

Currency Market

(English Medium)

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Currency Market

1 Introduction:

From time immemorial people from one region are selling goods to another region. This trade used to be in barter form. For instance, one person who has rice will exchange it with wheat from another person. With the advent of currency, barter was replaced with currency. Now, every country has its own currency. Therefore, for trade of goods from one country one needs to have currency of that country.

One unit of goods needs a different amount of currency from different countries. For instance, for one Kg of basmati rice we may need 100 INR, 180PKR, 2USD, 6SAR, 15 CNY, 1500 JPY, 1.8 Euro etc.

What we mean to say is that the real worth (value) of one unit of currency of one country is different than that of another country.

In today's globalised world, the volume of trade of one country with another is very high and no country can meet its requirement of goods within its own boundaries. This makes exchange of goods between different countries inevitable.

To meet the currency needs, one needs to exchange currencies similar to what we do with goods. That is, we trade currencies and it takes place all over the world. Therefore, we need a currency market where we can execute our currency trade.

The foreign exchange market is the place where money denominated in one currency is bought and sold with money denominated in another currency. It provides the physical and institutional structure through which the currency of one country is exchanged for that of another country, the rate of exchange between currencies is determined, and foreign exchange transactions are physically completed.

The currency market, or foreign exchange market ("forex"), is created to facilitate the exchange of currency that becomes necessary as the result of foreign trade. That is, when an entity in one country sells something to an entity in another country, the seller earns that foreign currency.

Currency market is the largest market in the world with a daily turnover of Five Trillion dollars.

2 Currency Exchange Rate:

An **exchange rate** is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in relation to another currency. For example, an interbank exchange rate of 114 Japanese yen to the United States dollar means that JPY 114 will be exchanged for each USD1 or that USD 1 will be exchanged for each JPY 114. In this case it is said that the price of a dollar in relation to yen is JPY 114.

Exchange rates are determined in the foreign exchange market, which is open to a wide range of different types of buyers and sellers, and where currency trading is continuous: 24 hours a day except weekends, i.e. trading from 20:15 GMT on Sunday until 22:00 GMT Friday. The spot exchange rate

refers to the current exchange rate. The forward exchange rate refers to an exchange rate that is quoted and traded today but for delivery and payment on a specific future date.

USD INR Exchange rate as on 17th Jan 2020 is 71.03. i.e. 71.03 Indian Rupees are needed to buy one US Dollar. Or One US Dollar will fetch 71.03 Indian Rupees.

Forex exchanges allow for 24 x 7 trading in currency pairs, making it the world's largest and most liquid asset market.

3 Currency Trade

In India, NSE is the first exchange to have received an in-principle approval from SEBI for setting up a currency derivative segment. The exchange launched its currency futures trading platform on 29th August, 2008. Currency futures on USD-INR were introduced for trading and subsequently the Indian Rupee was allowed to trade against other currencies such as Euro, GBP and Japanese yen. Currency Options was introduced on October 29, 2010.

Further, Options trading on EURINR, GBPINR and JPYINR was also introduced on February 27, 2018. Cross Currency Futures and Options contracts on EUR-USD. GBP-USD and USD-JPY are also introduced on February 27, 2018.

4 Currency Pair:

Currencies are traded against one another as pairs (e.g. EUR/USD) and each pair is typically quoted in pips (percentage in points) out to four decimal places. In Indian currency market which is also regulated by SEBI, trading in four currency pairs is allowed.

Permitted Rupee Currency pairs are -

US Dollar -Indian Rupee Contract (USD-INR)

British Pound -Indian Rupee Contract (GBP -INR)

Japanese Yen –Indian Rupee Contract (JPY-INR)

In the above said currency pairs, USD, GBP, JPY and EUR are Base Currencies whereas INR is Quote Currency.

