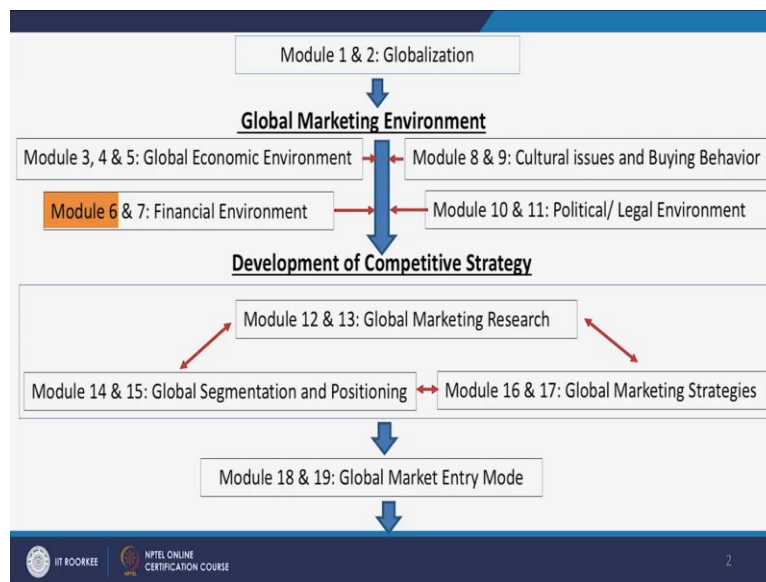


Global Marketing Management
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Module - 2
Lecture - 6
Financial Environment - Part I

Welcome to this course on Global Marketing Management. And we are talking about the second section of this course, that is Global Marketing Environment. In module 3, 4 and 5 we have talked about the Global Economic Environment.

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And in module 6 and 7, we will talk about the financial environment. Let us start with module 6. And in module 6, we will be talking about things like;

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Chapter Overview

1. Historical Role of the U.S. Dollar
2. Development of Today's International Monetary System
3. Fixed Versus Floating Exchange Rates
4. Foreign Exchange and Foreign Exchange Rates

The historical role of US dollar; then the development of today's international monetary system; the fixed versus exchange floating rate; foreign exchange and foreign exchange markets. So, I will start this discussion with an example. Now, there is a, consider a situation whereby there is a company or an individual in India who wants to export and there is another company or individual in Thailand who wants to import.

Now, when the Indian exports, he wants rupees in return, while when the, when this Thai imports, he has Thai baht to pay for the goods that he is importing. But the Indian company or the individual do not need Thai baht. So, then how will trade happen? So, there has to be a mechanism whereby this value of Thai baht can be transferred to Indian rupee. And also, how much Thai baht will be equivalent to a Indian rupee and vice versa.

So, the after having looked at this example, the current day financial monetary system International Monetary System is such that, whenever a person or a company exports or imports, it affects lots of other people. So, therefore international marketer have to operate in the current International Monetary System

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Introduction

- Foreign exchange is the monetary mechanism allowing the transfer of funds from one nation to another.
- The existing international monetary system always affects companies as well as individuals whenever they buy or sell products and services traded across national borders.
- Although international marketers have to operate in a currently existing international monetary system for international transactions and settlements, they should understand how the scope and nature of the system has changed and how it has worked over time.



And this Monetary system is such that it affects lots of people.

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Introduction

The 1990s – particularly, the second half of the decade – proved to be one of the most turbulent periods in recent history.

- The adoption of the euro as a common currency in the European Union in 1999 has challenged the supremacy of the dollar as a global currency.
- Financial crises in Latin America and the U.S. have reverberated throughout the world as a global recession.



The decade of 1990 was especially turbulent because of precise, because of 2 reasons, 1 is the emergence of euro as a currency and its, and they wanted to make it a dominant currency in this world. And then, financial crisis across several countries in Latin America. Let us see the historical role of the US dollar.

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Historical Role of the U.S. Dollar

- The gold standard is a monetary standard that pegs currencies to gold and guarantees convertibility to gold.
- This standard broke down during the 1930s as countries engaged in competitive devaluation.
- In the post-World War II period, the United States agreed to exchange the dollar at \$35 per ounce of gold. The dollar became the common denominator in world trade.
- In the early seventies, the U.S. dollar standard was dropped.



Now, the gold standard is a monetary standard that pegs currencies to gold and guarantee convertibility to gold. So, how much gold will 1 rupee buy. This was the kind of currency exchange mechanism that was there in 1930s. After the World War II period, United States agreed to exchange the dollar at \$35 per ounce of gold. So, anybody could bring a 35 dollar and he can, he or she can buy an ounce of gold and vice versa. So, the dollar became the common denominator for all the currencies. But in early 1970s, this standard was dropped. And that was because of speculative pressures on dollar;

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Historical Role of the U.S. Dollar

- This system collapsed, primarily due to **speculative pressure** on the dollar following a **rise in U.S. inflation** and a growing U.S. **balance-of-trade deficit**.
- This has resulted in exchange rates becoming more volatile and far less predictable.



