# UNIT - I

# 1. INTRODUCTION TO INTERNATIONAL FINANCE

**Meaning :-**

International financial management is a well-known term in today's word and it is also known as international finance. It means financial management in an international business environment.

International finance is the branch of economics that studies the dynamics of exchange rates, foreign investments, and how these affect international trade.

Fundamentals of International Finance deal withthestudy of foreign investments, the changes in the foreign exchange rates, and how international trade is influenced by them. International finance also follows techniques for allocation of funds and resource in international trade. However, it faces certain hindrances regarding mobility of capital and foreign currencies, as well as the foreign also tries to solve the problem of human resource exploitation carried out by MNC in the poor and developing countries by applying its own principles, three conceptually distinct but interrelated parts are identifiable in international finance.

International Financial Markets: Concerned With International Financial/ Investments Instruments, Foreign Exchange Markets, International Banking, International Securities Markets Financial Derivatives Etc.

## FEATURES OF INTERNATIONAL FINANCE:

1) **Expanded Opportunity To Business:-** due to globalization in business there is an expanded opportunity to the business. Business can raise more funds through less cost of capital.
2) **Foreign Exchange Risk:** - It Is Financial Risk That Exists When A Financial Transaction Is Denominates In A Currency Other Than That Of The Base Currency Of The Company.
3) **Imperfect Market:**- Due to difference in law and customs among the countries, tax system, cultural difference, business practices, there is distinction between international business practices, there is distinction between international business practice, there is distinction between international business practices, there is distinction between international finance and domestic finance. so, it is said that there is always an imperfect market. due to imperfection in market.
4) **Political Risk:**- International Financial System Affected By Government Policies And Political Issues. So There Is A Risk Of Political Policies, International Finance Can Be Affected. Similarly A Favorable Political Decision Can Increase International Financial Stability.

## SCOPE OF INTERNATIONAL FINANCE

Currently, International Finance Has Become More Comprehensive Pr Broader In Scope And Is Dealing With Matters Related To Globalization, Fair Trade Multinational Banking, And Multinational Corporation. International Finance Consist Of Foreign Exchange Market, Currency Convertibility, BOP, International Finance And International Monetary System. So There Is A Big Scope International Finance. It Is Discusses Below:

1) **International Monetary System:-** For Better Economic Growth And To Do Trade And Investments Efficiently, A Country Need To Have Its Own Monetary System And An Authority Who Can Control The System. For Example, RBI Id India Controls Over The Monetary System Of India Through Controlling Over Inflation, Supply Of Money And Maintaining Interest Rate.

2) **International Financial System:-** The Growth In Word Trade, Liberalization And Globalization In Business Brought Tremendous Change In International Financial System. It Organization And Customs Which Enable The International Payments And Receipts Between The Countries. Comparing To Past, The Volume Of Transaction Has Increased In International Finance.

3) **Foreign Exchange Market:-** This Is A Market Where One Country's Currency Denominated In That Currency Can Be Purchase Through Sales Of Another Country's Currency. International Financial System Provides This Facility.

4) **Currency Convertibility:-** The Currency Of A Country Is Freely Convertible When The Resident Or Nor Resident Of The Country Are Allowed To Convert The Local Currency In Foreign Currency. But The Governments Of The Country Restricts The Residents And Non-Residents To Do This. Various Countries Do Not Allow Converting The Currency Freely. It Makes The International Business Difficult.

5) **Balance of Payment:** Balance Of Payment (BOP) Of A Country Is Defined As, "Systematic Record Of All Economic Transaction With The Residents Of A Reporting Country And Residents Of Foreign Countries During A Given Period Of Time"-Kindle Berger. Thus Balance Of Payments Includes All Visible And Non-Visible Transactions Of A Country During A Given Period, Usually A Year. It Represents A Summation Of Country's Current Demand And Supply Of The Claims On Foreign Currencies And Of Foreign Claims On Its.

## IMPORTANCE OF INTERNATIONAL FINANCE

International Finance Plays A Critical Role In International Trade And Inter-Economy Exchange Of Goods And Services. It Is Important For A Number Of Reasons; The Most Notable Ones Are Listed Here:

1) International finance helps keep international issues in a disciplined state.
2) International finance is an important tool to find the exchange rates, compare inflation rates, get an idea about investing in international debt securities, ascertain the economic status of other countries and judge the foreign markets.
3) International finance helps in calculating exchange rates which are very important in international finance, as they let us determine the relative values of currencies.
4) Various economic factors help in making international investments decisions. Economic factors of economics help in determining whether or not investors money is safe with foreign debt securities.
5) Utilizing IFRS is an import factor for any stages of international finance. financial factor for many stages of international finance . financial statements made by the countries that have adopted ifrs are similar. it helps many countries to follow similar reporting systems.
6) IRFS system' which is a part of international finance' also helps in saving money by following the rules of reporting on a single accounting standard.

7) International Finance Has Grown In Nature Due To Globalization. It Helps Understand The Basic Of All International Organization And Keeps The Balance Intact Among Them.

8) An International Finance System Maintains Peace Among The Nations. Without A Solid Finance Measures, All Nations Would Work For Their Self-Interest. International Finance Helps In Keeping That Issue At Bay.

## PRINCIPLES OF INTERNATIONAL FINANCE:

1) **Advantages To Become International:-** The Internationalization Advantages Attract Companies To Invest Directly In Foreign Countries.

2) **Comparative Merits:**- Every Country Is Specialized In Some Product Of Has Some Product Of Has Some Special Feature. Through International Trade Exchange Of Verity Of Goods, Culture And Services Takes Place Through Trade. It Increases The Standard Of Living.

3) **Economic Of Scale:** Synergistic Effect Direct To Economies of Scale. When The Whole Is More Profitable Than The Part Of It Than Synergistic Effect Exists.

4) **Effect Of Portfolio:** As Per The Principles Of Portfolio It Is Said That The Risk Is Diverted By Increasing The Portfolio. In Same Way The Company Can Diversify Its Risk By Working On Global Level Rather Than Restricting In Domestic Level.

5) **PerfectCompletion: -** International Trade Allows Every Country to Entry In The Market And Exist From The Market Freely. Under This Condition Goods And Services Are Freely Transferable. So, the Balance of Cost no Return Exists.

6) **Risk And Profitability Trade Off:**- It Is Well Known That There Is A Close Relation Between Risk And Profitability. But The Trade-Off Between Risk And Profitability Decides The Maximization Balance Between Risk And Profitability.

7) **Valuation Of Assets:** - This Principle Says That The Value Of An Asset Is The Expected Earning Of The Asset. For MNC's Better Marketability, Earning More Profit, Capitalization At Lower Rate Comparing To Domestic Companies Leads To Higher Price Earnings Ratio And Lower Required Rate Of Return. So, The Value Of MNC Is More Than The Domestic Companies.

## ADVANTAGES OF INTERNATIONAL FINANCE:

**1) Promotion:-** International Finance Helps To Promote Domestic Investments And Growth Through Capital Market.

**2) Better Banking System:-** International Finance Helps To Healthy Competition Due To Which It Provides Better Banking System.

3) **More Equality:-** It Helps To Integrate The Economy Of Two Countries And Asy Flow Of Capital. Due To Free Flow Of Capital Results Into More Equality Between The Countries.

4) **Effective Capital Allocation:**- It Helps To Allocate The Country's Capital Effectively By Providing Information Related To Different Areas.

5) **Capital In need :**- It Helps To Access The Capital Market Around The Word Which Enables The Country To Lend Money In Good Times And Borrow Capital Ijn Need.

6) **Corrective Measures:**- Due To Worldwide Cash Flows International Finance Helps To Take Corrective Measures to Bad Government Policies.

# 2. BALANCE OF PAYMENT

## INTRODUCTION:-

**Meaning:** The Balance of Payment of a country is “a systematic record of all economic transactions between the residents of the reporting country and the residents of foreign countries during a given period of time”.

Like all double entry book keeping accounts it always balances i.e. sum of credit entries & sum of debit entries.

In other words the balance of payment statement is a device for recording all economic transactions within a given period of time between the residents of a country and the residents of other countries.

## COMPONENTS OF THE BOP ACCOUNT:

The analysis of Balance of Payment can be done in terms of its major sub-divisions:

(a) Current A/c
(b) Capital A/c

(a) **<u>Current A/c</u>:** It can be broken down in to two parts viz., Balance of trade & Balance of Services.

Balance of trade deals only with export & import, merchandise (or invisible items); It is not necessary that balance of trade always balances; more often, it will either show a surplus or a deficit. A surplus on trade balance may be matched with a surplus or a deficit on service balance. If the surplus on service balance equals the deficit on trade balance, the current A/c show a net balance.

(b) **Capital A/c**: Similarly, the capital a/c represents transfer of money and other capital items & changes in the country's foreign assets & liabilities resulting from the transactions recorded in the current a/c. It includes loans, investments, issue of bonds, etc.

***Reserve A/c:** The deficit on the current a/c or capital transactions can be financed by external assistance, drawings from IMF & allocations of the SDR's.

Balance of Payment is a Double entry A/c. hence it always balances. There may be deficit or surplus in current account and capital a/c or any sub account. But final adjustment is made by increasing or decreasing forex reserves.

Hence BOP as a whole always balances.

{X – M > 0 = Current A/c Surplus e.g. China}

{X – M < 0 = Current A/c Deficit e.g. India}

{X – M = 0 = Current A/c Balance}

*****FACTS*****

- USA has maximum deficit against China.
- 25% of Global GDP comes from USA
- No Indian company manufactures aircraft. We only import

BOING = American Company

AIRBUS = European Company

## BALANCE OF TRADE:-

**Balance of trade (BOT**) is described as the difference between the value of merchandise (goods) exports and the value of merchandise imports. It can also be described as the 'goods balance' or the "balance of merchandise trade". This balance is reflects the country's capacity to provide material requirements of the population. An active (positive) or 'passive' (negative) BOT represents the net trade in tangibles.

## FACTORS AFFECTING BALANCE OF TRADE:

1) The cost of production )land. Labour, capital, taxes, incentives, etc.) in the exporting economy vis-à-vis those in the importing economy;

2) The cost and availability of raw materials, intermediate goods and other inputs;
3) Exchange rate movements;
4) Multilateral, bilateral and unilateral taxes or restrictions on trade;
5) Non-tariff barriers such as environmental, health or safety standards;
6) The availability of adequate foreign exchange with which to pay for imports;and
7) Prices of goods manufactured at home (influenced by the responsiveness of supply)

## BALANCE OF VISIBLE TRADE:-

Balance of visible trade is also known as balance of merchandise trade, and it covers all transactions related to movable goods where the ownership of goods changes from residents to non-residents (exports) and from non-residents to residents (imports). The valuation should be on FOB basis so that international freight and insurance are treated as distinct services and not merged with the value of goods themselves.

Export valued on FOB basis are the credit entries. Data for these items are obtained from the various forms that the exporters have fill and submitted to the designated authorities. Imports value at CIF are the debit entries. Valuation CIF though inappriate between the total of debits and credits appears in the “NET” coloum. This is the ‘balance of visible trade.’ In visible trade if the receipts from exports of goods, we described the situation as one of zero’ goods balance.’ Balance.

Depending on whether we have receipts exceeding payments (positive) or payments exceeding receipts (negative).

## BALANCE OF INVISIBLE TRADE:-

Just as a country exports goods and imports goods a country also exports and imports what are called as services (invisibles). The services account records all the services exported and imported by a country in a year. Unlike goods which are tangible or visible services are intangible.

Accordingly services transactions are regarded as invisible items in the BOP. They are invisible in the sense that services receipts and payments are not recorded at the port of entry or exist as in the case with the merchandise imports and exports receipts.

### UNILATERAL TRANSFERS:

It is an economic transactions between residents of two nations over a stipulated period of time, usually a calander year. Typically, these transaction consist of gift exchanges, pension payments and the like, but they can encompass other goods and services as well.

## ERRORS AND OMISSIONS:

Errors and omissions is a “statistical residue.” It is used to balance the statements beacauses in practice it is not possible to have complete and accurate data for reported items and beacause these cannot, therefore ordinarily have equal entries for debits and credits.

## OVERALL BALANCE:-

The overall BOP is determined by computing the cumulative balance of payments including the current account, capital account, and the statistical discrepancies. The overall BOP is significant because it indicates discrepancies. The overall BOP is significant because it indicates a country’s international payment gap that must be financed by the governments’s official reserve transactions.

### ACCOMMODATING (BELOW THE LINE IN BOP) AND AUTONOMUS (ABOVE THE LINE IN BOP) FLOW CONCEPT:

An autonomus transaction is a transaction undertacken in the normal course of business in response to the given environment of price levels, exchange rates, interest rates etc. it does not take into account the equilibrium aspect of the BOP.

### THE BOP ALWAYS BALANCES:

Whether the BOP is in surplus or deficit depends on the balance of the autonomous items. The BOP is said to be in surplus if autonomous receipts are greater than the autonomous payments and in deficit if vice versa. Autonomous transaction are viewed as ‘above the line’. Effectively all the elements of currency flows captured in the balance of payments get recorded in either the current or capital account which together constitute the ‘autonomous transactions’.

