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"CURRENCY DERIVATIVES AND CURRENCY RATES"

(Research Article)

Ashok K.Sinha

Derivative is a financial instrument whose value depends on underlying assets or variables. So likewise there are many currency derivatives used in currency future contracts. The following discussion gives the holistic view of currency derivatives and their future. A currency future contract is a standardized contract between two parties to buy or sell a particular currency at a specified future date on a price agreed today. A currency forward contract is almost similar to future contract but it is the customized contract between two parties where contract matures on a specified date on a price agreed today. It is a contract between two parties for future transactions on a financial instrument at a specified price. There are two types of options: call option and put option.**Call option**: the buyer of the call option has the right but not the obligation to buy the agreed quantity of currency lots from the seller of the option at a certain time for a certain price. The following example will discuss how the call option works in currency future contracts:

Suppose the current price of one USD is Rs 55. If the investor A feels that its price will go up significantly in future than A buys a call contract of one lot (1000 units) from B at a price of Rs 56000. A is paying the premium of Rs 1000 up front for one lot of USD.

If the price of USD does not go up and A does not exercise the contract then A loose Rs 1000.

If the price of 1 lot of USD goes upto Rs 58000 and A exercise the contract before the maturity of the contract then A will get the one lot of USD at Rs 56000. It means A gains Rs 2000 for exercising call option before maturity.

If the price of 1 lot of USD goes down upto Rs 53000 then A will not exercise the option and pays the premium amount to B for not exercising the option.

Put option: the buyer of the put option has the right but not the obligation to sell the agreed quantity of currency lots to the seller of the option at a certain time for a certain price. The following example will discuss how the put option works in currency future contracts:

Suppose the current price of one EURO is Rs 65. If the investor X feels that its price will go down significantly in future than X buys a put contract of one lot (1000 units) from Y and pays a premium of Rs 1000 per lot.

If the price of EURO does not go below and X does not exercise the contract then X loose Rs 1000.

If the price of 1 Euro goes down to Rs 60 and X exercise the contract before the maturity of the contract then X buys the one lot of euro from the market and sell it to Y for Rs 65 per euro and earns profit of Rs 5 per euro.

If the price of 1 Euro goes upto Rs 70 then X will not exercise the option and pays a premium of Rs 1000 to Y.

Currency Swaps: It allows swapping of both principal and interest between counterparties. There are many types of currency swaps like fixed to fixed currency swap, floating to floating swap, fixed to floating currency swap. Currency swaps help investors in hedging their position against the exchange rate fluctuations.

The net present value of swap contract is always maintained to be zero at the time of the contract to avoid the discrepancies to any of the parties in the contract. Suppose there are two parties A and B in the contract and if party A wants to pay 1 bps above the swap rate then party B must pat 1 bps below the swap rate. By doing so, their position will be compensated at par at the time of the contract.

Currency future trading is done on margin money. The following example will discuss how trading is done in currency futures:

For example, the spot rate of one USD is Rs. 45.25 and one month future rate of USD is Rs. 45.50. Assume expected spot rate on maturity of the contract at Rs 45.65.

If a Dealer or an investor buys 1000 lots of currency future contract. We all know that one lot of currency future contract consists of 1000 units. So, therefore, 1000 lots of currency future contract will have 1000*1000 = 1000000 USD or 10 Lakh units of USD.

There value of the contract is: 1000000*45.25 = Rs 45250000. Suppose margin money deposit for the contract is 2 percent of the total value of the contract. Therefore, margin money for this contract is Rs. 905000 (45250000*0.02).

If exchange rate after a month for one USD goes upto Rs 45.65 then dealer gains profit of Rs 1000000*Rs 0.15 = Rs. 1,50,000. Therefore rate of return would be 150000/905000 = 15.79 Approx.

Spot rate of one USD	Rs 45.25
Value of one month future contract	Rs 45.50
Size of one lot	1000 units
Lot purchased	1000 or 1000000 units
Total value of the contract	Rs 45250000
Expected spot rate of USD on maturity of contract	Rs 45.65
Margin Money	2 percent of the value of the contract
Margin money deposited	Rs 905000
Profit earned on maturity, if spot price increased as expected	Rs 150000

The biggest advantage of currency future contract is that we don’t need to pay entire amount either at upfront or at the time of settlement of the contract. Brokers or investors need to maintain only margin money while trading of currency future contracts.