Permitted Cross Currency pairs are -

Euro –Indian Rupee Contract (EUR-INR)

Euro – US dollar EURUSD,

Pound Sterling – UD dollar GBPUSD,

US dollar – Japanese Yen USDJPY

Maximum volume of trade is done by the USDEUR currency pair in the whole world. In India max volume is done in USDINR currency pairs.

5 Currency Derivatives

Currency derivatives are financial contracts between the buyer and seller involving the exchange of two currencies at a future date, and at a stipulated rate.

Currency Derivative Trading is similar to Stock Futures and Options trading. However, the underlying asset are currency pairs (such as USDINR or EURINR) instead of Stocks. Currency Options and Currency Futures trading is done in the Foreign Exchange markets.

Forex rates are the value of a foreign currency relative to domestic currency. The major participants of Currency Trading in India are banks, corporations, exporters and importers.

Currency Derivatives Trading is suitable for those interested in reducing their foreign exchange rate risk. Currency Derivatives in India provide a bundle of opportunities for a number of players.

Like the commodity market, currency derivatives also have two segments. These are Futures and Options.

5.1 Currency Futures:

Currency Futures Trading involves financial contracts in which the parties have the obligation to exchange their underlying currencies at a predetermined price on the expiry date. Currency futures are a linear product, and the procedure of calculating profits or losses is similar to that of Index futures.

Whether you are a pure hedger, an arbitrageur, a speculator or a trader, you can benefit from currency futures trading by taking a view on exchange rate movements without an underlying or an economic exposure.

There are 7 currency pairs available in the currency futures market for trade. These are – USDINR, GBPINR, JPYINR, EURINR, EURUSD, GBPUSD, USDJPY.

5.2 Currency Options:

Currency Options are financial contracts in which the buyers have the right, but not the obligation to buy or sell the underlying at a predetermined price on the predetermined future date. There are two types of options – Call or Put.

Call options provide the holder the right (but not the obligation) to purchase a certain currency pair at a specified price (the strike price), for a certain period of time.

Put options give the holder the right to sell a certain currency pair at a specified strike price. The seller (or writer) of the put option is obligated to buy the stock at the strike price.

Currency options Trading is also a very effective tool as it provides better strategic investment opportunities. Online currency trading provides an opportunity to trade in currency options and strategize your currency trading in India more effectively.

We shall learn more about Options Market in Advance Course.

5.3 Benefits of Currency Derivatives

- 1. Offers diversification to your investments
- 2. Hedging opportunities to Importers & exporters, for their future payables and receivables.
- 3. Gives trading opportunities because of volatility in currency
- 4. Provides transparent rates to traders as it is exchange-traded

6 Currency Market Participants

6.1 Hedging:

Now avail protection against foreign exchange exposures and minimize your losses by taking appropriate positions through hedging with the help of currency derivatives

6.2 Trading:

With currency options and futures, you can now trade on short-term fluctuations in markets by taking view on directional movement.

6.3 Arbitrage:

Benefit from currency exchange rates in different markets and different exchanges with currency derivatives trading.

6.4 Leverage:

With currency futures trading and options trading, you only need to pay a minimal margin of the total value, and not the full traded value.

In the Forex transactions 85% volume is cornered by the following seven currencies –

- 1. US Dollar (USD)
- 2. EURO (EUR)
- 3. Japanese Yen (JPY)
- 4. Pound Sterling (GBP)
- 5. Australian Dollar (AUD)
- 6. Canadian Dollar (CAD)
- 7. Swiss Franc (CHF)

7 Contracts

Contract Period: Trading cycle for Currency contracts is for a period of 12 months.

Trading Hours: 09:00 AM to 05: PM for currency pairs having INR

09:00 AM to 07:30 PM IST for Cross currency pairs

Last trading day: Two days prior to the last business day of expiry month at 12:30 PM.

Final Settlement Day: Last working day (Excluding Saturday) of the expiry month.