## 3. EVOLUTION OF INTERNATIONAL MONETARY SYSTEM

The international monetary system is the framework within which countries borrow, lend, buy, sell and make payments acress political frontiers. The framework determines how balance of payments disequilibrium is resolved. Numerous frameworks are possible and most have been tried in one forms or another. The international monetary system can be broadly classified as below:

## PRE BWS PERIOD: GOLD STANDARD SYSTEM:

## Gold Standard System (1870-1914):

The gold standard was the first universally implemented system for valuing currencies. It was promoted by banks of England. It was an exchange rate in which gold coins were freely minted by the central bank of a country. The gold standard was adopted by UK in 1821, germany in 1875, france in 1878, us in 1879, and Russia in 1897. The gold standard system has 3 variants:1) the gold specie 2) the gold exchange and 3) the gold bullion.

The gold standard is a system in which international currencies are tied to a specific amount of gold. Almost from the dawn of the history gold was considered as the medium of exchange because gold was durable, storable, portable and easily divisible.the gold standard, gold jewellery could be converted into gold coins and used as legal tender.

Under relative gold standard, gold was considered as the currency standard and each currency was convertible into gold as a specified rate. Thus exchange rate betwenn two currency was determined by their relative convertible rates.

The official central exchange rate between two currencies remained constant since the official prices of gold was constant

## GOLD EXCHANGE STANDATD ( 1925-1933)

Another version of gold standard system was the gold exchange standard, where one country's currency was expressed in terms of another country's currency, which was on gold bullion standard. The advantage was that only the country on gold bullion standard had to maintain gold reserve and the other country needed to simply hold reserves of the currency to which its currency was linked.

Under this system, the currency in use was made of gold or was convertible into gold at a fixed rate. The value of the currency unit was defined in terms of certain weight of gold, that is, so many grains of gold to the rupee, the dollar, the pound, etc. the central bank of the country was always ready to buy and sell gold at the specified price. The rate at which the standards money of the country was convertible into gold was called the mint price of gold.

## FEATURES OF GOLD STANDARDS SYSTEM:

1) Each country was required to establish a central bank with an exclusive authority to print and issue their respective currency notes.
2) The countries gold reserves were required to be in custody of central bank.
3) Each central bank was required to announce an official price of gold and to provide an irrevocable guarantee to buy and sell unlimited quantity of gold at official price.
4) Each currency note was required to contain an irrevocable promise to redeem the note on demand against specified quantity of gold.
5) The total value of currency notes in circulation was required to be limited to the value of gold with the central bank. Therefore there was a 1:1 relation between gold with central bank and money supply in circulation.

## ADVANTAGES OF GOLD STANDARDS :-

1) It is very easy system to implement and operate.
2) It provided fully secured payment and settlement system through transfer of gold from deficit to surplus country.
3) It provided for a very high level of stability in exchange rates which promoted international trade

and investment.

4) It provided an in build mechanism for achieving equilibrium in an international trade called “price species adjustments mechanism” (PASM)

## DISADVANTAGE OF GOLD STANDARD:

1) It did not provide for revision of gold price in keeping with the increasing manufacturing cost of gold.
2) It was a very inflexible system due to which it was difficult to adjust money supply during economy stress in situation such as natural disaster, war, economy depression etc.
3) PSAM was ineffective in situation where a country had recurring trade deficit.
4) It contributed to recessions due to which deficit countries suffered from lower lower investments and employment opportunities.

## BRETTON WOODS SYSTEM:

Because of the breakdown of gold standard system, the world monetary system was in a very chaotic position. Hence the policymaker of US,UK and other allies initiated with the process of reviving and restructuring the world monetary system as it was urgently required to revamp the economies after the destruction caused by world war II. Hence in july 1944, representatives of 44 major economies met at brettenwoods, a town in Hampshire in US to finalize a new system for currency value and new international financial architecture to be implemented during this conference, two multilateral institution were established:

### FEATURES OF BWS:

1) **Usd As Universal Reserve Asset:-** The USD Was Given The Status Of Universal Reserve Asset In Addition To Gold. This Means Countries Could Issue Currency Notes Against A Reserve Basket Containing Both Gold And Usd.
2) **Fixing Value Of Gold In Usd:**- The Value Of USD Was Fixed At 1 Ounce Gold Is Equal To USD 35 (1 Oz Gold= Usd 35)
3) **Unconditional Guarantee By Us Federal Reserve Bank:** Us Federal Reserve Bank Provided An Unconditional Guarantee To Buy And Sell Unlimited Quantity Of Gold At The Fixed Prices. This Was Known As Gold Convertibility Clause.
4) **Pegging And Parity Concept:** No Other Country Was Required To Value Its Currency In Terms Of Gold. The Value Of Each Currency Was Foxed Against USD.
5) **Par Value Mechanism:** Effectively A Three Way Relationship Was Created Between Gold, Usd And Individual Currency. This Was Called Par Value Mechanism.
6) **Parity Rate Support Points:** Currency Rates Were Allowed To Move In A Narrow Range In Both The Sides Of Parity Rates Up To +/-1%. The Extreme Points Of Variation Zone Were Called Support Points Or Intervention Points.
7) **Central Bank Participation:** Exchange Rates Were Expected To Be Controlled Within The Variation Zone Through Intervention. This Concept Means The Central Bank Proactively Participates In Domestic Foreign Exchange Market By Buying And Selling Foreign Currency So As To Influence The Exchange Rate.
8) **IMF Assistance:**IMF Provided The Undertaking To Financially Assist All Members Fpor Intervention.

9) **Currency Devalution Limit**: In Case Of Structural Imbalance In Countries BOP The IMF Undertook To Help Members To Devalue Their Currency Approximately.
10) **International Vechicle Currency**:- International Payments Could Be Made Either In Gold Or In US Dollars. Officially Dollar Became An International Reserve Currency And Vehicle

## ADVANTAGES OF BWS:

1) The advantage of Bretton woods system was that the number countries had to maintain only the reserve of dollars which helped them in overcoming the problem of maintain gold reserve.
2) The countries could also earn interest on their dollar reserve unlike in the gold reserve system.
3) The Bretton woods system sought to secure the advantage of the gold standard without its advantage.
4) The gold standard imposed monetary discipline on the countries involved. Any country experiencing inflation would have lost gold and therefore would have had a decree in the amount of money available to spend.
5) The gold standard maintained fixed exchange rates. Fixed exchange rates were seen as desirable because they reduced the risk of trading with other countries.
6) The united states had emerged from world II as the strongest economy in the world. Unlike Europe and japan, the united states had experienced very little destruction on its own land.
7) The benefits of the Bretton woods system were a significant expansion of international trade and investment as well as a notable macroeconomic performance.

## DISADVANTAGE OF BWS:

1) Weaknesses of the system were capital movement restrictions throughout the Bretton woods years, government needed to limit capital flows in order to have a certain extent of control
2) Another negative aspect was the pressure Bretton woods put on the united states, which was not willing to supply the amount of gold the rest of the world demanded, becauise the gold reserve declined and eroded the confidance in the dollar.
3) There was not enough gold available to allow people to buy all the new goods and service that could be produced.and the gold that was available was mainly located in the soviet union.
4) The success of Bretton woods system was essentially based on the unconditional supply of dollars by US. However US could not do it for a long time as it was still under the sytem of gold standard.

## REASON FOR FAILURE OF BWS:

1) The BWS was merely a variant of gold exchange system and as such it was also constrained by availability of gold.
2) As in the case of gold standard, this system also dish not provided for any revision in the price

of gold. Due to inflation, it became uneconomical to produce gold.

3) The system did not provide for any revaluation of parties dur to which surplus countries such as west Germany and Japan continued to enjoy export competitiveness against the US economy.
4) The system did not provide for a revision in the price of gold in terms of USD. Due to this, it was not possible to devalue the US dollar continued trade deficit.
5) Every member country had the right to accumulate dollar reserve and for that obviously they had to consistently have a positive balance of trade with US.
6) The success of Breton woods system was essentially based on the unconditional supply of dollars by US. Howe ever US could not do it for a long time as it was still under the system of gold standards.
7) The continued trade deficit of the US created an over- supply of USD in the international financial markets which reduced the acceptability of the USD.

## FIXED EXCHANGE RATES:

The fixed exchange rate is the system in which the monetary authority fixes the value of the domestic currency to a foreign currency or to a basket of currencies. It is also called as hard peg or rigid peg and when one currency is pegged to a foreign currency and its value is set at regular intervals according to some preset criteria of the average exchange rate over the previous few months in the foreign exchange market which makes the system more responsive to the market value of the domestic currency this system of determining the va;ue of currency is called as crawling peg system.

## ADVANTAGE OF FIXED EXCHANGE RATE SYSTEM:

1) **Contribute to the strength of the domestic currency:** since there is no panic of currencies fluctuations, fixed exchange rate creates assurance in the strength of the domestic currency
2) **Contributing to international economic integration:** fixed exchange rate is a part of more universal argument for national economic policies contributing to international economic integration.
3) **Control of inflation:** as compared to floating system, there is control on inflation as central bank controls the money supply and therefore keeps the inflation under control.
4) **Elimination of depreciation of currencies:** under the fixed exchange system there is no unhealthy practice of depreciation of currencies to capture international trade like the floating system.
5) **Encourage long-term capital flows**: since uncertainty and risk of exchange rate of exchange rates volatility is rare in case of fixed exchange rates volatility is rare in case of fixed exchange rate, hence it encourage-long term capital flows.
6) **Encourages international trade**: commitment to a single fixed exchange rate encourage

international trade by making prices of goods concerned in trade more predictable.

7) **Monitor responsible financial policies**: fixed exchange rate serve as a commentator and imposes a discipline on monetary authorities to monitor responsible financial policies within countries.

8) **No fear of unfavourable effect of speculation:** since there is no-fear of currencies fluctuations, fixed exchange rate creates confidance in the strength of the domestic currency and there is no fear of adverse effect of speculation on the exchange rate.

9) **Relatively simpler system**: it is a relatively simpler system and can be relied upon as there are no frequent fluctuations in the exchange rate.

10**) Comparatively more stable**: the exchange rates remain comparatively more stable than the flexible exchange rate

## DISADVANTAGE OF FIXED EXCHANGE RATE SYSTEM:

**1) Affects domestic economic stability:** fixed exchange rate possibly will achieve exchange rate stability but at the cost of domestic economic stability.

2) **Restriction on monetary policy formulation**: monetary authorities lose the freedom of monetary policy formulation to preserve exchange rate stability.

3) **Managing foreign exchange reserve**: the central bank may have to maintain adequate reserve of the foreign currency every time leading to idle resources.

4) **Misallocation of resources**: fixed exchange rate system need difficult exchange control mechanism which may lead to misallocation of resources.

5) **International trade not promoted by fixed rates**: the argument that fixed exchange rates promote international trade is not supported by historical facts of inter-war or post-war period.

6) **International investment not promoted by fixed rates**: the argument that long-term international investments are encouraged under fixed exchange rate system is not valid.

7) **Fixed rates not necessary for currency area**: this stable exchange rates are not necessary for any system of currency areas.the sterling block functioned smoothly during the thirties in spite of the fluctuating rates of the member countries.

8) **Speculation not prevented by fixed rates**: the main weakness of the stable exchange rate system is that in spite of the strict exchange control, currency speculation is encouraged.

9) **Regular intervention of the central bank**: this system requires regular intervention of central bank to stabilize the rate; however, underlying problems of the weak economy could not be solved through this method.

## FLUCTUATING EXCHANGE RATES:

Fixed exchange rate regime is rarely practiced by any country at present. Almost all countries, at present, have adopted some forms of flexible exchange rate policy. In spite of making several attempts, when the various ways of stabilizing the exchange rates went futile, IMF proposed the flexible exchange rate system in 1978.

The second amendment in IMF articles and it provided the monetary authorities to introduce a new exchange rate system which should be indepented i.e which is not based on gold valuation.

When the exchange rate of a country is determined by the market forces i.e the demand and supply of the currency, it is called as floating or flexible exchange rate. It is called as free float or clen float.

## ADVANTAGE OF FLOATING EXCHANGE RATE:

1) **Autonomy of monetary authorities**: autonomy of monetary authorities preserve under floating exchange rate system as there is no target exchange rate to maintain.
2) **Boost international liquidity**: the system of flexible exchange rates eradicated the need for official foreign exchange reserve, if the individual governments do not empty stabilization funds to influence the rate.
3) **Equilibrium provider to balance of payment**: fluctuation in the exchange rate can provide automatic adjustments for countries with a large balance of payments deficit. Balance of payments on current account disequilibrium can automatically be restored to equilibrium floating exchange rate regime and the scarcity or surplus of any currency eliminated under floating exchange rate regime.
4) **Flexible monetary policy**: floating exchange rates gives the government/ monetary authorities' flexibility in determining interest Rtes. This is because interest rates do not have to be set to keep the value of the exchange rate within pre determined bands.
5) **Improvement in current account positions**: this system provides for an automatic mechanism to deal with country's current account deficits will lead to fall in the value of currency which will make imports costlier and exports cheaper.
6) **Market forces of demand and supply**: under the flexible exchange rate system the foreign exchange rates are determined by the market forces of demand and supply.
7) **Optimum utilizing of monetary resources;** flexible exchange rate enables quicker adjustments in the rates depending upon the changes in the economic factors in country.
8) **Protects domestic economy**: a fluctuating exchange rate sytem protects the domestic economy from the shocks produced by the turmoil generated in other countries.
9) **Reflects the true position of a country:** it reflects the true position of a country as the fluctuation in the exchange rate is caused by the changes in the macro-economic factoes and is determined by the market forces of demand and supply of the currency.
10) **support planned economic development**: the flexible exchange rate system promotes economic development and helps to achieve full employment in the country.