Following a rise in U.S. inflation and a growing U.S. balance of trade deficit. Therefore, this resulted in exchange rate becoming more volatile and far less predictable.

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Development of Today's International Monetary System

- Post-World War II developments had long-range effects on international financial arrangements.
- The negotiations to establish the postwar international monetary system took place at the resort of Bretton Woods in New Hampshire in 1944 which established the **International Monetary Fund (IMF)**.
- The IMF Articles of Agreement were heavily influenced by the worldwide financial collapse, competitive devaluations, trade wars, high unemployment and general economic disintegration that occurred between the two world wars.



Now, let us go back; and we have already discussed some of these things in module 4 and model 5. After the World War Second, there was a strong desire to rebuild this world and by way of international trade. But again, the problem was that the gold standards were no longer there, the dollar was not the common currency in our. So, how to trade? Therefore, then, major powers, they landed up in Bretton Woods in New Hampshire in 1944 and they gave birth to 2 cousins which are also called as Bretton Wood cousins.

And they come by the name of IMF, that is International Monetary Fund and World Bank. So, the, we will talk about International Monetary Fund today. The IMF article of agreement were heavily influenced by the worldwide financial collapse, competitive devaluation, trade wars, high unemployment and general economic disintegration that occurred between the 2 world wars.

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Development of Today's International Monetary System

- The IMF oversees the international monetary system and its functions are as follows:
 - ✓ To promote international monetary cooperation.
 - ✓ To facilitate the expansion and balanced growth of international trade.
 - ✓ To promote exchange stability and to maintain orderly exchange arrangements.
 - ✓ To assist in the establishment of a multilateral system of payments in respect to current transactions between member nations; to eliminate foreign exchange restrictions.

So, basically IMF is supposed to do the following. First is to promote international monetary cooperation; facilitate the expansion and balanced growth of international trade. Keep in mind that we are talking of expansion and balanced growth. So, the trade deficit should reduce. So, the country should import so much and the country should export equivalent to what it imports. So, this balanced growth is an important agenda item of IMF.

To promote exchange stability and to maintain orderly exchange arrangements. So, there should not be a chaos that we have seen earlier. When the dollar peg was removed. To assist in the establishment of a multilateral system of payments in respect to current transactions between member nations and to eliminate foreign exchange restrictions.

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Development of Today's International Monetary System

- ✓ To make available the general resources of the fund temporarily available to members under adequate safeguards; help members to correct maladjustments in the balance of payments
- ✓ To shorten the duration and lessen the degree of disequilibrium in the international balance of payments to members
- ✓ To help increase international reserves, the IMF created special drawing rights (SDRs) in 1969.

fiat currency

To make available the general resources of fund temporary available to members under adequate safeguard help members to correct maladjustments in their balance of payment. So, it was also supposed to work as a bank giving short term loans to countries which are facing problems in balance of payment. But then, what happened over a period of time that IMF did not had the amount of money which was demanded by various countries in terms of loan.

So, they came up with a novel concept, a new concept that was called as special drawing rights. And that was in the year 1969. So, this special drawing rights, these are a type of virtual or fiat currency.

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Development of Today's International Monetary System

- SDR is an international reserve asset created to supplement members' existing reserve assets.
- The value of SDRs is determined by a weighted average of a basket of four currencies: the U.S. dollar, Japanese yen, European Union's euro, and the British pound.
- After the 1997-98 Asian financial crisis, the IMF has worked on policies to overcome or even prevent future crises.

The beauty of this SDRs is that they can be traded against with each other. So, SDR is an external reserve asset created to supplement members' existing reserve assets. The value of SDRs is determined by the weighted average of a basket of 4 currencies, the US dollar, Japanese yen, European Union's euro and the British pound. After the 1997 and 98 financial crisis, IMS has worked on policies to overcome or even prevent future prices.

Now, how does, how are the rates of the, of currencies established? So, these are the 2 side, 2 ways, the fixed vs floating exchange rate. Now, as the name suggests, fixed exchange rate. The value of a set of currencies are fixed against each other.

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Fixed Versus Floating Exchange Rates

- **Fixed Exchange Rate:** The values of a set of currencies are fixed against each other at some mutually agreed on exchange rate.
- After WW II the world's major industrial nations participated in a fixed exchange rate system till 1973.
- **Floating Exchange Rate:** The foreign exchange market (market forces) determines the relative value of a currency.
- World's major trading currencies adhere to this system- US Dollar, Euro, Japanese Yen and British Pound. ◦

And they had some mutually agreed upon exchange rates. So, 1 rupee may be = 10 dollars. So, this is what a fixed exchange rate means. So, you take 1 rupee and you get 10 dollars. So, this is what a fixed exchange rate is. After World War II, the world's major industrial nations, they participated in fixed exchange rate till 1973. And then came the floating exchange rate.