Settlement : Daily settlement : T+1

Final Settlement: T+2

Settlement Example:

Contract:

Symbol USDINR

Instrument Type FUTCUR

Expiry Date 31-05-2019

Last Business day 31-05-2019

Last Trading Day 29-05-2019 at 12:30 PM

8 Unit For Trading and Tick Size In Currency Futures

Lot size for allowed currencies as per contract is as per below table -

| Symbol | USDINR | EURINR | GBPINR | JPYINR |
|--------------------------------------|-----------|------------|-------------------------|-------------|
| Instrument | FUTCUR | FUTCUR | FUTCUR | FUTCUR |
| Unit of Trading: 1 1 unit denotes | 1000 USD. | 1000 EURO. | 1000 POUND STERLING. | 100,000 JPY |

A trader needs to buy at least one unit. For instance, if you are buying 1 unit of USD, it means you are buying 1000 US Dollars.

Unit of trading for Cross currency pairs -

| Symbol | EURUSD | GBPUSD | USDJPY |
|--------------------------------------|-----------|----------|----------|
| Instrument | FUTCUR | FUTCUR | FUTCUR |
| Unit of Trading: 1 1 unit denotes | 1000 EURO | 1000 GBP | 1000 USD |

9 Tick Size

| Symbol | USDINR | EUROINR | | GBPINR | | JPYINR |
|------------|-------------------------|---------|--------|--------|------|--------|
| Instrument | FUTCUR | FUTCUR | | FUTCUR | | FUTCUR |
| Tick Size | 0.25 Paise = INR 0.0025 | | | | | |
| Symbol | EURUSD | GBPUSD | | JPY | | NR |
| Instrument | FUTCUR | FUTCUR | | FUTCUR | | CUR |
| Tick Size | 0.0001 | | 0.0001 | | 0.01 | |

10 Margin Requirement

In currency futures margin required is generally lower as compared to commodity market. This is because there is less volatility in the currency market as compared to the commodity market. Margin requirement varies between 2.5% to 5.0%. Let us see it through an example –

Let us buy one lot of USDINR

1 Lot of USDINR = 1000

CMP = 66.7800

Contract value = CMP X Qty

= 66.7800 x 1000

= Rs 66780

Let us now calculate Margin requirement @3.0%

Margin required = $66,780 \times 3\%$

= Rs 2,003

Let us see some more examples below -

| Sr. No. | Currency Pair | СМР | Lot Size | Contract Value | Margin @3% |
|---------|---------------|---------|----------|----------------|------------|
| 1 | USDINR | 69.0000 | 1000 | 69,000 | 2,070 |
| 2 | EURINR | 78.0000 | 1000 | 78,000 | 2,340 |
| 3 | GBPINR | 90.0000 | 1000 | 90,000 | 2,700 |
| 4 | JPYINR | 62.0000 | 1000 | 62,000 | 1,860 |

Cross Currency Pair -

| Sr. No. | Cross Currency Pair | СМР | Lot Size | Contract Value | Margin @3% |
|---------|---------------------|----------|----------|----------------|------------|
| 1 | EURUSD | 1.1200 | 100,000 | 1,12,000 | 3,360 |
| 2 | GBPUSD | 1.3000 | 100,000 | 1,30,000 | 3,900 |
| 3 | USDJPY | 111.0000 | 1000 | 1,11,000 | 3,330 |

11 Mark to Market

We have already understood Mark to Market in the commodity market.

After one gets a futures contract, one needs to keep an eye on the spot rate every day to see whether to close foreign exchange (FX) position or wait until the settlement date. The value of a futures contract to the holder changes with two things –

- 1. changes in the spot rate and
- 2. changes in the expectations regarding the future spot rate at the settlement date.

If the spot rate of a currency increases over a period, futures prices are likely to increase as well. In this case, purchase and subsequent sale of futures may be profitable.

Conversely, if the spot rate declines, the futures rate would also decline, which would lead to a loss.