## DISADVANTAGE OF FLOATING EXCHANGE RATE:

1) **Increases exchange rate volatility**: market forces may fail to resove the appropriate exchange rate and hence floating exchange rate regime may not provide the desired result and may also guide to misallocation of resources.
2) **Increases the exchange rate risk:** unless sound hedging mechanism is there, the importers and exporters may face uncertain exchange rate risk.
3) **Inflationary pressures:** flexible exchange rate system involves greater chance of inflationary

effect of exchange depreciation on domestic price level of a country. Inflationary rise.

4) **Makes the economy more vulnerable:** it is unfeasible to have an exchange rate system without official intervention. Government may not intervene, however domestic monetary policy and fiscal policy would definitely influence the exchange rate.
5) **Monetary disorder in the economy**: this system though has auto-mechanism to correct cureent account deficits, but for the countries where demand for certain products is inelastic, huge imports may lead to heavy deficits which may induce inflation and monetary disorder in the economy.
6) **Reduce the volume of international trade**: volatile exchange rate introduces sixeable uncertainty in export and import prices and a result to economic development.
7) **Serious impact on the economic structure**: the system of flexible exchange rates has serious impact on the economic structure of the company. Fluctuating exchange rates cause changes in the price of imported and exported goods which, in turn, destabilize the economy of the country.
8) **Speculative capital movements**: speculative capital movements caused by fluctuating exchange rates cause changes in the price of imported and exported goods which, in turn, destabilize the economy of the country.
9) **Worsen the balance of payments deficit**; the elasticity in the international markets is too low for exchange rate, variations to operate effectively in bringing about automatic equilibrium.

**DISTINCTION BETWEEN FIXED OR FLUCTUATING EXCHANGE RATES.**

| **Fixed exchange rate** | **Floating exchange rate** |
|---|---|
| Value of currency was decide by central bank of the country | Value of currency decided by market demand supply |
| Exchange rates were fixed | Exchange rates were flexible |
| Changes in exchange rate took place by official action called devaluation or revaluation | Change in exchange rate is by market action represented by depreciation |
| Due to stability, use of derivatives and risk management system did not exist | Due to variability in exchange rate, the use of derivation and risk management techniques is critical |
| Stability of exchange rate promoted trade and investment | Thewre is no such concept in this system |
| By implication central bank were required to parity rates through intervention | There is no mandatory requirement for central bank to Participate in market. |
| Value of gold was fixed i.e it was considered a financial commodity | Value of gold is variable, now considered as investments commodity. |
| Rates were calculate as ratio of gold content in 2 currencies | Exchange rates are calculated through a process of crossing using vehicle currency mechanism. |
| As basket securing the currency comprises of gold and USD | Current asset basket securing issue of INR contains gold, foreign currency asset. SDR |

| | and government securities. |
|---|---|

## CURRENCY AREAS:

In the wake of the collapse of the Bretton woods exchange rate system, the IMF appointed the committee of twenty that suggested for various option for exchange rate arrangement.

Now a days a wide variety of arrangements exist and countries adopt the monetary system according to their own whims and fancies. That's why some analysts are calling is a monetary "non-system" de jure arrangements stands for exchange arrangement a member of IMF notifies to the fund in accordance with article IV, section 2(b) of the funds's articles of agreement- and de facto (observed) arrangements.

The IMF system classifies exchange rate arrangements primarily on he basis of the degree to which the exchange rate is determined by the market rather than by official action, with market- determined rates being on the whole more flexible.

## EUROPEAN MONETARY SYSTEM:

EMS started in 1979: the decision was taken in 1978 by the German chancellor and French president. European monetary system (EMS) was am arrangement established in "1979 under the Jenkins European commission where most nations of the European Economic Community (EEC) linked their currencies to prevent large fluctuations relative to one another.

All European community countris are de facto members of EMS however; there is an optional element of EMS:

The basic elements of the arrangement were:

1) ECu: with this arrangement. Member currencies agreed to keep their foreign exchange rates within agreed bands with a narrow band of +/- 2.25% and a wide band of +/-6%.
2) an exchange rate mechanism (ERM)
3) an extension of European credit facilities and
4) the European monetary cooperation fund: created in October 1972 and allocates EU to members central banks in exchange for gold and US dollar deposits.

## CURRENT EXCHANGE RATE ARRANGEMENTS:

In the wake of the collapse of the Bretton woods exchange rate system, the IMF appointed the committee of twenty that suggested for various options for exchange rate arrangements. Those suggetions were approved at jamacia during February 1976 ans were formally incorporated into the text of the second amendment to the articles of agreement that came into force from april 1978.

1) Floating-independence and managed.
2) Pegging of currency.
3) Crawling peg.

4) Target-zone arrangements.

The IMF system classifies exchange rate arrangements primarily on the basis of the degree to which the exchange rate is determined by the market rather than by official action, with market- determined rates being on the whole more flexible, the system distinguish among four major categories: hard pegs (such as exchange arrangements); soft pegs ( including conventional currency board arrangements, pegged exchange rates within horizontal bands, crawling pegs,stablized arrangements, and crawl-like arrangements.

(1) Hard pegs: establishing a fixed exchange rate between one national currency and another national currency is called the 'hard peg' of a currency. A hard peg is generally adopted by countries. As per the de facto classification by the IMF,25 countries follow a hard peg. Hard peg comprising of

1) Exchange arrangements with no separate legal tendor (13)
2) Currency board arrangements(12)

(2) Soft peg: a pegged exchange rate, without a strong commitment by the central bank to allow the money supply to vary as necessary to maintain it, is called a soft peg. A soft peg is followed by 82 countries around the world. Soft pegs consisting of

1) Conventional pegged arrangements,(45)
2) Pegged exchange rates within horizontal bands,(1)
3) Crawling pegs,(2)
4) Stabilized arrangements,(19)
5) Crawl-like arrangements;(15)

3) Floating regimes: under this regime the exchange rate is floated against currencies. It comprises of managed floating and independent floating. At present 65 countries are under the floating exchange rate system.

4) A residual category other managed arrangements(19): these above mentioned categories are based on the flexibility of the arrangements and the way it operates in practice---that is, the de facto regime is described, rather than the de jure or official description of the arrangement. Effective February 2, 2009, the classification methodology was revised to allow for greater consistency and objectively of classfications across countries and improved transparency, in the context of the IMF,s bilateral and multilateral surveillance.

# 4. INTRODUCTION TO EXCHANGE RATE

## EXCHANGE RATE QUOTATIONS:

A foreign exchange rate is the price of a foreign currency. A foreign exchange quotation or quote is a statement of willingness to buy or sell at an announced rate. Interbank quotations are given as “bid” and “ask”.

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. Dealers buy at the bid price and sell at the ask price, profiting from the spread between the bid and ask prices: bid <ask. Bid ask quotations are complicated by the face that the bid for one currency is the ask for another currency.

The exchange rates include two numbers: the bid and the offer. The bid (or buy) is the price at which a bank or financial services firm is willing to buy a specific currency. The ask (or offer or sell), willing to sell that currency. Typically, the bid or the buy is always cheaper than the sell; banks make a profit on the transactions from that difference

## TYPES OF FOREIGN EXCHANGE QUOTATION

1) **Bid and ask price:-** in foreign exchange market there are buyers and sellers, one party buy and one party sale. Quotes are made in the form of buy and sale. Buy means bid and sale means ask.
2) **Direct quote**: direct quote also known as price quotations under the direct quotation, the variations of the exchange rates are inversely related to the change in the value of the domestic currency. When the value of the domestic currency rises, the exchange rate is fall.
3) **Forward quote:** forward quote is a rate which applies in foreign exchange for some transactions of purchase or sale on a specified future date. The buyers and seller agree to do the the transactions on a future date and the rate will be fixed now for the transaction, irrespective the

rate on that future date.

4) **Indirect quote:** indirect quote is also known as the quantity quotation. Under indirect quotation, the rise and fall of exchange rates are directly related to the changes in value of the domestic currency
5) **Inter-bank quote:** the most professional way to do foreign exchange transaction is inter-bank quote. In this system most of the professional broker gives quote, European terms are a term where on the computer screen the trading screen appears. It showa that the number of units of foreign currency appears.
6) **Mid quote:** this quote also knoen as reference rate. When convertibility. Condition exists then the central banks follows the mid quote.it is the quote or price which is the average of the bid and sk quot or price.
7) **Spot quote:** spot quote basically usefull when there is purchase or sale takes place in foreign exchange and the payment or receipts are made on the spot, generally within very short specified period, then it is called as spot quote.
8) **Cross currency rate:** when stocks are exchanged by using different currency which are not official currency where the exchange quote in given then a cross currency quote can be used.
9) **Spread quote:** this is also known as bid-offer spread. It is a quote at which the participants will to buy or sale goods or services. It is divided in direct spread and indirect spread when the ask price is greater than bid price then it is direct spread quote but when the bid price is greater than ask price then it is called as indirct spread quote.

## FOREX TRANSACTION

Interbank market deals are conducted mainly over the telephone. If the price quoted is acceptable, the deal between traders will move further in terms of amount bought/sold, price identity of the party etc. in their respective banks will settle the transactions with both the sides. Classification of rates in terms of settlement.

The day on which these transfers are effected is called the settlement date or the value date. Classification of transactions based on value date.

1) **Cash**: cash rate or ready rate is the rate when the exchange of currencies takes place on the date of the deal itself. There is no delay in payment at all.
2) **Tom**: it stands for tomorrow rate, which indicates that the exchange of currencies takes place on the next working day after the date of the deal, and therefore represented by T+1.
3) **Spot**: when the exchange of the currencies takes place on the second day after the date of thedeal (T+2), it is called as spot rate. It applies to interbank transactions that require delivery

on the purchase currencies within two business days in exchange for immediate cash payment for that currencies.

4) **Forward**: the forward rate is contractual rate between a foreign- exchange trader and the trader's client for delivery of foreign currencies sometimes in the future.

## FACTORS AFFECTING EXCHANGE RATES:

1) **Balance of payment :** surplus leads to stronger currency.
2) **Economic growth rates:** high/low growth rate.
3) **Fiscal/monetary policy: deficit** financing leads to depreciation of currency.
4) **Interest rates:** currency with higher interest will appreciate in the short term.
5) **P[olitical issues:** political stability leads to stable rates.

### 2) Technical Reasons:

A) Government Control Can Lead To Unrealistic Value.

B) Free Flow Of Capital From Lower Interest Rate To Higher Interest Rates.

C) Speculation: Higher The Speculation Higher The Volatility In Rates

### Determinants Of Exchange Rates:

1) **Demand for and supply of foreign exchange:** the forein exchange rate is determined by demand for and supply of foreign exchange. The rate established at a point where demand and supply are equal is called equilibrium rate of exchange.
2) **Inflation:** inflation is one of the most important factors that affect the exchange rate.theoretically a low inflation rate scenario will show a rising currency rate, as the purchasing power of the currency will increase as compared to other currency.
3) **Interest rates:** inflation and interest rates are very much correlated. Higher inflation usually means higher interest rates in an economy.the central bank check on any major currency fluctuation.
4) **Current account deficits:** the current account is the balance of trade between two countries. It reflects all paymenmts and recipts between the two countries for goods, services, interest and dividents.

## Foreign Bank Note Market:

1) Nostro Means "Our" In Latin World. Nostro Is Accounting Terms Used To Distinguish An Account Held For Another Entity From An Account Another Entity From An Account Another

Entity Holds. A Nostro Account Is One Which Is Held Within A Foreign Country. These Accounts Are Utilised For Facilitating The Settlements Of Forex And Foreign Trades.

2) VOSTRO Means "Yours" In Latin Word. This Also An Accounting Terms Used To Distinguish An Account Held For Another Entity From An Account Another Entity Holds. A VOSTRO Account Is One Which Is Held Domestic Country

3) A Loro Account ("Theirs"), Which Is A Record Of An Account Held By A Second Bank Oh Behalf Of A Third Party; That Is, My Record Of Their Account With You. In Practice This Is Rarely Used, The Main Exception Being Complex Syndicated Financing. In The Same Style As Above: A Loro Is Our Account Of Their Money, Held By You.

## UNIT - II

# 5. FOREIGN EXCHANGE MARKET

**Introduction to forex market:** foreign exchange market is the most largest and liquid financial market in the world. It is reffered to foreign currency market, where a party of a country purchase some quantity of a currency in exchange of paying some quantity of another currency.basically large banks, speculator of currency, central banks, government and other financial insititues are involved in trading in foreign exchange market.

