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Factors Affecting Exchange Rates Part - 1Subject:Business Economics

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Factors Affecting Exchange Rates and Exposures

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Lecture – 1 Factors Affecting Exchange Rates Part-1

Academic Script

1. Introduction

Have you ever been on vacation in a foreign country and wondered about the exchange rate? For example, why is it that a Canadian dollar is just about the same as a U.S. dollar, while a U.S. dollar is worth over 12 Mexican pesos? Where do these conversion rates come from anyway? Well, just like the price of any good, exchange rates are determined on open markets under the control of two forces: demand and supply. Remember the laws of demand and supply?

So in this session we would be learning the concepts of demand and supply of currency, factors affecting the demand and supply conditions of currency etc. Apart from this we will also understand one more curve and its effect called the J curve effect. We will look in to how it works and why it is important. So let's get started by talking about the demand and supply of currency in international market.

2. Determination of the Value of Currencies

Currencies are bought and sold, just like other commodities, in markets called foreign exchange markets. The world's three most common transactions are exchanges between the dollar and the euro (30%), the dollar and the yen (20%) and the dollar and the pound Sterling (12%).

How currency values are established depends upon whether they are determined solely in free markets, called *freely floating*, or determined by agreements between governments, called *fixed* or pegged. Like most currencies, the pound has at times been both fixed, and floating. Between 1944 and 1971, most of the world's currencies were fixed to the US Dollar, which in turn was fixed to gold. After a period of floating, the pound joined the *European Exchange Rate Mechanism* (ERM) in 1990, but quickly left in 1992, and has floated freely ever since. This has meant that its value is largely determined by the interaction of demand and supply.

The demand for currency

The demand for currencies is derived from the demand for a country's exports, and from speculators looking to make a profit on changes in currency values.

For example:

For Americans, British goods are less expensive when the pound is cheaper and the dollar is stronger. At depreciated values for the pound, Americans will switch from American-made or thirdparty suppliers of goods and services to British suppliers. Before they can purchase goods made in Britain, they must exchange dollars for British pounds. Consequently, the increased demand for British goods is simultaneously an increase in the quantity of British pounds demanded.

The supply of currency

The supply of a currency is determined by the domestic demand for imports from abroad. For example, when the British imports cars from USA it must pay in dollar, and to buy dollar it must sell (supply) pounds. The more it imports the greater the supply of pounds onto the foreign exchange market. A large proportion of short-term trade in currencies is by dealers who work for financial institutions. The London foreign exchange market is the World's single largest international exchange market.

Continuing the previous example the supply curve would slope upward because British firms and consumers are willing to buy a greater quantity of American goods as the dollar becomes cheaper (i.e. they receive more dollars per pound). Before British customers can buy American goods, however, they must first convert pounds into dollars, so the increase in the quantity of American goods demanded is simultaneously an increase in the quantity of foreign currency supplied to the United States.

Exchange rates

The equilibrium exchange rate is the rate which equates demand and supply for a particular currency against another currency.



Example

If we assume the UK and France both produce goods that the other wants, they will wish to trade with each other. However, French producers require payment in Euros and the British producers require payments in pounds Sterling. Both need payment in their own *local* currency so that they can pay their own production costs in their local currency. The foreign exchange market enables both French and British producers to exchange currencies so that trades can take place.

The market will create an equilibrium exchange rate for each currency, which will exist where demand and supply of currencies equates.

Changes in exchange rates

A variety of actors cause currencies to experience changes in supply and demand:

- companies that export and import,
- foreign investors and banks,
- speculators who wish to engage in market activity,
- and central banks that control the movement of interest rates.

Exporting and Importing Companies

Large multinational corporations influence the foreign exchange market as they purchase and sell goods and materials between different countries.

The first group that has influence in the foreign exchange markets is typified by large, multinational corporations. Imagine a New York City firm exports its products to a German company. The business transaction will be settled in dollars so the American firm obtains revenue in its own currency and can pay its employees' salaries in dollars.

To facilitate the transaction, the German firm needs to convert some of its capital from euros to dollars on the foreign exchange market. The supply of euros increases leading to an appreciation of the dollar and depreciation of the euro. It can also be said that the German firm increases the demand for dollars, again causing the dollar to appreciate in comparison to the euro. This transaction would have to be for a very large contract in order for the exchange rate to actually move a pip up or down.