- 1. **Credit risk:** If you buy or sell futures, money is not exchanged until the settlement date. To keep the credit risk in check, the buyer or seller of a futures contract must deposit funds into a margin account. In other words, there is an initial margin requirement. This requirement is typically between 2.5 to 5.0% of the contract value of the currency contract.
- 2. **Marking-to-market:** After the futures contract is obtained, as the spot exchange rate changes, the price of the futures contract changes as well. These changes result in daily gains or losses, which they are credited to or subtracted from the margin account of the contract holder. This is called the *marking-to-market process*. This process reduces the credit risk to brokerage firms as well as to the CME.
- 3. **Maintenance margin:** Holders of Currency futures are required to maintain a minimum level of margins. If their margin accounts are below the maintenance margin, they receive a *margin call from* their brokers to increase their funds on their margin account to avoid penalties.

Let us now understand these points through example -

USDINR Contract Value = Lot Size x CMP

= 1000 USD x 66.7800

= 66,780/-

Margin @ 3 % = 66,780 x 3 / 100

= 2,003/-

This margin money is needed to transact one lot of this currency pair. The table summarizes the impact on margin required due to changes in closing price for a couple days and the associated gains/losses.

| Date | Closing Price | Buyer (Margin) | Seller (Margin) |
|------------------|----------------------|-----------------|-----------------|
| 18 th | 66.78 | 2003 | 2003 |
| | 66.88 | + 0.10 x1000 | (-) 0.10 x 1000 |
| | | = 100 | = (-)100 |
| | | = 2103 | = 1903 |
| 19 th | 66.63 | (-)0.25 x 1000 | +0.25 x 1000 |
| | | = (-)250 | = 250 |
| | | = 1853 | = 2153 |
| 20 th | 66.48 | (-) 0.15 x 1000 | + 0.15 x 1000 |
| | | = (-)150 | = 150 |
| | | 1703 | 2303 |

When the loss exceeds 70% of Initial Margin, then you are asked to pay additional margin to cover this shortfall. Otherwise, your position will be squared off by your broker.

12 Factors Affecting Currency Exchange Rates



12.1 Inflation Rates

Changes in market inflation cause changes in currency exchange rates. A country with a lower inflation rate than another will see an appreciation in the value of its currency.

Therefore one needs to keep an eye on the inflation figures which are published by various govt. agencies from time to time.

12.2 Interest Rates

Changes in interest rate affect currency value and exchange rate. Forex rates, interest rates, and inflation are all correlated.

Increase in interest rates causes a country's currency to appreciate because higher interest rates provide higher rates to lenders, thereby attracting more foreign capital, which causes a rise in exchange rates.

12.3 Country's Current Account / Balance of Payments

Country's current account reflects the balance of trade and earnings on foreign investment. It consists of a total number of transactions including its exports, imports, debt, etc. A deficit in current account due to spending

more of its currency on importing products than it is earning through sale of exports causes depreciation. Balance of payments fluctuates the exchange rate of its domestic currency.

12.4 Government Debt

Government debt is public debt or national debt owned by the central government.

A country with government debt is less likely to acquire foreign capital, leading to inflation.

Foreign investors will sell their bonds in the open market if the market predicts government debt to rise. As a result, a decrease in the value of its exchange rate will follow.

12.5 Political Stability & Performance

Country's political state and economic performance can affect its currency strength.

A country with less risk for political turmoil is more attractive to foreign investors, as a result, drawing investment away from other countries with more political and economic stability.

Increase in foreign capital, in turn, leads to an appreciation in the value of its domestic currency. A country with sound financial and trade policy does not give any room for uncertainty in the value of its currency. But, a country prone to political confusions may see a depreciation in exchange rates.

12.6 Recession

When a country experiences a recession, its interest rates are likely to fall, decreasing its chances to acquire foreign capital. Therefore, recession causes its currency to weaken in comparison to that of other countries, resulting in lower exchange rate.

12.7 Currency Demand and Supply:

Factors discussed above affect demand and supply position of currency. AS is true for any commodity demand and supply of currency affect its exchange rate in the same way.