## NEED TO FOREIGN EXCHANGE MARKET

The foreign exchange market is a crucial international market and is the world's most respected financial institution. On a daily basis, the forex exchange trades with approximately two trillion us dollars foreign exchange transaction are central to global commerce.

1) **Protection of currency:** to accumulate the reserve governments protects the currency trade by the help of foreign exchange market. It affects by value of the currency.and it is easy to do payments. If economy changes then central bank can ensures the reserves are enough to face the situation.
2) **Job opportunities:** with the increased use of the internet, online forex exchange has become a prominent features in the foreign exchange market. Many people ern a living by trading currencies online on a daily basis which in turn increasing the job opportunities.
3) **Hedging facilitator:** forex is a hedging facilitator. Here heading means protecting the business from risk. It provides business owners with mechanism with mechanism that guard them against incurring losses in the event that values of the currencies they trade in fluctuate
4) **Facilities international trade:** the need for acquiring currency to trade arises when the business deal with other country investors. Transfer of purchasing is facilitated by foreign exchange among the countries. By acquiring capital purchasing power can be enhanced.
5) **Currency liquidity:** the foreign exchange market provides liquidity for currencies. Liquidity is the ease with which it can convert a foreign currency into a domestic currency.
6) **Credit provision:** it has a facility of credit provision. It helps to enhance the growth of foreign trade. Most investors dealing with international trade depend on the credit facilities that are advanced to them by forex markets.

## CHARACTERISTICS OF FOREIGN EXCHANGE MARKETS:

1) **Superior liquidity**:- in a forex market, traders are free to buy and sell currencies of their own chhosing. The superior liquidity of the forex market enables traders to easily exchange currencies without affecting the price of the currerencies being traded.
2) **Strong market trends:** forex trader make money by getting accurate market data and then analyzing the direction the markets takes.
3) **Purchasing power:-**foreign exchange market aims at transferring the purchasing power of one currency to another currency.
4) **Lower trading costs:-** any one can open a mini forex account by investing small amount of investment. Because the cost of trading is low comparing to other investment options. The lower trading costs in the forex market has made it possible for even small individual investors to mkake decent profits from forex trading. Eith lower costs the possible losses are also much lower.
5) **Intermediary function:-**buyers and sellers come to do business in foreign exchange market. So

it gives a platform for business and foreign exchange market acts works as intermediary.

6) **Electronic market:** foreign exchange market transaction takes place through electronically linked network banks, where the buyers and seller come together to do foreign exchange.
7) **Credit provision:** forex provides the facility of credit provison to the buyers in the form of banker's acceptance and letter of credit. It helps the trades in international market.
8) **Best transparency:** the excellent transpency of the forex market means that forex traders have more control over their investments and can decide what to do base on the information available.

## FUNCTIONS OF FOREIGN EXCHANGE MARKETS:

1) **Transfer of purchasing power:-** forex allows transferring the purchasing power or conservation of one currency to another currency in the market to complete the business between two countries.
2) **Provision of credit:-** to promote foreign trade between the countries, foreign exchange market provides credit to the trade both national and international. It helps the trader to trade easily.
3) **Minimizing foreign exchange risk:-** foreign exchange market minimizing the risk of trade. Foreign transaction are done minimizes the risk of trade. Foreign transactions are done through the payment and receipts of foreign currency exchange.

## PARTICIPANTS OF FOREIGN EXCHANGE MARKET:-

1) **Retailers**: basically retailers use foreign exchange for the purpose of operating their business.they buy or sale by placing orders with commercial banks.
2) **Commercial banks:-** commericial banks are directly involved in buying and selling of foreign currency in order of their retail clients and for their own proprietary trading for the purpose of structuring their assets and liabilities.
3) **Foreign exchange brokers:-** foreign exchange brokers play a good role in foreign exchange market. They collect number of quotations for different currencies from several banks and they places most favorable quotation to the banks.
4) **Central banks:** central banks play a good role in this. They frequently intervene to buy and sale the currency through bid which influences the rate at which the currency is traded.
5) **Investors and speculators:** investors and speculators require currency exchange whenever they deal in any foreign investments are it equties, bonds, bank deposite, or real estate.
6) **Authorized dealer**: a trader who buys and sells currencies for example, a foreign exchange dealer rata different exchange rate. The dealer profits from the difference in exchange rates between currencies.
7) **Market make**:-a market maker or liquidity provider can be company or an individual. They quote both a buy and a sell price in a financial intruments or commodity held in inventory. A designated primary market maker (DPM) is a specialized market maker approved by an exchange to guarantee that the perong will take the position in a particular assigned security, option or option index.

8) **Money changer**: a mony changer is a person who exchange the coins or currencies of one country for that of another. This trade is thought generally to be the origin of modern banking in Europe. Their work is to change ine market, most large transaction were done not by cash/ coins but by transfer order of funds on the books kept at the local money changer(s).

## ROLE OF FOREIGN EXCHANGE BROKERS IN FOREIGN EXCHANGE MARKET:

1) **Works on behalf:-**foreign exchange market is an OTC market in which the broker charges a fee for bringing together a buyer and seller. However his role is quite different from a dealer who mainly carrioes out the transaction.
2) **Technical analysts**:- a foreign exchange market broker also undertackes a good deal of technical analusis. They use charts to extrapolate future trends from past movements on the assumption that movements in exchange rates reflect market beliefs and past patterns an rationally predict forthcoming ups and downs.
3) **Good deal provider;**- through the foreign exchange broker it is very easy to get the best deal in exchange market. So the act as a best deal provider.

## INTERNATIONAL PAYMENT AND SETTLEMENT SYSTEM:

International payment and settlement system is the entirety of payment instruments, of common rules, procedures and supportive technical of common rules, procedures and supportive technical and program facilities for implementation of clearing, transfer payments of funds and executions of final settlement, which is used to provider a payment to a beneficiary.

The payments systems of the central bank are:-

- Gross paper-based payments system
- Gross electronic payment system
- Net settlements system
- Government securities accounting and settlement system.

## STRUCTURE OF FOREIGN EXCHANGE MARKET:

1) **Retail market**: there are two types of license issued by RBI in retail market to do the transaction. One is fully fledged money changes- who can undertake purchase and sale transaction with the public.
2) **Wholesale market:-** wholesale markets is structured through the large banks that are having the power to enter directly in the foreign market and do the transactions. It is an interbank market where the transaction t5akes place through transfers one country denominated currencies to another countries currencies.

- **Interbank market:** in interbank market system banks quote buying and selling prices between

each other banks. These are called as decentralized, continues, open bid, double auction market. This is called as direct market.

- **Central bank:-** central bank plays good role in this they frequently intervene to buy and sale the currencies through bid which influences the rate at which the currency is traded.

**TYPES OF FOREIGN EXCHANGE MARKET:**

1) **Spot market:** the spot market or cash market is a public financial market in which financial intstruments or commoditis are traded for immediate delivery. It contrasts with a futures market in which delivery is due at a later date.

   A spot market can be an organized market, an exchange or over the counter.

2) **Forward market:** the forwad market is the informal over- the counter financial market by which contracts for future delivery are entere4d into. Standardized forward contracts are called futures contracts and traded on a future exchange contracts entered into in the forward market are binding on the parties involved.

## 6. INTERNATIONAL PARITY RELATIONSHIPS AND FOREIGN EXCHANGE RATE

**INTERET RATE PARITY:**

Interest rate parity (IRP) is an arbitrage condition that must hold when international financial markets are in equilibrium.it tends to create a relationship between the interest rates of two countries and their forward exchange rate premium or discount. It involves investing in a foreign country and covering against the exchange rate risk.

IRP theory states that s that exchange rate between currencies is directly affected by their interest rate. Interest rate parity is one of the most important fundamental economic relation relating differential interest rate and forward exchange rate between a pair of currencies.

In other words, the interest rates paid on two currencies should be equal to the difference between the spot and forward rates. We will deal with practical situations with respect to this concept in the next chapter.

**FISHERS PARITY:**

International fisher effect postulates that the estimated change in the current exchange rate between any two currencies is directly proportional to the difference between the two countries nominal interest rates at a particular time. In other words, the percentage change in the spot exchange rate over time is governed by the difference between the nominal interest rate for the two currencies.

The international fisher's effect relates the nominal interest rate between two currencies of two countries and the movment of exchange rate between two countries and the movement of exchange rate between the currencies of two countries. It indicates that the country with lower nominal (hiher) interest rate will appreciate compared to the other currency. If the spot rate is INR40 / USD and 1 year interest rate is 12% and 8 % in india and US respectively, then INR is expected to depreciate or USD is excepted to appreciate. The % appreciation and depreciation will be governed by interest rate differential.

According to prof. fisher, there are two types of interest rates

1) real interest rates: real interest rates: 2)nominal interest rate is also called as money interest rate, also referred as out-of-pocket interest rate.

   The interest that is actually given/ received is nominal interest. According to ding to prof. fisher, nominal rate of interest

**PURCHASING POWER PARITY:**

The theory of purchasing power parity is the oldest and most extensively accepted theory of all exchange rate determination theories. The basic idea of PPP originated with scholars at the university of Salamanca, the oldest university in spain, in the 16$^{th}$ century

When the low of one p[rice is applied internationally to a standard commodity basket, we obtain the theory of purchasing power parity (PPP). This theory states that the exchange rate between currencies of two countries should be equal to the ratio of the countries price levels.

Most exchange rate determination theories have PPP elements rooted within their frameworks. PPP calculation and elements rooted within their frameworks. PPP calculation and forecast are however and significant data challenges in estimation. PPP theory is based on the concept of "low of one price" the price of the commodity shall be the same in two markets. If it were not true, arbitrageurs would buy in cheaper market and sell in expensive market to make risk less gain. It as enunciated by a Swedish economist, gustav cassel in 1918.

In this absolute version, purchasing power parity states that price levels should be equal worldwide when expressed in a common currency. In other words, a unit of home currency (HC) should have the same purchasing power around world.

**DRAWBACKS OF PURCHASING POWER PARITY THEORY:**

1) **Ignores government intervention:** the PPP theory does not consider government or central bank intervention in exchange rate determination. If domestic currency depreciates too much, the central bank intervenes as it can have adverse effects on economy intervenes in exchange arte.
2) **Ignores specialization:** PPP theory ignores specialization effect in international trade. Countries specialize in those items in which they enjoy superior cost advantage and accordingly produce such items.
3) **Ignores the effect of change in exchange rate on price level:** PPP theory ignores specialization effect in international trade. Countries specialize in tose items in which they enjoy superior cost advantage and accoedingly produce power of currencies for a similar basket of goods and

services.

4) **Ignores quality of goods:-** ppp ignores quality of goods while determining prices quality of goods in two different countries may be different. This prevents the equalization of prices thus it is difficult to arrive at equilibrium exchange rate.
5) **Faulty assumption:**PPP theory is based on faulty assumption such as lack of transport cost, lack of trade barriers such as custom duties and quotas etc. in reality international trade involves higher transportation cost and is also affected by trade barriers.
6) **Does not consider speculation in foreign exchange market:-** now a days there is lot of speculation in foreign exchange market, which affects the exchange rate. ppp theory does not consider speculation in foreign exchange market.
7) **Limited application to large countries:** for large countries like india, china, USA etc. the application of this theory is limited, the ppp theory may have applicability to small countries where a large part of national income comes from international trade.
8) **Neglects capital transfer:** ppp theory takes into account only trade in merchandise. It excludes trade in services, capital transfers All such items create demand for and supply or foreign exchange. By excluding such factors, the theory has limited relevance.
9) **Too much emphasis on purchasing power:** ppp theory places too much much emphasis on purchasing power as a determining factor of rate exchange. It ignores factors such as reciprocal demand of trading countries which can influence the rate of exchange even with no change in price levels.

**FORCASTING EXCHANGE RATES:**

Several decisions of MNCs require an assessment of the future. Future exchange rates will affect all critical characteristics of the firm such as costs and revenues.

Exchange rate forecasts paly a fundamental role in nearly all aspects of international financial management international transaction are usually settled in the near future. Exchange rate forecasts are necessary to evaluate the foreign denominated cash flows involved in international transactions.

**METHODS OF FORECASTING EXCHANGE RATES:**

The numerous methods available for forecasting exchange rates can be categorized into four general groups below:

**Efficient market approach:-** financial markets are said to be efficient if the current asset prices fully reflect all the available and relevant information. The effiecient market hypothesis (EMH) is largely attributable to professor eugene fama of the university of Chicago.

**ADVANTAGE OF MARKET BASED MODELS ARE:**

1) Easy to use data are readily observable.
2) Costless to use: data are “free”

**DISADVANTAGE OF MARKET BASED MODELS:**

1) **Conceptual:** models don’t force us to think about forces which may account for future moves in exchange rates.
2) **Even if we assume** these models provided long term unbiased predictiors there are times, especially over the short run, when they may produce large single period forecasting errors.
3) **Implications for global firms and global investors:-** use with caution, given the potential for large short term forecasting errors.