The foreign exchange market, that is the market forces, the forces of demand and supply, they determined the relative value of currency. The world's major trading currencies adhere to this system. The US dollar, euro, yen and British pound; they are floating currencies. So, depending upon the forces of demand and supply their value keeps on changing. And there are advantages and disadvantages of both of these kind of systems. Let us talk about the fixed exchange rate. The benefit here is that the countries they have to have a monetary discipline.

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Fixed Versus Floating Exchange Rates

The case for fixed exchange rates

- 1) **Monetary Discipline:** These rates force countries to discipline themselves and not expand their money supplies at inflationary rates.
- 2) **Speculation:** If the rates are not allowed to float (are fixed) then speculators **cannot** buy and sell currencies and cause wild fluctuations in the exchange rates. i.e. Such a system **will limit** the destabilizing effects of speculation. ◦

Speculations are eliminated.

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Fixed Versus Floating Exchange Rates

The case for fixed exchange rates

- 3) **Reduce Uncertainty and Risk:** Fixed rates help make business planning easier and reduce the risks associated with exporting, importing, and foreign investment. ◦

And they reduce uncertainty and risk. So, 1 rupee will continue to buy 10 dollars and so there is no amount of risk involved. The risk involved is that I purchase 1 dollar for 70 rupees today and the next day it becomes 65 rupees. So, I lose 5 rupees. And what are the advantages of having floating exchange rates? 1 is the countries they have monetary policy autonomy.

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Fixed Versus Floating Exchange Rates

The case for floating exchange rates

- 1) Monetary Policy Autonomy:** Floating exchange rate gives countries autonomy over their own monetary policy.
E.g.: A government facing unemployment could increase its money supply to stimulate domestic demand and reduce unemployment.
- 2) Trade Balance Adjustment:** Floating rates can help adjust trade imbalances.
E.g.: A country is importing > exporting, then devaluation can make its exports cheaper and imports more expensive, leading to correction in trade deficit.

The government facing unemployment could increase its money supply to stimulate domestic demand and reduce unemployment. And then, they have the flexibility of trade balance adjustment. Floating rates can help adjust trade imbalances. A country is importing more than it is exporting. Then, devaluation can make its export cheaper and imports become more expensive leading to correction in trade deficits. So, imports will reduce and exports will increase. So, the trade deficits is reduced.

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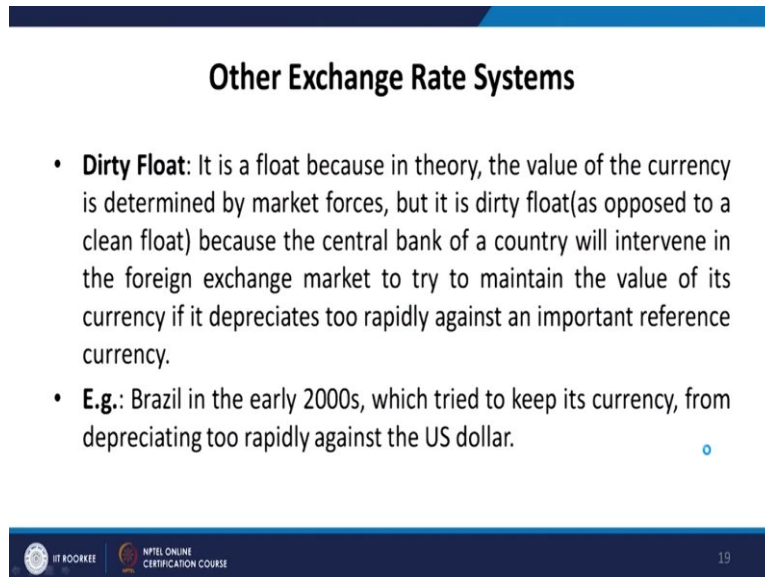
Other Exchange Rate Systems

- **Pegged Exchange Rate:** The value of a currency is fixed relative to a reference currency, such as the US dollar, and the exchange rate between that currency and other currencies is determined by the reference currency exchange rate.
- **E.g.:** China pegs its currency to the dollar, then the exchange rate between Chinese yuan and the euro is determined by the US Dollar/ euro exchange rate.

Then there are certain other exchange rate system also which is, which are called as pegged exchange rates. The value of a currency is fixed relative to a reference currency such as US dollar. And the exchange rate between the currency and other currencies is determined by reference currency's exchange rate. For example, China pegs its currency to the dollar. Then

the exchange rate between Chinese yuan and euro is determined by the US dollar and euro exchange rate.