12.8 RBI Monetary Policy

RBI monitors the health of all areas linked to the economy of the country. It formulates its policy to have effective corrective steps. Any step taken by RBI has far reaching consequences on the market. Therefore, let us have a detailed look at the policy and its impact –

The monetary policy is a policy formulated by the central bank, i.e., RBI (Reserve Bank of India) and relates to the monetary matters of the country. The policy involves measures taken to regulate the supply of money, availability, and cost of credit in the economy.

The policy also oversees distribution of credit among users as well as the borrowing and lending rates of interest. In a developing country like India, the monetary policy is significant in the promotion of economic growth.

The various instruments of monetary policy include variations in bank rates, other interest rates, selective credit controls, supply of currency, variations in reserve requirements and open market operations.

12.8.1 Objectives of Monetary Policy

Main objective of monetary policy is economic growth as well as price and exchange rate stability. There are other aspects that it can help with as well. These are –

- Promotion of saving and investment: Since the monetary policy controls the rate of interest and
 inflation within the country, it can impact the savings and investment of the people. A higher rate of
 interest translates to a greater chance of investment and savings, thereby, maintaining a healthy cash
 flow within the economy.
- 2. **Controlling the imports and exports:** By helping industries secure a loan at a reduced rate of interest, monetary policy helps export-oriented units to substitute imports and increase exports. This, in turn, helps improve the condition of the balance of payments.
- 3. **Managing business cycles:** The two main stages of a business cycle are boom and depression. The monetary policy is the greatest tool using which the boom and depression of business cycles can be controlled by managing the credit to control the supply of money. The inflation in the market can be controlled by reducing the supply of money. On the other hand, when the money supply increases, the demand in the economy will also witness a rise.
- 4. Regulation of aggregate demand: Since the monetary policy can control the demand in an economy, it can be used by monetary authorities to maintain a balance between demand and supply of goods and services. When credit is expanded and the rate of interest is reduced, it allows more people to secure loans for the purchase of goods and services. This leads to the rise in demand. On the other hand, when the authorities wish to reduce demand, they can reduce credit and raise the interest rates.
- 5. **Generation of employment:** As the monetary policy can reduce the interest rate, small and medium enterprises (SMEs) can easily secure a loan for business expansion. This can lead to greater employment opportunities.
- 6. **Helping with the development of infrastructure:** The monetary policy allows concessional funding for the development of infrastructure within the country.
- 7. **Allocating more credit for the priority segments:** Under the monetary policy, additional funds are allocated at lower rates of interest for the development of the priority sectors such as small-scale industries, agriculture, underdeveloped sections of the society, etc.
- 8. Managing and developing the banking sector: The entire banking industry is managed by the Reserve Bank of India (RBI). While RBI aims to make banking facilities available far and wide across the nation, it also instructs other banks using the monetary policy to establish rural branches wherever necessary for agricultural development. Additionally, the government has also set up regional rural banks and cooperative banks to help farmers receive the financial aid they require in no time.

12.8.2 Monetary Policy Tools

To control inflation, the Reserve Bank of India needs to decrease the supply of money or increase cost of funds in order to keep the demand for goods and services in control.

12.8.2.1 Quantitative tools –

The tools applied by the policy that impact money supply in the entire economy, including sectors such as manufacturing, agriculture, automobile, housing, etc.

- 1. **Reserve Ratio:** Banks are required to keep aside a set percentage of cash reserves or RBI approved assets. Reserve ratio is of two types:
- 1.1 **Cash Reserve Ratio (CRR)** Banks are required to set aside this portion in cash with the RBI. The bank can neither lend it to anyone nor can it earn any interest rate or profit on CRR.

Current CRR rate is 4.0%

1.2 **Statutory Liquidity Ratio (SLR)** – Banks are required to set aside this portion in liquid assets such as gold or RBI approved securities such as government securities. Banks are allowed to earn interest on these securities, however it is very low.