**FUNDAMENTAL APPROACH:-**

Fundamental forecasting is based on underlying relationships that are belived to exists between one or more variables and a currency's value. Given these relationships, a change in one or more of these variables will lead to a forecast of the currency value.

Even if a fundamental relationships exists, it is difficult to accurately quantify that relationship in a form applicable to forecasting. Even if the relationships could be quantified, there is no guarantee that the historical relationships will persist in the future. It is difficult to determine the lagged impact of some variables. It is also called difficult to incorporate some qualitative factors into the model.

## 7. CURRENCY OPTIONS AND INTEREST RATE FUTURES

### Introduction to currency options:

Currency option is a financial intruments that gives its holder a right hut no obligation to buy or sell a currency sometime in the future. Options are traded on over the counter (OTC) as well as on organized market. OTC market and wholesale market. The retail market consists of individual clients as well as

enterprises who buy options from banks to cover against exchange risk. These clients are generally fionancial institution and portfolio managers, apart from big enterprises. The wholesale market comprises of commercial banks and investments banks. They operate on OTC option market are carried out by telephone or by the system of reuter or telerate and may take place round the clock

1) **Call option:** an option giving the buyer of the option, the right out not the obligation to buy a currency.
2) **Put option**: an option giving the buyer of an option, the right but not the obligation to SELL a currency.
3) **Strike price:** the fixed price, at which, the buyer of option contract can exercise his option to buy/ Sell the currency.
4) **Expiry date:** the last date on which the option may b exercised.
5) **European option:** an option which can be exercised only on the specified date.
6) **American option**: an option which can be exercised on may date up to expiry date.

- Derivatives market is lead economic indicators.
- Lower transaction costs
- Provides liquidity, enables price discovery in underlying market
- Incentive to make profits with minimal amount of risk capital
- Eliminate security specific risk.
- Arbitrage between underlying and derivative market.

**INTEREST RATE FUTURES:**

It is not just financial sector, but also the corporate and household sectors that are exposed to interest rate risk. Banks insurance companies primary dealers and provident funds bear significants interest rate risk on account of the mismatch in the tenure of their assets and liabilities.

These entities therefore need a credible institutional hedging mechanism. Interest rate risk is becoming increasingly important for the household sector as well, since the interest rate exposure of several household are rising on account of increase is their savings and investments as well s loans. Moreover, interest rate products are the primary instruments available to hedge inflation risk, which is typically the signal most important that the financial system provides different agents of the economy a greater access to interest rate risk management tools such as exchange traded interest rate derivatives.

**PURPOSE OF TRADING IN INTEREST RATE FUTURES:**

1) **Taking a view on interest rates:** trading involves entering into positions in the futures market for the purpose of making a profit, assuming that market developments are forecast properly.
2) **Hedging:** people holding a portfolio of bonds or investments subject to interest rate risk can reduce arising out of interest rate volatility by hedging.
3) **Arbitrage:** strategies which take into account the price difference between the futures price and the ubderlying price.
4) **Spreading:** spreas trading is a trading method for trader who observe mispricing in te relative value of two different contracts.

**BENEFITS OF IRF:**

1) **Standardization:**only contracts with standardized features are allowed to trade on the exchange.standardization improves liquidity in the market. The following features are standardized.
   **a)** only certain expiry dates are allowed in india viz. last working day of the months of march,

june, September and December.

**b)** The size of contract can only be in multiples of a certain number called the lot size. The lot size currently in india is Rs. 2 lakhs.

**c)** Only some specific bonds can be used for delivery.

2) **Transparency:** transparency is ensured by dissemination of orders and trades for all market participants. Also competitive. Transparency improves the efficiency of the market in terms of discovery of competitive price and liquidity.

3) **Counter-party risk:-** counterparty risk is mitigated by the exchange. The credit guarantee of te clearing house addresses counter party risk thereby improving the confidance of investors leading to wider participation.

**Types of interest rate futures:** interest rate futures can be bought and sold through the trading members of the national stock exchange.

**SHORT TERM INTEREST RATE FUTURES(STIRs)**

Short term interest rate futures” are one of the largest financial markets in the world. Interest rate futures interest rate futures were introduced by the Chicago board of trade in 1975. In india it started trading in june 2003.

There are futures on short and long-term interest rate. But the largest trading volume is in 2-year treasury notes. Futures on shot term interest rates are widely used by banks and investments banks to price and hedge their open trading position and their customs-made OTC derivatives

Advantage of stirs:

1) The short term interest future contracts are more liquid.
2) STIRs are exteremely useful in looking in the yield to be paid to n investors or interest rate to be paid when borrowing money between two periods.

**HEDGING WITH INTEREST FUTURES:**

HEDGING is technique designed to reduce or eliminate financial risk. Hedging is the calculated installation of protection and insurance into a portfolio in order to offset any unfavourable moves. Cross hedging is also usefull in option trading market. Using this technique some suitable results are find out, when a trader need a particular currency for hedging but in the market that currency is not available then trader use cross hedging means they can use another currency then trader use cross hedging means they can use another currency that is positive correlated with required currency. And on buying that currency it reduce risk.

a) Interest rate swap
b) Interest rate caps and floors
c) Interest rate collars

**Interest rate swap:**

An interest rate swap is an agreement to exchange interest payments on a national loan, normally at regular intervals for the term of the swap . swaps are over-the counter instruments and an important instruments for a large companies to manage long term interest rate risk and long term currency risk.

## UNIT - III

## 8. EURO CURRENCY BOND MARKETS

**INTRODUCTION TO EURO CURRENCY MARKET:**

**Introduction :-**

Euro currency market is a dllar or other freely convertible currency deposited in a bank outside its country of origin. It means any currency banked outside its country of origin. Example: a deposite denominated in Japanese yen held in a Brazilian bank is a eurocurrency depisite. The euro currencies market is utilized by banks, MNCs, mutual funds and hedge funds that wish to avoid regulatory requirements, tax laws and interest rate caps often present in domestic banking.

**Characteristics of Euro currency market:**

1) The transactions in each currency take place outside the country of origin of that currency.
2) Euro-currency market is distinct from the foreign exchange market. It is a market for deposite and for loans between banks and between banks and their customers. It is a market in which foreign currencies are lent and borrowed whereas in the foreign exchange market, foreign currencies are bought and sold.
3) The market is essentially unregulated because of which the deposits in this market are unsecured.
4) Deposit are received only on short term basis most of the deposit are interbank, and they tend to be very short term. This leads to concern about risk.
5) It is essentially a wholesale market dealing only is standardized deposit ammount. Leading in this market is therefore done on a consortium basis.
6) The eurocurrency market exist for saving and time deposit rather than demand deposit. That is, institution that create Eurodollar deposit currency in order to buy goods and services.

**Difference between euro- currency market and domestic money market:**

- The euro currencymarket is purely wholesale market as compared to domestic market which is retail banking market.
- The euro currency market has got relative freedom from regulation as compared to domestic markets.
- There are number of problems in euro currency market as compared to domestic market such as jurisdiction, the acceptability of a freeze on deposit in one country by another country.
- The euro currency market is almost exclusively concerned with matched deposit dealing. That is each deposit of an international bank will tend to be matched by an asset of the same currency and of similar maturity.

**FACTORS RESPONSIBLE FOR GROWTH OF EURO- CURRENCY MARKETS:**

The incentive to establish the Eurocurrency market came from regulation in the British and American markets that added to the cost of doing business onshore. In Britain, the bank of England restricted the use of sterling to finance foreign trade and external loans.

1) **Less willingness to hold dollars in USA-based bank**:-many economics were less willing to hold deposit in dollars and they started putting their earnings in London banks.
2) **Regulation 'Q':** the regulation 'Q' of the federal reserve act which composed a ceiling on interest rates that could be paid on deposit by banks in the US. This enable European banks to attract US dollar deposits by offering better interest rates.
3) **Regulation 'M':** regulation 'M' of the federal reserve act which stipulated reserve to be maintained against deposits accepted by banks in the US.
4) **Insure deposit**: the mandatory requirement on all banks in the US to insure deposits accepted by them from the public. The euro currency market is unregulated which means eurobanks were under no obligation to insure euro-currency deposits. This reduced their cost on deposits
5) **The interest equalization tax:** it was introduced by the US monetary authority in 1963 resulted in increasing the effective cost of borrowing in the united states for non-resident entities.
6) **The voluntary restraint program:** it was introduced in the US in 1965 in terms of which, borrowing in the US for financing international projects was restricted.

7) **Full capital account convertibility:** there had been full capital account convertibility adopted by many developed nations, which allowed them to conduct transactions of local financial assets into foreign financial asset freely.

## EURO BOND MARKET:

**Introduction:**

a) **Domestic bonds:-** issued locally by a domestic borrower usually denominated in the local currency. For example , a Japanese company issuing bonds in Yen currency in japan.
b) **Foreign bonds:** issued in a local market by a foreign borrower- usually denominated in the local currency. For example, a Japanese company issuing US-dollar denominated bonds in the US market.
c) **Eurobonds:** placed mainly in countries other than the one in whose currency the bond is denominated. For a example A Japanese company issuing yen denominated bond in the the US market.
   **A Eurobond** is an international bond that is denominated in a currency not native to the country where it is issued. Eg. Coca cola issuing a U.S dollar denominated bond in Europe. It can be categorized according to the currency in which it is issued.

## CHARACTERISTICS OF EURO BONDS:

1) Eurobonds are not regulated by the country of the currency in which they are denominated.
2) Eurobonds are "bearer bonds", i.e, they are not registered anywhere centrally, so whomever holds. The bond is considered the owner. Bearer status also enables Eurobonds to be held anonymously.
3) The Eurobond market is largely a wholesale with bonds held by large insitutioins. Pension funds insurance companies, mutual funds.
4) Since they are denominated in an offshore currency, investors in Euro-bonds assume both credit and foreign exchange risks
5) Some publically offered Eurobonds trade on stock exchange normally in London or luxembourg. Others are placed directly with institutional investors without a listing
6) Withholding taxes are not imposed on Eurobond coupon payments.

## ADVANTAGE OF EUROBOND FINANCING:

1) Issuers have the freedom to issue bonds in a country. Region of their choice. They also have the choice of currency in floating the Eurobond
2) Eurobonds gives issuers the opportunity to take advantage of favourable regulatory and lending conditions in other countries.
3) Obtaining financing by issuing Eurobonds is often cheaper than Eurobond mrket as compared to other debt markets.
4) It is a way for companies to obtain financing in an economy where financing is difficult to obtain.
5) Issuing euobond gives companies wider access to the international market which they may normally not be able to access.
6) It would prevent repeated financial crists that creating a destabilizing economic and political environment.

**DISTINGUISH BETWEEN EUROBONDS AND FOREIGN BONDS:**

| # | Heading | Eurobonds | Foreign bonds |
|---|---|---|---|
| **1.** | **Meaning** | A bond is an international in a currency not native to the country where it is issued | A bond issued by a foreign borrower in the currency of the country in which it is sold |
| **2.** | **Currency** | Issued in currency other than the one in whose currency bond is denominated | Issued in local currency |
| **3.** | **Types** | Straight Eurobonds, floating rate bond notes, zero-coupon convertible bonds, etc | Samurai bulldog sovereign, yankee bonds, etc. |
| **4.** | **Issued by** | Usually a Eurobond is issued by an international syndicate | A foreign bond is most often issued by a foreign firm to raise capital in a domestic market |
| **5.** | **Example** | Japanese company issuing US -dollar denominated bonds in the US market | Japanese company issuing yen denominated bond in the US market. |

**TYPES OF EUROBONDS:**

1) Conventional or straight Eurobonds have a fixed coupon and maturity date when all the principle is repaid.
2) Floating rate bond notes (FRN) are usually short to medium term bond issues, with a coupon interest rate that "floats" i.e goes up or down in relation to a benchmark rate plus some additional "spread" basis points
3) Zero coupon bonds do not have interest pyments. The investor in this type of Eurobond may be looking for some kind of tax advantage.
4) Convertibl bonds can be exchanged for another instruments, usually an ordinary share of dhare of the issuing organization.
5) High yield bonds are also part of the Eurobond market, a class of bonds which individual investors may encounter.

**INNOVATION IN THE EURO BOND MARKET:** From a base of zero in the late 1950s, the Eurobond market has grown to an annual volume of new issues that often nnears or surpasses the annual volume of new US corporate bond issues.
Through innovations in market processes and product offerings the Eurobond market has carved out an important place in the international capital market providing benefits to investors and borrowers.

**1)Pay-In-Kind Bonds:-** In This Case, The Issuers Of Bonds May Choose To Pay Interest Either In Cash Or In Additional Bonds With The Same Face Value, Thereby Giving The Issuer An Opportunity To Delay The Payment Of The Bonds, At The Time Of Maturity Of The Bond.

2) **Reverse Floaters:-** Thee Are The Floating Rate Bonds Whereby The Coupon Rate On The Bonds Falls When General Level Of Interest Rates In The Economy Rises.

3) **Financial Performane:** E.G Walt Disney Has Issued Bonds With Coupon Rates Tied To The Financial Performance Of Several Of Its Films. If Its Films Do Well And Go Financially Strong.