Contract Specification: currency future contract has many contract specification:

- **Underlying:** Rate of exchange between 1 USD and 1 INR
- Pair: The following 4 pairs are allowed in India for currency futures:
  - ✓ USD-INR
  - ✓ EUR-INR
  - ✓ GBP-INR
  - ✓ JPY-INR
- **Tick Size:** 0.0025 INR
- **Trading Hours :** 9:00 AM to 5:00 PM
- **Contract size :** one lot or 1000 units
- **Trading period :** Maximum 12 months
- **Contract period :** 12 calendar months
- **Final Settlement day:** Last working day of the month. As per RBI guidelines, last trading must be two days prior to the final settlement date. The settlement price gets fixed at 12:00 NOON on the last trading day.
- **Last trading day:** Two working days prior to the final settlement date.
- **Settlement price:** Cash in INR (Indian Rupee)

Let us discuss the factors which affects the currency rates-Currency rates keep on changing constantly. It means value of one currency in terms of another currency is not fixed. Any change in the price of currency either shows its strength/appreciation or weakness/depreciation over the other currency. Take the case of USDINR, appreciation of INR with respect USD means that each unit of INR can buy more units of USD than ever before. Depreciation of INR with respect to USD means that each unit of INR will buy less units of USD than ever before. There are many factors which affect the currency rates across the globe. No one factor alone is responsible for fluctuating currency rates. Some of the factors are which affect the currency rates are given as follows:

Demand and Supply: Demand for base currency and its supply in domestic market. For ex: take the case of USDINR, if USDs' are not available in the domestic market or domestic market fails to meet its demand then the price of per USD may increase in the domestic market because of variation in demand and supply.

Export rate: Take the case of USDINR, **if** there is excess of export in the country then more USD will inflow in the country due to which value of USD will depreciate and value of INR (Indian Rupee) will appreciate.

Import rate: if there is excess of import in the country then more domestic currency will outflow to the other countries of the world. If it happens then domestic currency will depreciate than other currencies of the world. Take the case of USDINR, if India imports more stuffs from USA then there will be more outflow of INR (India Rupee) to the USA which will result in depreciation of Indian Rupee or INR and the value of USD will appreciate.

Trade balance: Trade balance also affects the prices of currencies across the globe. Positive trade balance of any country appreciates the value of currency of that country. Negative trade balance of any country depreciated the value of currency of that country.

NRI FOREX remittance: If there is increase in NRI FOREX remittance, it means that there is increase of foreign currency in the domestic market. Take the case of USDINR, if there is an increase of USD in NRI FOREX remittance, it means there is excess of USD in the domestic market or there is an increase in the inflow of USD which will affect the prices of USD and INR in the country. If it happens then the price of USD will depreciate and price of INR will appreciate.

Commodity prices: commodity prices across the globe also affect the price of currencies around the world. Take the case of USDINR; if there is rise in global price of commodities then demand for USD will be on higher side due to heavy imports from outside the country. If it happens then the value of USD will appreciate or the value of INR will depreciate.

Political factor: An unstable or stable government can also affect the value of its currency across the globe. For ex, USD value is always on the higher side than the most of the currencies of the world where as value of Pakistan rupee is always on the lower side than the most of the currencies of the world. It happens because of the performance of their respective governments on global platform. USA shows its positive and strong image to the world which results in the appreciated of USD whereas Pakistan shows its poor image to the world which results in the depreciation of Pakistan rupee. It means political factors also can play a very important and crucial role in deciding the value of its country currency. Therefore, it becomes paramount for every nation to show its positive and strong image to the world so that the value of its currency never depreciates.

Monitory and fiscal policies: Monitory and fiscal policies also play a very important role in deciding the value of its currency. Good and strong monitory and fiscal policies always help the government in keeping the value of its currency appreciating than other currencies of the world.

USA is the perfect for the appreciating value of USD than many currencies of the world for such a long period of time. It has been made possible because of the stronger and stringent monitory and fiscal policies of USA for its economy than other countries.

Financial stability: Financially sound economies or countries always have good or strong value of its currency. A good financial stability is required in keeping the appreciating value of currency intact. USA is always considered to be financially sound economy than major economies of the world and that is why even after subprime crisis, they have been able to maintain the appreciating rate of its currency than most of the currencies of the world at such a crucial time or juncture. So, financial stability also plays a very important role in deciding the value of currency of any economy.

Future policies of the country: future policies of the country also play a very important role in deciding the value of its currency across the globe. Good future policies always attract or promote FDI (foreign direct investment) and FII (foreign institutional investor). Higher the FDI or FII, higher the inflow of outside currencies in the domestic market. Take the case of India; good future policies of India have been able to attract investors for many years. Due to this reason, there is more inflow of non domestic currencies in the domestic market and which has been strengthening the INR for a longer period of time.