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Other Exchange Rate Systems

- **Dirty Float:** It is a float because in theory, the value of the currency is determined by market forces, but it is dirty float (as opposed to a clean float) because the central bank of a country will intervene in the foreign exchange market to try to maintain the value of its currency if it depreciates too rapidly against an important reference currency.
- **E.g.:** Brazil in the early 2000s, which tried to keep its currency, from depreciating too rapidly against the US dollar.

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Another kind of exchange rate system is the dirty float. That is, it is a float because, in theory the value of a currency is determined by market forces, but it is dirty as opposed to clean float. Because the central bank of the country will continue to intervene in order to appreciate or depreciate, increase or decrease the value of the currency. And many currencies, they follow this kind of float. Brazil in early 2000 tried to keep its currency from depreciating too rapidly against the US dollar.

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Foreign Exchange and Foreign Exchange Rates

- **Foreign Exchange Market:** A market for converting the currency of one country into that of another country.
- Without the foreign exchange market, international trade and international investment on the scale that we see today would be impossible.
- It acts as a lubricant that enables companies based in countries that use different currencies to trade with each other.
- Provides some insurance against foreign exchange risk, which means the adverse consequences of unpredictable changes in exchange rates.

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Now, let us see how this, what is this foreign exchange markets and how these foreign exchange rates are determined. Foreign exchange market is a market that helps in converting

the currency of 1 country into that of another country. And only then international trade can happen. Without the, without this foreign exchange market, international trade and investments on the scale that we see today would be impossible.

In, it acts as a lubricant that enables companies based in countries that use different currencies to trade with each other. And it also provides the insurance against foreign exchange risk which means the adverse consequences of unpredictable changes in exchange rates. Now let us look at the size, composition and location of the foreign exchange market. The market size is \$ 4 trillion a day. And US dollar is the most important currency of the foreign exchange market.

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Size, Composition, and Location of the Foreign Exchange Market

- Market size is \$4 trillion daily and the U.S. dollar is the most important currency on the foreign-exchange market
- The most commonly traded currency pairs are EUR/USD and USD/JPY
- London is the largest foreign exchange market (followed by New York, Tokyo, and Singapore) because of its strategic location between Asia and the Americas.
- Bank of International Settlements (BIS) plays a critical role in managing FX transactions worldwide



The most commonly traded currencies pairs are euro, US dollar; and US dollar and Japan. London is the largest foreign exchange market followed by New York, Tokyo and Singapore, because of its strategic location between Asia and the Americas. Bank of International Settlement, that is called BIS, plays a critical role in managing foreign exchange transactions worldwide.

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Size, Composition, and Location of the Foreign-Exchange Market

Global Foreign Exchange: Currency Distribution

The U.S. dollar is involved in 87 percent of all worldwide foreign-exchange transactions. Because it's so readily available, it's a popular choice for exchanges between two countries other than the United States, and it's involved in four of the seven most frequently traded currency pairs (the \$/€ is number one, the \$/¥ number two).

Currency	April 2001	April 2004	April 2007	April 2010	April 2013
U.S. dollar	89.9	88.0	85.6	84.9	87.0
Euro	37.9	37.4	37.0	39.1	33.4
Japanese yen	23.5	20.8	17.2	19.0	23.0
Pound sterling	13.0	16.5	14.9	12.9	11.8
Australian dollar	4.3	6.0	6.6	7.6	8.6
Swiss franc	6.0	6.0	6.8	6.4	5.2
All others	25.4	25.3	31.9	30.1	31.0

Source: Based on Bank for International Settlements, *Central Bank Survey Report on Foreign Exchange Turnover in April 2013* (Basel, Switzerland: BIS, September 2013), p. 10.

Now this shows the currency distribution. In April, the US dollar was 89.9 and then it moved on to 87.7. Swiss franc was 6 and it moved on to 5.2. Japanese yen is 23.5 and then it moved on to 23.3. So, the US dollars involved in 87% of all worldwide foreign exchange transaction. Why? Because it is so readily available. It is a popular choice for exchanges between 2 countries other than the United States.

And it is involved in 4 of the 7 most frequently traded currency pairs. And these currency pairs are dollar to euro is number 1, dollar to yen is number 2. So, as we have seen in this slide, the US dollar is involved in 87% of all worldwide foreign exchange transactions. Why it is so?