4) **Issuer Also Issue 'Disaster Bonds':-** Based On The Happening Or Not Happening Of An Event. For Example, Electrolux Once Issued A Bond With A Final Payment That Was Depended On Whether There Has Been An Earthquake In Japan.

5) **Indexed Bonds:** Make Payments That Are Tied To A General Price Index Or The Price Of A Particular Commodity. For Example, Mexico Has Issued Bonds With Payments That Depend On The Price Of Oil.
6) **Swap Agreement:-**In Swap, Two Borrowers Raise Money Separately And Then Agree To Make Each Other;S Interest Payments, One In Fixed Agree To Make Each Other's Interest Payments.

7) **Floating Rate Notes (Frn):-** Are Debt Instruments With A Coupon That Change Periodically According To Some Predeterminrd Interest Rate Benchmark. Like Libor, Mibor Etc.

8) **Zero Coupon** Bonds Are Single-Payments Long-Term Securities That Do Not Call For Periodic Interest Payments. These Bonds Are Sold At A Discount From Par, And The Investor Entire Return Is Realized At Maturity.

9**) Dept-Equity Hybrid Instruments** Are Corporate Bonds That Give The Investor The Right, But Not The Obligation, To Convert The Bond Into Another Security, Usually Into Shares At A Price Fixed On Issue.

10) **Derivative Instruments**, Like Forwards, Futures Contracts, Option Contracts And Swap, Which Can Be Used By Borrowers And Investors To Either Protect Themselves Against Adverse Foreign Exchange Rate Movements

## 9. INTERNATIONAL EQUITY MARKETS AND INVESTMENTS

**Introduction to international equity market:**

**Introduction:-**

International equity markets are an important platform for global finance.they not only ensures the participation of a wide variety of participants but also offer global economies to proposer. International fund raising used to be the domain of MNCs.

They not only source raw material across the world or sell products at many geographical regions, they also search for capital all over the world and raise capital wherever it is cheaper.

At a faster speed. Even relatively smaller companies are sourcing capital from foreign countries and do not want to remain restricted as well as do not want to depend on the domestic equity market.

**Elementsof international equity market:**

1) Cross-listing:- cross-listing refers to having the sales listed on one or more foreign exchange. In particular, MNCs do this generally, but non-MNCs also cross-list. A firm may decide to cross-list its shares for the following reasons:
    a) Cross-listing provides a way to expand the investor's base, thus potentially increasing its demand in a new market.
    b) Cross-listing offers recognition of the company in a new capital market, thus allowing the firm to sources new equity or debt capital from local investors.
    c) Cross-listing offers more investors. International portfolio diversification is possible for investors when they trade on their own stock exchange.
2) Yankee stock offering: in 1990s, many international companies, including the latin americans, have listed their stocks on U.S exchange to prime market for future capital to U.S public investors.
3) American and global depository receipts (ADR & GDR) : an ADR is a receipt that has a number of foreign shares remaining on deposit with the U.S depository's custodian in the issuer's home market.

- ADR are denominated in dollars, trade on a US stock exchange, and can be purchased through the investors regular broker. This is easier than purchasing and trading in US stocks by entering the US exchange.
- ADR trades clear in three business days as do U.S equities, wherea settlement of underlying stocks vary in other countries.
- ADR price quotes are in U.S dollars.

4) Global registered shares (GRS): GRS are a share that are traded globally, unlike the ADRs that are receipts of the bank deposits of home market shares and are traded on foreign markets.

**International equity market benchmarks**

One of the most common ways to evaluate investments performance is not compare performance against the returns of an appropriate market benchmark. equity market benchmark allow an investors to measure the average performance of global equity markets. There are several stock market indexes that are used to benchmark the perfomane of a given market.

1) The central advantage of using the benchmarked is the wide market breadth of the companies included in the benchmark index.

2) Market benchmarks allow investors to make informed decisions regarding active versus passive alternatives.
3) Investors can better understand where their rates of retirns are coming from.
4) Ensures advisor/ investors are accountable for their investments decisions.
5) The market benchmark data is readily accessible. The values of these indexes are displayed every day by financial media outlets all over the world.

(A) International stock indexes:
   1) DJIA: the dow jones industrial average (DJIA) contains 30 of the largest and most influential companies in the U.S
   2) S&P 500: the main drawback of the DJIA is that it only contains 20 companies the S&P 500 improves on the DJIA in this respect by including 500 companies.
   3) NASDAQ Composite index: the NASDAQ composite index represents all the stocks that trade on the NASDAQ stock market. The recent surge in popularity of technological stocks has launched the NASDAQ into the spotlight.
   4) MSCI EAFE: MSCI stands for morgan Stanley capital international and EAFE stands for Europe, Australasia, and the far est. MSCI EAFE index is an equity index which captures large and mid-cap representation across developed markets countries around the world.
   5) MSCI world index: the MSCI world inex is a broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries.
   6) The BBC global 30: it is a worldwide stock market index, run as a global economic barometer.

(B) Domestic indexes:
   Local indees are widely used by domestic investors to calculate performance, market beats, hedge ratios, etc. private international investors often prefer domestic indexes for the following reasons:

**Risk and return from forign equity investments:**

**Introduction:-** investors and companies put money in foreign equity investments to earn a return on their money, but often they receive less than expected--- indeed, sometimes the return can be negative when the investors, receive less the initial investments.with some investments the entire investments can be lost. Investments risk is the chance that he will receive less than the expected return from an investments, and differs according to the type of investment.

**Risk-return tradeoff:**

Investors differ in their risk tolerance, which is the risk that an investor is willing to take or is comfortable with in the hope iof getting higher returns. Investors who are risk averse don't want to risk much in exchange for their little or no risk, they will earn very little as areturn at the opposite end of the spectrum there are investments, such as options, where risk-seeking investors can earn several their investments within a shot time or lose the entire investments.

**Types of investments risk:**

Risk can be defined as the chance that an investments actual return will be different that expected. Risk means the possibility of losing some, or even all, of the original investments. Low levels of risk are associated with low potential returns and vice versa. The risk/ return tradeoff is the balance between the desire for the lowest possible risk and the highest possible return investments risk can be divided into two categories: systematic and unsystematic.

**Systematic risk:** also known as market risk or "un-diversifiable risk"' systematic risk is the uncertainty

inherent to the entire market or entire market segment. Also referred to as volatility, systematic risk is the day to day fluctuations in a stock's price.

**Unsystematic risk:-** also known as specific risk "diversifiable risk" or residual risk" this type of uncertainty comes with the company or industry one invests in and can be reduced through diversification. For example, news that is specific to a small number of stocks, such as a sudden strike by the employees of a company one has shares in,is considered to be unsystematic risk.

**Types of risk**

1) **Credit or default risk**:-credit risk is the risk that a company or individual will be unable tp pay the contractual interest or principle on its debt obligation.
2) **Country risk**:- country risk refers to the risk that a country wont be able to honour its financial commitments. When a country defaults on its financial commitments. When a country defaults on its obligation it can harm the performance of all other financial instruments in that country as well as other countries.
3) **Foreign-exchange risk**:- when investing in foreign countries one must consider the fact that currency exchange rates can change the price of the asset as well. Foreign exchange risk applies to all financial instruments that are in a currency other than the domestic currencies.
4) **Interest rate risk**:- interest rate risk is the risk that an investments's value will change as a result of a change in interest rates.
5) **Political risk:-** political risk represents the financial risk that a country's government will suddenly change its policies. This is a major reason why developing countries lack foreign investments.

- Taxex different types of investments are taxed differently. The typr of account an investments is held in and a taxpayer's tax bracket also affect the amount by which taxex diminish investment returns.

**Meaning of depository receipts:**

Depository receipts are a type of negotiable financial security representing a security, usually in the form of equity, issued by a foreign publicly-listed company. However DRs are traded on a local stock exchange though the foreign public listed company is not traded on the local exchange.

International capital market comprises of debt and equity market. Debt market includes international bond market and the equity market includes international equity market. The international equity market can further be divided into various depository receipts-ADR, GDR and IDR.

**(1) ADR- American depository receipts:-**

American depository receipts popularly known as ADRs were introduced in the American market in 1927. ADR is security issued by a company outside the U.S which physically remains in the country of issue, usually in the custody of a bank, but is traded on U.S. stock exchange in other words, ADR is a stock that trades in the united states but reprents a specified number of shares in a foreign corporation.

**An ADR:**

- Is a negotiable certificate issued by a U.S bank

- Represents a specified number of shares of a foreign company
- ADRs are denominated in U.S dollars
- Ownership in the shares of a non-U.S company and trades in U.S financial markets
- ADRs are listed on US stock exchange: NYSE, AMEX, or NASDAQ.

**Different types of ADR programs:**

**A sponsored ADR** is approved and backed by the foreign company behind the shares . an investor looking at an OTC ADR should verify whether the ADR shares are sponsored and may want to stay clear of unsponsored shares.

**Sponsored ADR** is an ADR issued by a bank on behalf of the foreign company whose equity serves as the underlying asset. A sponsored ADR creates a legal relationship between the ADR and the foreign company which absorbs the cost of issuing the security.

An unsponsored ADR an ADR issued by a depositary bank without the involvement or participation-or even the consent -of the foreign issuer whose stock underlies the ADR the issuer therefore has no control over an unsponsored ADR, in contrast to a sponsored ADR where it retains control. Unsponsored ADRs are usually established by depositary banks in response to investor demand. Shareholder benefits and voting rights may not extended to the holders of these particular securities. Unsponsored ADRs generally trade over-the-counter (OTC) rather than on United States exchanges.

| SOPONSORED ADR | UNSPONSORED ADR |
|---|---|
| Issued with cooperation of the company whose stock will underlie the ADR | Issued by – broker / dealer or depository bank without the involvement of company whose stock underlies the ADR |
| Comply with regulatory reporting | No regulatory reporting |
| Listing on international Stock Exchanges allowed. | Trade on OTC market |

**Levels of ADR:**

(a) **Level 1 ADRs**: level 1 ADRs are the lowest level of sponsored ADRs and also the simplest methodfor companies top aces the US capital markets level 1 ADRs are traded in the over-the-counter (OTC) market. The issuing company does not have to comply with US market.

(b) **Level II ADRs**: level II ADRs enable companies to list their ADRs on NASDAQ, the American stock exchange the new York stock exchange and the American stock exchange, the new York stock exchange and the American

level II ADRs require a form 20- F and form F-6 to be filled with the SEC, as well as meting the listing requirements and filling a listing application with the designated stock exchange.

(c) **Level III ADRs:-** level III ADRs enable companies to list their ADRs on NASDAQ, the Amex, the NYSE or the OTC bulletin board and make a simultaneous public offering of ADRs in the united states. The benefits of level III ADRs are substantial; it allows the issuer to raise capital and leads to much greer visibility in the US market. Level III ADR programs must comply with various SEC rules, including the full registration and reporting requirements of the SEC's

exchange Act.

1) **GDR- Global depository receipts:**

These are similar to the ADR but are usually listed on exchanges outside the U.S, such as Luxembourg or London Dividends are usually paid in U.S. dollars. GDR allows investors of any country to purchase and sell shares of a company in any other country, entitling the shareholders to partake in the dividend and capital gains of that foreign company.

A GDR is set up when a company from one country intends to list its publicly-traded shares in any foreign country.

2) **IDR-Indian depository receipts:**

IDR is an exact reverse of the ADR/GDR issue. IDR's allow foreign companies to mobilizing funds from India markets these foreign companies get listed on Indian stock exchange. IDR is a financial instruments denominated in Indian rupees in the form of a depository receipt created by a domestic depository against the underlying equity of issuing company to enable foreign the underlying shares would accrue to the depository receipts holders in India. Standard chartered PLC became the first global company to file for an issue of Indian depository receipts in India in june 2010. IDR needs to be registered with SEBI.

- SEBI has set Rs.50 crore as the lower limit for the IDRs to be issued by the Indian companies.
- Moreover, the minimum investments required in the IDR issue by the investor has been fixed at Rs two lakh.
- Also, the IDR issuing company should have good track record with respect to securities market regulations and companies not meeting the criteria will not be allowed to raise funds from the domestic market.

**Parties involved in ADR/GDR issue:**

1) The issue company is the first party this is typically a large foreign based corporation that is already listed on a local foreign exchange. Rather than dual list its shares on its home exchange and on a U.S exchange.
2) Custodian bank is the second party in this process. They accept all the relevant documents from the issuing company and keep them in custody. They accepts the shares from the company stores all of them in its vault.
3) Depository bank:- the overseas bank by accepting the issuing company's shares and selling representative certificates to investors. It is a subsidiary of a commercial bank located in the country where the DR's are to be issued.
4) A stock exchange:- they list the bank certificate for trading allowing investors to buy and sell ADR/GDR units just as they would normal shares.

5) Lead manager:-they are merchant bankers for the issuing company. They help in smoothing the DR issue process. The company has to chose a competent lead manager to managers usually charge a fee as percent of the issue.