If the payment by the German company is coming 6 months later, it introduces the risk that the amount of dollars they would

receive for a certain amount of euros today will not be the same in 6 months time. A company may want to limit, or hedge, this exchange rate risk by immediately converting their euro into dollars, or by purchasing forward contracts in the foreign exchange market. A forward contract is a contract to convert euros into dollars at a future date at a set price.

Importing companies affect the demand of a currency as well. For example, an American retailer features Japanese furnishings and pays its suppliers in Japanese yen. If consumers like these products then they will indirectly contribute to an increase in demand for the yen as the American retailer will have to buy more merchandise from Japan. As the retailer purchases the yen and sells the dollar on the exchange market, the yen appreciates. **Foreign Investment Flows**

Foreign investment has many aspects, having to do with goods, services, stocks, bonds, or property. Suppose a Canadian company wants to open a factory in America. In order to cover the costs of the land, labor and capital the firm will need dollars. Suppose the company holds most of its reserves in Canadian dollars. It must sell some of its Canadian dollars to buy US dollars.

The supply of Canadian dollars on the foreign exchange market will increase and the supply of US dollars will decrease, which causes the US dollar to appreciate against the Canadian dollar. On the flip side, foreign investors are also increasing or decreasing the demand for the currency of the country in which they are interested in investing.

Banks

For a long time the foreign exchange market has been associated with the term "interbank" market. This term was

employed to capture the nature of the foreign exchange market when it predominantly dealt with banks. Banks included central banks, investment banks and commercial banks.

- Examples of central banks include the Federal Reserve Bank of the United States or the European Central Bank.
- Investment banks include those of Goldman Sachs, JP Morgan, and Bank of America.
- Today, banks are not the only participants within the foreign exchange market. With the onset of technology and the growing ease of accessibility to market activity, there has been an increase in many non bank participants such as individuals.

Speculators - Investment Management Firms, Hedge funds, and Retail Traders

Many financial institutions use currency exchange as a method to generate income. There are also many individuals who try to do the same thing. The currency markets move in one direction only when many investors act together. An individual investor cannot move the exchange rate of a currency but many traders, investment funds, and banks may collectively move it.

If speculating traders think the Japanese Yen is going to weaken in the near future due to poor economic data or a change in interest rate policy, then they sell the yen on the foreign exchange market relative to another stronger currency. The supply of yen will increase and cause the currency to depreciate. If many investors feel that a particular currency will depreciate in the near future, their collective selling of that currency will move its price down. Similarly, if speculators feel that a currency is going to appreciate in the near future then they will buy that currency today and cause it to experience a higher demand which causes its price to go up. Investors help materialize their predictions by acting in a herd mentality, and in some peoples eyes bring about a self fulfilling prophecy.

Central Banks

Floating vs. Fixed Exchange Rates

There are two types of exchange rate systems: floating or fixed. A floating exchange rate is one in which a currency's value is determined by market forces. A fixed exchange rate matches, "pegs", the value of the currency to: one currency, several currencies or even to a fixed amount of a commodity.

Floating Exchange Rates Prior to 1971's breakdown of the Bretton Woods Agreement (a fixed exchange rate system revolving around the US Dollar and gold), most currencies were pegged. Today, the current international financial system squares most of the currencies of the world against one another in a free market. Floating exchange rates are preferable to fixed ones since floating rates are reflective of market movement and the principles of supply and demand and limit imbalances in the international financial system. Fixed exchange rates grant more control to central banks (who may or may not be independent of the government) to set a currency's value, and during times of volatility are preferred for their greater stability. Many developing countries use fixed exchange rates in order to evade market abuse.

In extreme situations such as political unrest, terrorist attacks or natural disasters a country's currency may experience a period of heavy selling that causes it to depreciate in value. The country's central bank may intervene in order to restore the value of the currency. A central bank regime that routinely intervenes would use the term "managed float". Sometimes, the central bank may set upper and lower bounds known as price ceilings and floors, respectively, and intervene whenever those bounds are reached. **Central Banks, Interventions, and Interest Rates**

Central banks influence the supply and demand of their country's currency through control of interest rates or though intervention actions.

For many large economies, central banks can influence their currency's value by changing interest rates. The US central bank, the Federal Reserve, is not necessarily trying to achieve a weak or strong dollar policy, but acts in a manner that curbs inflationary pressure while maintaining steady growth within the economy. It uses interest rates as a mechanism to achieve this type of economic state.