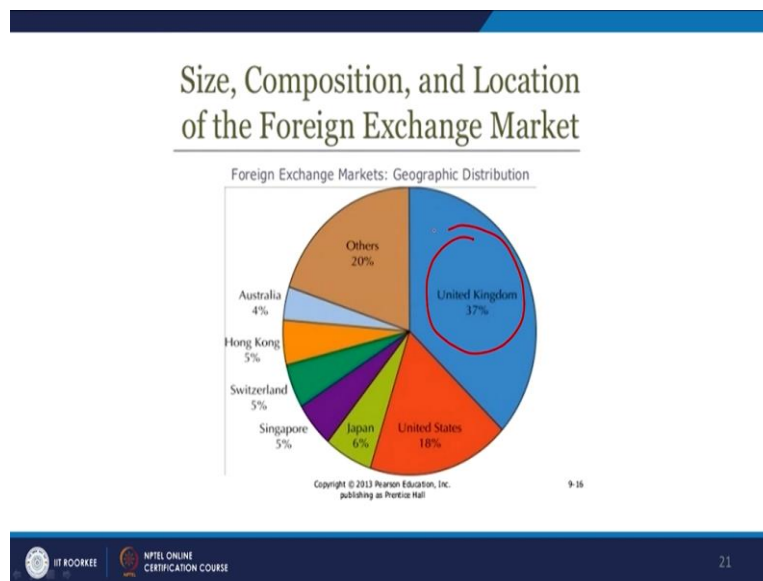
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Why U.S. Dollar is so widely traded

- It is an *investment currency* in many capital markets
- It is a *reserve currency* held by many central banks
- It is a *transaction currency* in many international commodity markets
- It is an *invoice currency* in many contracts
- It is an *intervention currency* employed by monetary authorities in market operations to influence their own exchange rates

Why US dollar is so widely traded? These are some of the reasons what makes US dollar so widely traded. 1 is, it is an investment currency in many capital markets. It also serves as a reserve currency held by many central banks. It is a transaction currency in many international commodity markets. It is an invoice currency in many countries. For example, all the, in many contracts, for example, when a company quotes the prices that is in dollars. It is, it also serves as intervention currency employed by many monetary authorities in market operations to influence their own exchange rates.

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This is the size composition and location of foreign exchange markets. You see the United Kingdom, it has the biggest composition in foreign exchange market. That is 37% followed by United States, Japan, Singapore.

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Foreign Exchange and Foreign Exchange Rates

Foreign Exchange

- ✓ It is money denominated in the currency of another nation or group of nations.

Exchange Rate:

- ✓ It is the price of a currency. The number of units of one currency that buys one unit of another currency.
- ✓ The rate at which one currency is converted into another.
- ✓ The market in which these transactions take place is termed as foreign exchange market.

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So, foreign exchange, it is the money denominated in the currency of another country or group of nations. Exchange rate; it is the price of a currency. The number of units of 1 currency that buys 1 unit of another currency. The rate at which 1 currency is converted into another. And the market in which these transactions take place is termed as foreign exchange market.

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Foreign Exchange and Foreign Exchange Rates

- The foreign exchange market has two major segments.
 - ✓ **Over-the-counter market (OTC):** It consists of commercial banks, investment banks and other financial institutions.
 - ✓ **Exchange-traded market:** Is composed of securities exchanges such as Philadelphia Stock Exchange, where certain types of foreign-exchange instruments, such as futures and options are traded.

Now, the foreign exchange has 2 major type of segments. 1 is over the counter market, that is called as OTC. It consists of commercial banks, investment banks and other financial institutions. The other type of segment is exchange traded markets. It is composed of security exchanges such as Philadelphia stock exchange where certain types of foreign exchange instruments such as futures and options are traded.

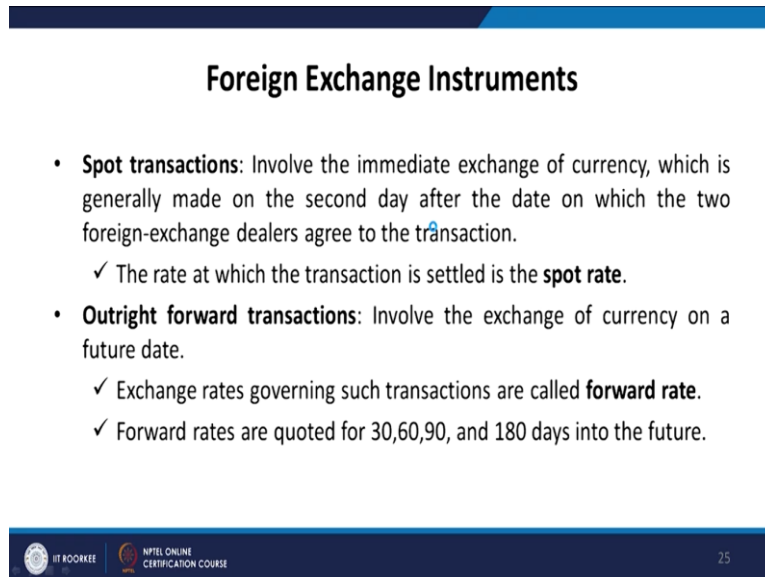
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Foreign Exchange Instruments

- Several types of foreign-exchange instruments are traded in these markets.
- **Traditional foreign-exchange instruments:**
 - ✓ **Spot**
 - ✓ **Outright forward**
 - ✓ **FX(Currency swaps)**

What are the various types of foreign exchange instruments? The traditional foreign exchange instruments are the spot, outright forward and foreign currency, currency swaps.