**Advantage of ADRs/GDRs issue:**

- For individuals, adrs/ GDRs are an easy and cost effective way to buy shares of a foreign company. The individual are able to save considerable money and energy by trading in ADR's/GDRs, as it reduces administrative costs and avoids foreign taxex on each transaction
- It gives attractive pricing to the issuer.
- It provides diversification opportunity to the investors
- ADRs/GDRs can be listed on any of the overseas stock exchanges.
- Capital can be easily raised from foreign markets.
- It helps enhancing the image of company globally.

**Distinguish between ADR and GDR:**

| # | Heading | ADR | GDR |
|---|---|---|---|
| 1 | Acronym | American depository receipt | **Global depository receipt** |
| 2 | Meaning | ADR is a negotiable instruments issued by a US bank, representing non-us company stock trading in the US stock exchange | GDR is a negotiable instrument issued by the international depository bank, representing foreign company's stock trading globally. |
| 3 | Relevance | Foreign companies can trade in US stock market | Foreign companies can trade in any country's stock market other than the US stock market. |
| 4 | Issued in | United states domestic capital market | European capital market |
| 5 | Listed in | American stock exchange such as NYSE or NASDAQ | Non-US stock exchange such as London stock exchange or Luxembourg stock exchange. |
| 6 | Negotiation | In America only | All over the world |
| 7 | Disclosure requirement | Stringent documentation & filing requirements | Less stringent-limited documentation |
| 8 | Lead time required | 5 to 6 months to complete process documentation | Maximum 3-4 months to complete documentation |
| 9 | Market | Retail investors market | Institutional market. |

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# 10. INTERNATIONAL FOREIGN EXCHANGE MARKETS

**MEANING OF INTERNATIONAL FOREIGN EXCHANGE MARKETS:-**

The foreign exchange market is the market in which participants are able to buy sell, exchange and speculate on currencies. There are many countries in the world and each country has its own currency- which result in numerous currencies thought the globe in international trad, buyers country has to make payment to the seller country according to the currency of the seller. Exchange rate is required to convert the one currency into picture.

The foreign exchange market is made up of a vast number of participants. The products traded on the foreign exchange market are currencies.

**Distinguish Between FDI & FPI.**

| Sr.no. | Point | FDI | FPI |
|---|---|---|---|
| 1 | **Meaning** | **FDI** refers to international investment in which the investor obtains a lasting interest in an enterprise in another country. | On the other hand, **FPI represents** passive holdings of securities such as foreign stocks, bonds, or other financial assets, none of which entails active management or control of the securities' issuer by the investor. |
| 2 | **Involvement - direct or indirect** | Involved in management and ownership control; long-term interest | No active involvement in management. Investment instruments that are more easily traded, less permanent and do not represent a controlling stake in an enterprise. |
| 3 | **Sell off** | It is more difficult to sell off or pull out. | It is fairly easy to sell securities and pull out because they are liquid. |
| 4 | **Comes from** | Tends to be undertaken by Multinational organisations | Comes from more diverse sources e.g.a small company's pension fund or through mutual funds held by individuals; investment via equity instruments (stocks) or debt (bonds) of a foreign enterprise. |
| 5 | **What is invested** | Involves the transfer of non-financial assets e.g. technology and intellectual capital, in addition to financial | Only investment of financial assets. |

| | | assets. | |
|---|---|---|---|
| 6 | **Stands for** | Foreign Direct Investment | Foreign Portfolio Investment |
| 7 | **Volatility** | Having smaller in net inflows | Having larger net inflows |
| 8 | **Management** | Projects are efficiently managed | Projects are less efficiently managed |

*"Nothing in the world is ever completely wrong. Even a stopped clock is right twice a day."*

# PRACTICAL PROBLEMS OF INTERNATIONAL FINANCE

## DIRECT QUOTE

❖ ***Identify the location where the following quotations are direct and calculate the indirect form:***

a) 1GBP = SGD 2.8272 -82

b) 1AUD = EUR 0.6733 – 43

c) CHF 1.2325 – 35 per USD

d) 100INR = JPY 198.2350 – 50

e) INR 45.8335 – 65 = 1USD

## INDIRECT QUOTE

❖ ***Identify the location where the following quotations would be classified as Indirect and convert them to direct form:***

a) 100INR = CHF 2.5858 – 68

b) 1EUR = CAD 1.4317 - 27

c) USD 0.1616 – 23 per SEK

d) 1 AUD = SEK 4.9350 – 50

e) USD 0.7000 – 10/SGD

## CROSS RATE

a) 1USD = CHF 1.2325 – 35
1USD = CAD 1.1285 – 95
Calculate value of 1 CAD in terms of CHF

b) AUD 1.1818 – 28 /USD
SGD 1.4343 – 53 /USD
Calculate AUD per SGD quotation.

c) USD/INR 46.0485 – 35
USD/SEK 5.8525 – 25
Calculate INR/SEK Quotation.

d) EUR 0.7135 – 45 per USD
USD 1.6767 – 77 per GBP
Calculate GBP per EUR quotation.

e) USD 1.6990 – 00 per GBP
EUR 1.2470 – 80 per GBP
Calculate USD per EUR quotation.

f) USD/INR 46.6375 – 25
EUR/USD 1.2870 – 80
Calculate INR/EUR quotation.

g) Calculate the rate of following currencies against Indian Rupee.

| | | BID | OFFER |
|---|---|---|---|
| 1USD | = | Rs. 44.20 | 44.30 |
| 1GBP | = | USD 1.8100 | 1.8110 |
| 1EURO | = | USD 1.2050 | 1.2060 |
| 1USD | = | JPY 113.80 | 113.90 |
| 1USD | = | CHF 1.2970 | 1.2980 (SWISS FRANKS) |

h) Calculate the rate of following currencies against Indian Rupee.

| | | BID | OFFER |
|---|---|---|---|
| 1USD | = | Rs. 39.80 | 39.90 |
| 1GBP | = | USD 2.0300 | 2.0310 |
| 1EURO | = | USD 1.4090 | 1.4100 |
| 1USD | = | JPY 114.80 | 114.90 |
| 1USD | = | CHF 1.1700 | 1.1710 (SWISS FRANKS) |

i) Calculate the rate of following currencies against Indian Rupee.

| | | BID | OFFER |
|---|---|---|---|
| 1USD | = | Rs. 38.60 | 38.90 |
| 1GBP | = | USD 2.0300 | 2.0311 |
| 1EURO | = | USD 1.4090 | 1.3100 |

1USD = JPY 114.804 114.803

j) Calculate the rate of following currencies against Indian Rupee.

| | | BID | OFFER |
|---|---|---|---|
| 1USD | = | Rs. 46.80 | 46.90 |
| 1GBP | = | USD 2.0400 | 2.0420 |
| 1EURO | = | USD 1.5080 | 1.5100 |
| 1USD | = | JPY 214.80 | 214.90 |
| 1USD | = | CHF 1.1800 | 1.1810 |

k) Calculate the rate of following currencies against Indian Rupee.

| | | BID | OFFER | |
|---|---|---|---|---|
| 1USD | = | Rs. 44.80 | 44.90 | |
| 1CAD | = | USD 1.0230 | 1.0240 | Canadian Dollar |
| 1SGD | = | USD 0.8090 | 0.8100 | Singapore Dollar |
| 1USD | = | ZAR 6.7690 | 6.7700 | South African Rand |
| 1USD | = | THB 30.28 | 30.29 | Thai Baht |

l) Calculate the rate of following currencies against Indian Rupees.

| | Bid | Offer |
|---|---|---|
| 1 USD INR | 46.8090 | 46.9010 |
| 1CAD USD | 1.0240 | 1.0250 |
| 1SGD USD | 0.8080 | 0.8120 |
| I USD ZAR | 7.6090 | 7.6200 |
| 1 USD GBP | 0.7080 | 0.7090 |

m) Calculate the rate of following currencies against Indian Rupees.

| | Bid | Offer |
|---|---|---|
| 1 USD INR | 60.80 | 60.90 |
| 1GBP USD | 2.0300 | 2.0310 |
| 1 EUR USD | 1.4090 | 1.4100 |
| 1 USD JPY | 114.80 | 114.890 |
| 1 USD CHF | 1.1700 | 1.1710 |

n) Calculate the rate of following currencies against Indian Rupees.

| | Bid | Offer |
|---|---|---|
| 1 USD INR | 60.15 | 60.16 |
| 1GBP USD | 1.6500 | 1.6600 |
| 1 EUR USD | 1.3680 | 1.3700 |
| 1 USD JPY | 103.9000 | 103.9300 |
| 1 USD CHF | 0.8800 | 0.8900 |

o) Complete the following table:

| | 1USD = | 1GBP = | 1 CAD = |
|---|---|---|---|

| | | | |
|---|---|---|---|
| USD | 1 | 1.6667 | 0.9069 |
| GBP | ? | 1 | 0.5441 |
| CAD | ? | ? | 1 |

p)

| | **1USD =** | **1GBP =** | **1 CAD =** |
|---|---|---|---|
| USD | 1 | 1.6667 | ? |
| GBP | ? | 1 | ? |
| CAD | 1.1027 | ? | 1 |

## GEOGRAPHICAL ARBITRAGE

a) 1 USD = CAD 1.1293 – 03
1 USD = CAD 1.1275 – 85

b) 1 GBP = CHF 2.4326 - 36
1 GBP = CHF 2.4345 – 55

c) USD 1.2448-58 per EUR
EUR 0.8050-60 per USD

d) GBP/SEK 8.9950-50
SEK/GBP 0.1090 – 00

e) 100 INR / USD 2.1583-88
USD/INR 46.3375-25

f) 100 JPY / INR 40.2450-50
100 INR / JPY 248.4850-50

g) CAD/INR 32.7850-00
100INR/CAD 3.0425-50

h) EUR/AUD 1.5998-08
AUD/EUR 0.6223-33

i) SGD 1.8737-47 per EUR
EUR 0.5355-65 per SGD

j) CHF 2.4189-99/GBP
GBP 0.4110-17/CHF

k) Two banks are quoting the following US $ rates:
Bank A :Rs. 47.9810-48.1110
Bank B : Rs.48.0110-48.2350
Find out the arbitrage opportunity.

## TRIANGULAR ARBITRAGE

1) GBP/USD 1.6985
   USD/AUD 1.1875
   GBP/AUD 2.0195

2) EUR/USD 1.2398
   USD/CHF 1.2298
   CHF/EUR 0.6598

3) USD/SEK 5.9935
   GBP/SEK 9.8735
   GBP/USD 1.6435

4) EUR/SGD 1.9578
   EUR/CHF 1.6478
   CHF/SGD 1.1878

5) CAD 1.8900 – 10/GBP
   CAD 1.1245 – 55/USD
   GBP 0.5930 – 35/USD

6) GBP/INR 74.8525 – 75
   USD/GBP 0.5625 – 30
   100INR/USD 2.3715 – 20

7) EUR/AUD 1.4892-02
   EUR/USD 1.2390-00
   USD/AUD 1.1990-00

8) SEK 8.0050 – 00 = 1 EUR
   SGD 1.7130 – 40 = 1 EUR
   SEK 4.6775 – 25 = 1 SGD

9) EUR/CHF 1.6197 – 07
   EUR/SGD 1.9197 – 07
   SGD/CHF 0.8397 – 07

10) The following quotes are from New York:-
   1 GBP = USD 1.5975/6010
   1 EUR = USD 1.2375/90

Find the cross rate GBP EUR
The following quote is from Frankfurt:-
1 GBP = EUR 1.2950/65
Find whether there is arbitrage opportunity. If arbitrage is possible find the arbitrage profit for 1 million Euro.

11) The following foreign exchange quote are available in New York.
USD 1 = GBP 0.6542/0.6547
USD 1 = CHF 1.05530/1.5535
Calculate the cross currency quote for 1 GBP in terms of CHF
The following quote is available in Zurich.
GBP 1 = CHF 2.3722/2.3745
Compare this with the calculated cross currency quote and state whether arbitrage opportunity exists. Calculate the same (if any) for 1 million GBP. (April 2011)

12) The following foreign exchange quotes are available in New York.
AUD 1 = USD 0.7602/0.7613
CAD 1 = USD 0.6732/0.6741
Calculate the cross currency quote for 1 CAD in terms of AUD.
The following quote is available in Sydney.
CAD 1 = AUD 0.8895/0.8915
Compare this with the calculated cross currency quote and state whether arbitrage opportunity exist. Calculate the same (if any) for 1 million CAD. (Oct 2011)

13) Given:-
USD/CAD 1.1685-1.1695
USD/CHF 1.3785-1.3795
CAD/CHF 1.1885-1.1895
Identify and calculate triangular arbitrage profit. (Assume you have 1 million CAD)

## SPREAD

1) 1 USD = CAD 1.1290 – 00 Calculate %age spread.

2) 100 INR = USD 2.1605 – 10 Calculate %age spread.

3) USD / SGD 1.4395-05
GBP / SGD 2.6865-75
Calculate GBP/USD Quotation.
Establish relationship between the three quotations in terms of %age spread.

4) Mean rate GBP/INR 78.6500 AND SPREAD = 0.0030
Calculate %age spread and GBP/INR quotation.

5) Flat rate USD/AUD 1.1785 and spread = 10 points
Calculate %age spread and EUR/SEK quotation.

6) Average rate EUR/SEK 8.0025and spread = 80 points.
Calculate %age spread and EUR/SEK quotation.