The other method used by banks to influence supply and demand of its currency deals with directly buying or selling currencies through its reserves (as was explained above). An example of such operation can be seen by the Reserve Bank of China. Suppose the Reserve Bank of China thinks that the Chinese Yuan had appreciated too much and wanted to lower its value. Then, the Reserve Bank of China will sell its yuan and buy another currency such as the Japanese Yen into its reserves. The increased supply of yuan should work to lower the yuan's exchange rate.

Although this provides a convenient way for the central banks to control the value of their currency, the banks must be careful. There is only a limited amount of currencies that each country has within its reserves and a prolonged attempt to fight market forces can deplete it causing a financial crisis. A central bank can affect the demand for other countries currency as well. If the bank (Russian Central Bank) feels that its reserve amount of a particular country's currency (Euro) is too low then it will engage in the foreign exchange market and buy that currency. This change in the composition of the Russian central banks reserves, will lead to an increase in demand of the Euro since it is being bought, and the Euro's appreciation.

Changes in the value of a currency like Sterling reflect changes in demand and supply. On a demand and supply graph, the price of Sterling is expressed in terms of the other currency, such as the \$US.

An increase in the exchange rate

For example, an increase in exports would shift the demand curve for Sterling to the right and push up the exchange rate. Originally, one pound bought \$1.50, but now buys \$1.60, hence its value has risen.



Exchange rates and interest rates

Changes in a country's interest rates also affect its currency, through its impact on the demand and supply of financial assets

in the UK and abroad. For example, higher interest rates relative to other countries, makes the UK attractive the investors, and leads to an increase in the demand for the UK's financial assets, and an increase in the demand for Sterling.

Conversely, lower interest rates in one country relative to other countries leads to an increase in supply, as speculators sell a currency in order to buy currencies associated with rising interest rates. These speculative flows are called *hot money*, and have an important short-term effect on exchange rates.

3. What is the 'J-Curve' Effect?

The J-curve effect is a type of diagram where the curve falls at the outset and eventually rises to a point higher than the starting point, suggesting the letter J. While a J-curve can apply to data in a variety of fields, such as medicine and political science, the J-curve effect is most notable in both economics and <u>private</u> <u>equity</u> funds; after a certain policy or investment is made, an initial loss is followed by a significant gain.

How it works (Example)

The *J*-curve effect is a phenomenon in which a period of negative or unfavorable returns is followed by a gradual recovery that stabilizes at a higher level than before the decline. The progression of this phenomenon appears as a "J" shape on a time-series graph.



The J-curve effect is often seen in a country's balance of trade and equity fund returns.

BREAKING DOWN 'J-Curve Effect'



J-Curves in Economics

An example of the J-curve effect is seen in economics when a country's trade balance initially worsens following a <u>devaluation</u> or <u>depreciation</u> of its currency. The higher <u>exchange rate</u> first corresponds to more costly imports and less valuable exports, leading to a bigger initial deficit or a smaller surplus.

Due to the competitive, relatively low-priced exports, the affected country's exports of the goods in question start to increase as outside demand for the lower-priced option increases. Local consumers also purchase less of the more expensive imports and focus on local goods as the exchange rate makes certain locally produced items more affordable than the imported counterpart. <u>The trade balance</u> eventually improves to better levels compared to before devaluation.

In cases where a country's currency appreciates, a reverse Jcurve may occur. This is based on the country's associated exports becoming more expensive for importing countries than experienced previously. If other countries are able to offer the good at a more affordable rate, the country with a higher currency value may see demand drop in the export arena. Additionally, local consumers may favor imported versions of goods if they are available at a lower cost.

Why does J curve Matters?

Economic <u>analysts</u> and policymakers may <u>factor</u> the J-curve effect into their analyses and decisions as a way to gauge both short- and long-term effects of a variable change (for example, a decline in exchange rates) or new policy.

4. Summary

Currencies are bought and sold, just like other commodities, in markets called foreign exchange markets. How currency values are established depends upon whether they are determined solely in free markets, called *freely floating*, or determined by agreements between governments, called *fixed* or pegged. So in this session we learnt the concepts of demand and supply condition of currency, factors affecting the shift or change of currency which included companies that export and import, foreign investors and banks, speculators who wish to engage in market activity, and central banks that control the movement of interest rates. Apart from this we will also understood one more curve and its effect called the J curve effect. We saw how it worked, its connection with economics and well as why it matters. Economic analysts and policymakers may factor the Jcurve effect into their analyses and decisions as a way to gauge both short- and long-term effects of a variable change or new policy.