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Foreign Exchange Instruments

- **Spot transactions:** Involve the immediate exchange of currency, which is generally made on the second day after the date on which the two foreign-exchange dealers agree to the transaction.
 - ✓ The rate at which the transaction is settled is the **spot rate**.
- **Outright forward transactions:** Involve the exchange of currency on a future date.
 - ✓ Exchange rates governing such transactions are called **forward rate**.
 - ✓ Forward rates are quoted for 30,60,90, and 180 days into the future.

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What are spot transactions? They involve immediate exchange of currency which is generally made on the second day after the date on which the 2 foreign exchange dealers agree to the transaction. The rate at which the transaction is settled is the spot rate. Outright forward transaction involves the exchange of currency on a future date. So, as the name suggests, it is the forward transaction. Involves the exchange of currency on a future date. Exchange rates governing such transactions are called as forward rates. Forward rates are quoted for 30, 60 and 90 and 180 days into the future.

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Foreign Exchange Instruments

- **FX swap** :Is the simultaneous purchase and sale of a given amount of foreign exchange for two different value dates.
 - ✓ Most often, the first leg of a FX swap is a spot transaction, with the second leg of the swap a future transaction.
- **Derivatives:** In addition to the traditional instruments, there are derivatives, such as:
 - ✓ **Currency swaps**; OTC instruments
 - ✓ **Options**; traded both OTC and on exchanges
 - ✓ **Future contract**; exchange-traded instruments

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Foreign exchange swap is the simultaneous purchase and sale of a given amount of foreign exchange for 2 different value dates. Most often, the first leg of a FX swap is a spot transaction with the second leg of the swap as a future transaction. Derivatives; In addition to the traditional instruments there are derivatives such as currency swaps. These currency swaps are OTC instruments. Options; they are traded both over the counter and on exchanges. And future contract; that is exchange traded instruments.

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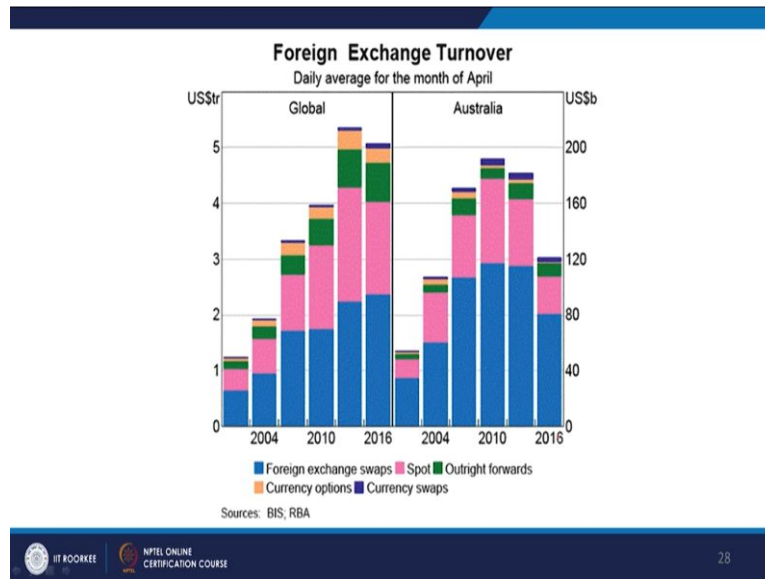
Foreign Exchange Instruments

- **Currency swaps:** Deal more with interest-bearing financial instruments (such as a bond), and they involve the exchange of principal and interest payments.
- **Options:** Are the right but not the obligation to trade foreign currency in the future.
- **Future contract:** Agreement between two parties to buy or sell a particular currency at a particular time on a particular future date, as specified in the standardized contract to all participants in that currency future exchange.

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Currency swaps deals more with interest bearing financial instruments. Keep in mind that we are talking of interest bearing financial instruments such as a bond. And they involve the exchange of principal and interest payment. Options are the right but not the obligation to trade foreign currency in the future. Future contracts are agreements between 2 parties to buy or sell a particular currency at a particular time on a particular future date as specified in the standardized contract to all participants in that future currency exchange.

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Now, you see, these are this figure tells the foreign exchange turnover. The daily average for the month of April. Let us see from 2000 to 2016. So, these are the various foreign exchange turnover figures that are available for daily average. The blue is foreign exchange swap; the pink is spot rates; the green is outright forwards; the orange is currency options and again dark blue is for currency swaps.