7) Ask rate USD/CHF 1.2318 and spread = 12 points.
Calculate USD/CHF quotation and %age spread.

8) Bid rate EUR/CHF 1.6873 and spread = 0.0014
Calculate EUR/CHF quotation and %age spread.

9) Mid rate USD/EUR 0.7108
Percentage spread = 0.0520%
Calculate spread and USD/EUR quotation.

10) Spread = 0.0014 and % spread = 0.0810%
Calculate mid rate and the USD/CHF quotation.

11) The following quote is given in Mumbai.
1 USD = Rs. 44.7250 – Rs. 44.7300
Is it a direct quote or indirect quote?
Find the mid rate, spread and the spread percentage.
Calculate the inverse quote.

12) Study the following quote:-
1 USD = NZD 1.5510/1.5560

i. Find the midrate, spread and percentage.
ii. Find the inverse quote.

13) The following quote is given.
USD 1 = CAD 1.1630/50
Identify the mid rate, spread and the spread percentage.
Calculate the inverse quote.

14) The following quote is given in New York.
EUR 1 = USD 1.2596/1.2620
Is it a direct or indirect quote?
Identify the mid rate, spread and the spread percentage.
Calculate the inverse quote.

## FORWARD RATES CALCUATIONS: ( TABLE/SCHEDULE METHOD)

1) Spot USD / INR 55.8325 – 50 USD / CHF 1.0275 – 85
1 month forward 735 – 765 12 - 07
3 month forward 2635 – 2715 32 - 27
6 month forward 5545 – 5675 107 - 77
Calculate 1,3,6 month CHF / INR quotations.

2) Spot GBP / USD 1.5890 – 00 USD / CAD 1.1298 - 02
1 month forward 15 – 05 05 - 10
2 month forward 27 – 12 12 - 20
3 month forward 37 - 17 22 - 32
Calculate 1,2,3 month GBP / USD quotations.

3) Spot GBP / INR 78.3250 – 75 GBP / USD 1.6813 - 23
1 month forward 150- 175 12 - 07
3 month forward 390 – 475 32 - 23
6 month forward 840 – 1015 59 - 41
Calculate 50 days forward USD / INR quotations.
Calculate 100 days forward USD / INR Quotations.

4) Spot EUR / SEK 8.0215 – 90 EUR / CAD 1.3715 – 25
1 month forward 425 – 475 15 – 25
3 month forward 1425 – 1575 35 – 55
Calculate 42 days forward CAD / SEK quotation.
Calculate 72 days forward CAD / SEK quotation.

5) Spot USD / INR 55.6320 – 50
Spot / Jan 615 – 645
Spot / Feb 1495 – 1545
Spot / March 2425 – 2630
Calculate USD / INR quotation for 13 Feb
Calculate USD / INR quotation for 19 March.

6) Data provided by Bank 'A' on 18 March 2013
Spot EUR / DKK 7.5380 – 90
Spot / March 30 – 35

Spot / Apr 105 – 125
Spot / May 198 – 249
Calculate EUR / DKK quote of bank 'A' for 1 month 6 days forward.
Calculate EUR / DKK quote of bank 'A' for 2 month 2 days forward.

7) Spot GBP / EUR 1.2118 – 28
Spot / Sept 35 – 25
Spot / Oct 65 – 55
Spot / Nov 96 – 86
Spot / Dec 126 – 116
Calculate GBP / EUR quotation for 11 Oct.
Calculate GBP / EUR quotation for 24 Nov.

8) On 10 June Bank 'A' quotes:
Spot EUR / USD 1.2935 – 45
Spot / July 08 – 03
Spot / August 28 – 18
Spot / September 48 – 33
Calculate 1 month 5 days forward EUR / USD quotation
Calculate 2 month 10 days forward EUR / USD quotation.

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## FORWARD RATES CALCUATIONS: ( FORMULA METHOD)

1) Spot GBP / USD 1.6835
USD interest rate: 3.25% p.a.
GBP interest rate: 3.65% p.a.
Calculate 3 months forward GBP/USD rate.

2) 73 days forward USD / CAD 1.1363
CAD interest rate: 3.6250% p.a.
USD interest rate: 2.8750% p.a.
Calculate spot USD / CAD rate.

3) Spot EUR/SGD 1.9382
60 days forward rate: 1.9402
EUR interest rate; 2.25% p.a.
Calculate SGD interest rate.

4) Spot EUR / CHF 1.4982
219 days forward rate: 1.4918
CHF interest rate: 1.35% p.a.
Calculate EUR interest rate.

5) 120 days forward 100 INR / USD 2.1695
INR interest rate: 4.25% p.a.
USD interest rate: 2.65% p.a.
Calculate spot USD / INR rate.

6) Spot GBP / SEK 9.8835
6 months forward rate: 10.0085
GBP interest rate: 3.1250% p.a.
Calculate SEK interest rate.

7) 4 months forward USD / INR rate 46.0035
Includes premium on USD 1165 points
USD interest rate: 2.5% p.a.
Calculate INR interest rate.

8) Spot USD / JPY 91.2200
JPY interest rate 0.35% p.a.
USD Interest rate: 2.65% p.a.
Calculate 292 days forward USD / JPY rate.

## CALCULATION OF SWAP POINTS

1) Spot EUR / CHF 1.5735 – 1.5745
EUR Interest rates: 2.25 - 2.50% p.a.
CHF Interest rates: 1.00 – 1.25% p.a.
Calculate 6 months forward quotations and swap points.

2) Spot GBP / INR 78.3525 – 75
3 months forward 78.4980 – 78.6005
INR deposit Interest rate: 4.00% p.a.
GBP deposit Interest rate: 3.00% p.a.
Calculate the arbitrage free Lending rates for GBP and INR.

3) Spot USD / CHF 1.2360 – 70.
73 days forward 1.2325 – 1.2345
USD Lending Interest rate: 2.50% p.a.
CHF Lending Interest rate: 1.25% p.a.
Calculate the arbitrage free deposit rates for USD and CHF.

4) Spot USD / AUD 1.1885 – 95
6 months forward swap points 15 – 49
AUD deposit interest rate: 3.00% p.a.
USD deposit interest rate: 2.50% p.a.
Calculate the arbitrage free lending Interest rates for AUD and USD.

5) Spot GBP / SEK 9.0335 – 9.0385
4 months forward swap points 74 – 224
SEK Lending interest rate: 3.75% p.a.
GBP Lending interest rate: 3.25% p.a.
Calculate the arbitrage free deposit interest rates for SEK and GBP.

6) Spot GBP / USD : 1.9845 – 1.9855
USD Interest rate : 4.1250 -4.3750% p.a.
GBP Interest rate : 5.8750 – 6.1250% p.a.
Calculate the swap points (forward margins) for three months.

## ANNUALISED FORWARD MARGIN (AFM)

1) Spot USD / SEK 5.9715
3 month forward rate: 6.0085
Calculate 3 month AFM.

2) Spot USD / INR 45.3820
6 month AFM: (+) 2.25%
Calculate 6 month forward USD / INR rate.

3) 60 days forward GBP / SGD 2.8038
60 days AFM: (-) 1.25%
Calculate Spot GBP / SGD rate.

4) Spot EUR / JPY 119.3525
1 month forward rate: 118.9745
Calculate 1 month AFM.
If JPY interest rate = 0.25% p.a.
Calculate EUR interest rate.

5) Spot GBP / EUR 1.2118
3 month forward rate: 1.2118
Calculate 3 month AFM and interpret the result.

6) Spot EUR / AUD 1.3932
3 month AFM: premium 1.75%
Calculate 3 month forward EUR / AUD rate.
If AUD interest rate = 3.25% p.a. calculate EUR interest rate.

7) Spot USD / JPY 90.2500 – 91.2500
6 month forward rate: 89.1800 – 90.1800
Calculate 6 month AFM and interpret the result.

8) Spot USD / INR 45.3825 – 75
3 month forward 100 INR / USD 2.2002 – 2.2005
Calculate 3 month AFM and interpret the result.
If USD interest rate = 2.35% p.a. calculate INR interest rate.

9) The following quotes are from Mumbai Spot 1 USD = Rs. 49.5600 / 5700:-
1 month forward 600 / 700
2 month forward 1500 / 1600
i. Write the quote in outright form.
ii. What is the premium or discount percentage on bid and ask rates for one month?
iii. what is forward quote for 50 days?

*10)* The following quotes are given in Mumbai.

USD 1 = INR 47.7000 / 7200 (spot)
2 months forward 240 / 300
Write the forward quotations in the outright form.
Calculate the annualized forward premium/ discount for the bid and offer rates.
What is the likely forward quote for 1 months and 10 days.

## COVERED INTEREST ARBITRAGE

1) Spot USD/CAD 1.0315

   6 month Forward Rate: 1.0360

   USD Interest Rate: 1.00% p.a.

   CAD Interest Rate: 1.50% p.a.

2) Spot EUR/SEK 8.6335

   3 month Forward Rate: 8.6815

   SEK Interest Rate: 4.00% p.a.

   EUR Interest Rate: 1.60% p.a.

3) Spot GBP/AUD 1.6240

   60 days Forward Rate: 1.6280

   Annualised 60 days GBP Interest Rate: 1.20%.

   Annualised 60 days AUD Interest Rate: 3.00%.

4) Spot EUR/SGD 1.7148

   73 days Forward Rate: 1.7173

   EUR Interest Rate: 1.50% p.a.

   SGD Interest Rate: 0.50% p.a.

5) Spot USD/CHF0.9318

   120 days Forward Rate: 0.9283

   USD Interest Rate: 1.20% p.a.

   CHF Interest Rate: 0.30% p.a.

6) Spot SEK/GBP0.1012

   146 days Forward Rate: 0.0995

   GBP Interest Rate: 1.50% p.a.

   SEK Interest Rate: 5.00% p.a.

7) Spot 100 INR/USD 1.8115

6 months Forward Rate: 1.7865

Annualised INR Interest Rate: 4.20% p.a.

Annualised USD Interest Rate: 1.20% p.a.

8) Spot USD/EUR 0.8013

   219 days Forward Rate: 0.7988

   USD Interest Rate: 1.50% p.a.

   EUR Interest Rate: 1.00% p.a.

9) Spot EUR/USD 1.2470-80

   270 days Forward Rate: 1.2565-75

   USD Interest Rate: 1.40-1.60% p.a.

   EUR Interest Rate: 1.00-1.20% p.a.

10) Spot GBP/CAD 1.8832-42

   6 month Interest Rate: 1.8900-10

   CAD Interest Rates: 2.00-2.20% p.a.

   GBP Interest Rate: 0.80-1.00% p.a.

## BORROWING & INVESTMENT DECISION

1) Given the following options, establish which currency would be used to borrow 6 million INR for a temporary period of 3 months?
   INR interest rate: 5% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 | 2.25% p.a. | 45.0600 |
| GBP | 78.7275 | 3.50% p.a. | 79.0200 |
| CHF | 38.3525 | 1.50% p.a. | 38.7000 |

2) Given the following options establish which currency would be used to invest INR 8 Million for a temporary period of 6 months.

INR Interest rate: 5% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 | 2.25% p.a. | 45.3700 |
| GBP | 78.7275 | 3.50% p.a. | 79.3100 |
| CHF | 38.3525 | 1.50% p.a. | 39.0200 |

3) Given the following options, establish which currency would be used to borrow INR 12 million for a temporary period of 3 months.
INR Interest rate: 4% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 – 65 | 2.25% p.a. | 44.9450 – 00 |
| GBP | 78.7275 – 25 | 3.50% p.a. | 78.8250 – 00 |
| CHF | 38.3525 - 75 | 1.50% p.a. | 38.5850 – 00 |

4) Given the following options establish which currency would be used to Invest INR 8 million for a temporary period of 6 months.
INR Interest Rate: 4% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 – 85 | 2.25% p.a. | 45.1500 – 50 |
| GBP | 78.7275 – 00 | 3.50% p.a. | 79.9400 – 50 |
| CHF | 38.3525 - 55 | 1.50% p.a. | 38.8375 – 25 |

5) Given the following options establish which currency would be used to borrow INR 12 million for a temporary period of 60 days.
Interest Rate: 4.00 – 4.25% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 – 85 | 2.25 – 2.50% p.a. | 44.8750 – 00 |
| GBP | 78.7275 – 25 | 3.50 – 3.75% p.a. | 78.7950 – 00 |
| CHF | 38.3525 - 75 | 1.50 – 1.75% p.a. | 38.5050 – 00 |

6) Given the following options establish which currency would be used to Invest INR 8 million for a temporary period of 90 days.
INR Interest Rate: 4.00 – 4.25% p.a.

| CURRENCY | SPOT RATE | INTEREST RATE | 3 MONTH FWD RATE |
|---|---|---|---|
| USD | 44.7535 – 85 | 2.25 – 2.50% p.a. | 44.9800 – 50 |
| GBP | 78.7275 – 00 | 3.50 – 3.75% p.a. | 78.8700 – 50 |
| CHF | 38.3525 - 55 | 1.50 – 1.75% p.a. | 38.5900 - 50 |