Likewise, there are many factors which could affect the prices of currencies across the globe. So it becomes paramount for investors to study each and every factor diligently so that a good hedging position can be created in the market against the fluctuating prices of currencies across the world.

Effect of Currency rate fluctuations

As currency rates keep on fluctuating constantly, so does its effects on many institutions, individuals, investors' etc. Currency rate fluctuations affect mainly exporters and importers. So it becomes paramount for them to keep the track record of currency rates and then plan their actions accordingly. There are many institutions or individuals or businesses that get affected due to fluctuations in the currency rates. Banks, retail investors, government, stock market etc are one of them. Given below is the brief explanation on majorly affected players:-

Impact on exporters: currency fluctuations could affect the plans of exporters to the larger extent. If the domestic currency appreciates then they will get less payment because appreciation of a domestic currency allows foreign importers to get goods and services at lesser price. If the domestic country depreciated then they will get more payment because depreciation of a domestic currency allows foreign importers to get goods and services at higher price. Therefore, for an exporter, depreciation of a currency is a good indication to make profit.

Impact on Importers: currency fluctuations affect the importers in the opposite way or direction as it does to the exporter. As exporters gain profit from currency depreciation, Importers gain profit from currency appreciation. It happens because if domestic currency appreciates than one unit of domestic currency can buy more units of foreign currencies. If it happens then it generates good profit for the importers because then they can get goods and services either at the cheaper rate or in more quantity.

Effect	Exporters	Importers
Appreciation of domestic currency	**Negative Impact**	**Positive Impact**
Depreciation of domestic currency	**Positive Impact**	**Negative Impact**

Table Effect on Exporters and Importers

Therefore it becomes paramount for both exporters and importers to know the importance of price appreciation or deprecation so that they can work accordingly in currency futures contract. A good strategy while buying currency future contracts could help them immensely in saving many units of domestic currencies while doing export or import.

Impact on Economy: currency appreciation and deprecation are like two sides of a coin. Currency appreciation or deprecation has dual effect on any economy. If the economy is developing, then it may have more imports than exports, it means currency appreciation can do wonders in the growth of that country. Likewise, if the country or economy is developed then it may have more exports than imports, so, currency depreciation can generate a good amount of profit for those countries.

Impact on Industrialization or globalization: As most of the nations want to expend their business outside the domestic market, so, a good appreciation in the value of their currency can boost their horizon to many folds. A good appreciation in the value of their currency will allow them to set up their businesses outside the domestic market at cheaper cost with cheap labour associated with it.

Today countries like USA, UK, and China have expanded their businesses outside the domestic market. It all has been made possible because of the appreciated value of their currencies with major and most currencies of the world. These countries are considered to be highly developed and industrialized in the world. Their highly valued currencies help these countries a lot in creating a niche for themselves in the market at the most cheaper rate or cheaper cost.

So likewise there are many individuals, organisations, economy, who get affected because of the fluctuations in the value of currencies across the globe. By keeping this in the mind, they can enter in currency future contracts and could by heavy lots to prevent their interest and profit in the market. By doing so, they would be able to generate not only profit but also confidence which would help them in long run in taking good business decision while doing business around the world.

References

- http://www.Nseindia.com
- http://www.oanda.com
- http://forecastchart.com
- http://www.loobiz.com
- http://www.invetopedia.com
- http://www.ssrn.com/
- State of Currency Derivatives Trading in India: Futures Vs Forwards by Tulsi Lingareddy
- Do Foreign Exchange Markets Still Trend? By Kuntara Pukthuanthong-Le, a,* Richard M. Levich, b and Lee R. Thomas III c
- Foreign Exchange Market Trading Volume and Federal Reserve Intervention By Alain Chaboud (Division of International Finance, Federal Reserve Board)
- Are Options Redundant? Further Evidence from Currency Futures Markets By Leo Chan and Donald Lien*
- Currency derivatives by kalpak K Bhore

- Foreign Exchange Derivatives Market in India - Status and Prospects By Neeraj Gambhir and Manoj Goel.
- RETURN, TRADING VOLUME, AND MARKET DEPTH IN CURRENCY FUTURES MARKETS By Ai-ru (Meg) Cheng and Yin-Wong Cheung
- Currency Markets and International Interest Rate Parity By Suk Hun Lee, Ph.D.