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Exchange-Rate Determination

- At the most basic level, exchange rates are determined by the demand and supply of one currency relative to the demand and supply of another.
- **E.g.:** If demand(for dollar)>supply, and If supply(for yen)>demand, then the dollar/yen exchange rate will change i.e.

The dollar will appreciate against the yen (or the yen will depreciate against the dollar).

However, this simple explanation does not tell us what factors underlie the demand for and supply of a currency.

How are exchange rate determined? How many dollars = rupee and how or how many rupee is = dollar? At the most basic level, exchange rates are determined by the demand, forces of demand and supply, of 1 currency related to demand and supply for another currency. For example, if demand for dollar is more than the supply and its supply for yen is more than the demand, then the dollar yen exchange rate will change.

That is, the dollar will appreciate against the yen or the value yen will depreciate against the dollar. However, this simple explanation does not tell us what factors underlie the demand for and supply of a currency.



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Exchange-Rate Determination

- **Purchasing power parity:** One of the most fundamental determinants of exchange rates.
- It links the changes in the exchange rate between two countries' currencies to change in the countries' price level.
- In essence, PPP theory predicts that changes in relative prices will result in a change in exchange rate.
- Formula for PPP:

$$R_t = R_0 * \frac{(1 + Infl_{\text{Britain}})}{(1 + Infl_{\text{U.S.}})}$$

Where R = the exchange rate quoted in a currency
 $Infl$ = Inflation rate
 t = time period



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1 theory that explains this exchange rate determination that is a basic kind of explanation is the purchasing power parity theory. One of the most fundamental determinant of exchange rate is the purchasing power parity. It links the changes in the exchange rates between 2 countries' currencies to change into the countries' price level. In essence, PPP theory predicts that changes in relative prices will result in change in exchange rate.

$$R_t = R_0 * \frac{(1 + Infl_{\text{Britain}})}{(1 + Infl_{\text{U.S.}})}$$

Where R = the exchange rate quoted in a currency

$Infl$ = Inflation Rate

T = Time Period

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Exchange-Rate Determination

- E.g.: Assume there is no inflation in US, while prices in Japan are increasing by 10 percent/year.


Price of a basket of goods	US	Japan	Exchange rate (\$/¥)
At the beginning of the year	\$ 200	\$20,000	\$1 /¥100
At the end of the year	\$ 200	¥22,000	\$1 /¥110

- Thus because of inflation, the PPP predicts that the exchange rate should change.
- Hence Japanese ¥ has depreciated by 10 percent against the \$.

Now, let us assume that there is no inflation in U.S. While prices in Japan are increasing by 10% a year. So, we are talking of the exchange rate between the US dollar and the Japanese yen. The price of a basket of goods at the beginning of the year in U.S. was \$200, in Japan it was \$20,000. So, the exchange rate is 1 dollar is = 100 yen. At the end of the year, the price of the basket of goods in U.S. was \$200, while in Japan it became 22,000 yen.



So, the exchange rate now became 1 dollar = 110 yen. Thus because of inflation, the purchasing power parity predicts that the exchange rate should change. The Japanese yen has depreciated. That is, its value has decreased by 10% against the US dollar.

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- The “Big Mac Index”: An interesting illustration of the PPP theory for estimating exchange rates is the “Big Mac index” of currencies used by *The Economist* each year.
- Source: ConvergeX Group report “Morning Markets Briefing”, Aug. 19, 2013

20 minutes or less
21 minutes to 30 minutes
31 minutes to 40 minutes
More than 40 minutes

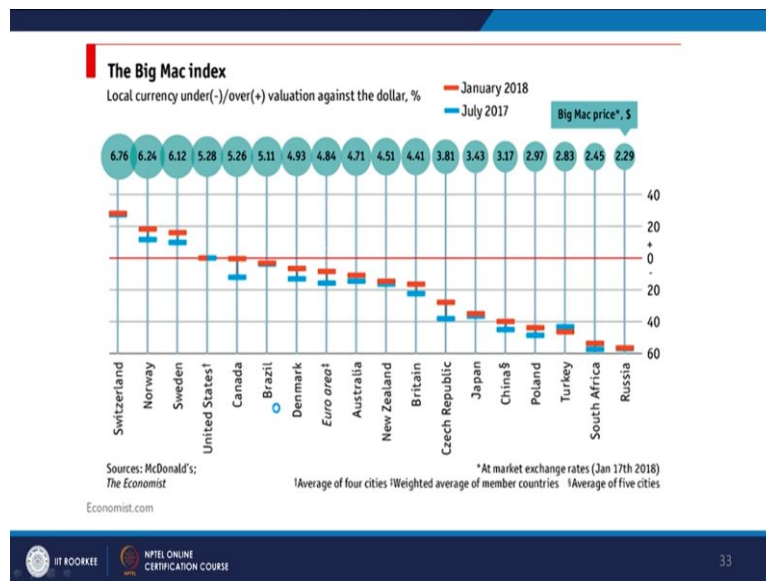
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The Big Mac Index; an interesting provides an interesting illustration of the purchasing power parity theory for estimating exchange rate. And this was, this is used by the economist

each year. Now, you see the, it tells the minutes of minimum wage work to buy a big mac. That is, how many, how much time a person has to work to get paid in order to buy a big mac. So, this figure shows how many minutes a minimum wage worker would have to work to earn enough money to buy a big bag big mac burger in these 20 countries.

So, for example, in Hong Kong he has to work for 30 minutes; in Australia he works for just 18 minutes; while in Mexico he works for 282 minutes. So, in Mexico, it he has to work the most in order to buy a big mac burger.

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Now, this figure shows the local currency is undervalued or overvalued against the dollar. The yellow line shows for January, figures for January 2018, while the blue line shows for July 2017.

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Exchange-Rate Determination

- **Exchange rates and Interest rates:** To understand this interrelationship between interest rates and exchange rates, we need to study two key finance theories:
 - ✓ Fisher Effect
 - ✓ International Fisher Effect
- **Fisher Effect:** This theory links inflation and interest rates.
- It states that a country's "nominal" interest rate (i) is the sum of the required "real" rate of interest (r) and the expected rate of inflation over the period for which the funds are to be lent (l).



So, let us look at the exchange rates and the interest rate. To understand this interrelationship between interest rates and exchange rates, we need to study two key finance theories. The first is the Fisher effect and the second is international Fisher effect. Now, let us see what is Fisher effect. This theory links inflation and interest rates. It states that a country's nominal interest rate; i , is the sum of required real rate of interest r , and the expected rate of inflation over the period for which the funds are to be lent. That is $i = r + l$.

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Exchange-Rate Determination

More formally,

$$i = r + l$$

Thus, if real rate of interest (r)=5 percent

And annual inflation (l)=10 percent

Then i (nominal interest rate)=15 percent



And it can be demonstrated as $i = r + l$. Thus, if the interest real rate of interest r is 5%, the annual inflation l is 10%, then i nominal interest rate is 15%.

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Exchange-Rate Determination

- **International Fisher Effect:** Explains the link between interest rates and exchange rates.
- It states that the **interest-rate differential is an unbiased predictor of future changes in the spot exchange rate.**
- **E.g.:** IFE predicts that if nominal interest rates in the US are higher than those in Japan, the dollar's value should fall in future by that interest rate differential, which would be an indication of a weakening, or depreciation, of the dollar.

What is international fisher effect. It explains the link between interest rates and again exchange rates and is, and it states that interest rates differential; we are now talking of interest rate differential, is an unbiased predictor of future changes in the spot exchange rate. Now, consider for example, if international fisher effect predicts that, if nominal interest rate in the U.S. are higher than those in Japan. Then what happens, the dollar values should fall in future by that interest rate differential which would be an indication of a weakening or depreciation of the dollar.

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Exchange-Rate Determination

- Suppose, the interest rate in
US=10 percent and Japan=6 percent

IFE predicts that the value of dollar to depreciate by 4 percent(interest rate differential) against the Japanese yen.

Suppose the interest rate in U.S. is = 10% and in Japan it they are = 6%. Then international fisher effect predicts that the value of a dollar to depreciate by 4% interest, that is the interest rate differential, against the Japanese yen. Then, there are certain other factors that also determine the exchange rate determination because that is not a plain simple phenomena. So,

there are various other factors that affect currency values. 1 is the confidence. Confidence, it refers to people prefer to hold currencies considered safe.

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Exchange-Rate Determination

- **Other factors in Exchange-rate determination:** Various other factors can affect currency values.
 - ✓ **Confidence:** In times of turmoil, people prefer to hold currencies considered safe.
 - ✓ **Technical Factors:** Such as the release of national economic statistics, comments by central bank, seasonal demand for a currency.
 - ✓ **Political Factors:** Exchange rate control, election year or leadership change.
 - ✓ **Random Factors:** Unexpected and/or unpredicted events, fear of uncertainty, etc.

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So, what kind of currencies are people holding? There are technical factors such as the release of national economic statistics. So, comment by central bank and seasonal demand for currency and so, for example, what is the employment rate and unemployment rate and so on so forth. So, these factors they affect the exchange rates. Then there are certain political factors like exchange rate controls.

How much exchange rate exchange, how much exchange foreign currency can be, can a person hold. Election year or leadership change in the government. And there are certain random factors, unexpected or unpredicted events or the fear of uncertainty. So, a terrorist attack that may affect the exchange rates of the currency. And we and I have used these references for module 6.

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References

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So, these are some of the references that can be used for further understanding the concept.
Thank you.