Current SLR rate is 19.24%

2 Open Market Operations (OMO): In order to control money supply, the RBI buys and sells government securities in the open market. These operations conducted by the Central Bank in the open market are referred to as Open Market Operations.

When the RBI sells government securities, the liquidity is sucked from the market, and the exact opposite happens when RBI buys securities. The latter is done to control inflation. The objective of OMOs are to keep a check on temporary liquidity mismatches in the market, owing to foreign capital flow.

12.8.2.2 Qualitative tools:

Unlike quantitative tools which have a direct effect on the entire economy's money supply, qualitative tools are selective tools that have an effect in the money supply of a specific sector of the economy.

- Margin requirements The RBI prescribes a certain margin against collateral, which in turn impacts
 the borrowing habit of customers. When the margin requirements are raised by the RBI, customers
 will be able to borrow less.
- 2. **Moral persuasion** By way of persuasion, the RBI convinces banks to keep money in government securities, rather than certain sectors.
- 3. **Selective credit control** Controlling credit by not lending to selective industries or speculative businesses.

12.8.3 Market Stabilisation Scheme (MSS) -

12.8.3.1 Policy Rates:

Bank rate – The interest rate at which RBI lends long term funds to banks is referred to as the bank rate. However, presently RBI does not entirely control money supply via the bank rate. It uses Liquidity Adjustment Facility (LAF) – repo rate as one of the significant tools to establish control over money supply.

Bank rate is used to prescribe penalty to the bank if it does not maintain the prescribed SLR or CRR.

12.8.3.2 Liquidity Adjustment Facility (LAF) –

RBI uses LAF as an instrument to adjust liquidity and money supply. The following types of LAF are:

1. **Repo rate:** Repo rate is the rate at which banks borrow from RBI on a short-term basis against a repurchase agreement. Under this policy, banks are required to provide government securities as collateral and later buy them back after a predefined time.

REPO rate is 6.25% as on 4th Apr 2019.

2. **Reverse Repo rate:** It is the reverse of repo rate, i.e., this is the rate RBI pays to banks in order to keep additional funds in RBI.

Reverse REPO rate is 6.0% as on 4th Apr 2019.

12.9 Speculation

If a country's currency value is expected to rise, investors will demand more of that currency in order to make a profit in the near future. As a result, the value of the currency will rise due to the increase in demand. With this increase in currency value comes a rise in the exchange rate as well.

13 Hedging Tools

Currency Hedging is the act of entering into a financial contract in order to protect against unexpected, expected or anticipated changes in **currency exchange rates**.

Let us understand it through an example of Infosys. Infosys is an Indian company engaged in the development of Software for domestic as well as foreign companies.

Let us assume, Infy got an order to develop software for a US company at a price of USD 10,00,000. Duration of this contract is 3 months and Infy will receive payment after 3 months.

Now let us have a look at the following scenarios –

Current USDINR exchange rate is 70 at which working has been done.

Case-I USDINR exchange rate at the end of contract remains at 70.

The profitability as planned remains the same and there is no change in it.

Case-II USDINR exchange rate at the end of contract is 75

Infy profit increases by $(75-70) \times 10,00,000 = \text{Rs } 50,00,000$

i.e. company is in a better position than expected.

Case-III USDINR exchange rate at the end of contract is 65.

Infy profit decreases by $(70-65) \times 10,00,000 = \text{Rs } 50,00,000$

i.e. company is staring at a lower profit or may be Loss which is not a good position.

In order to avoid such a situation, a company needs to hedge against a fall in Exchange rate by Shorting in the Future market where contract expiry matches with company's contract date.

In Currency market, company will gain as below –

- = (Selling Price Buying Price) x 10,00,000
- = Rs 50,00,000

By way of hedging, a company is neutralizing the impact of currency exchange fluctuations on its operations.

14 Currency Option

A **currency option** (also known as a **forex option**) is a contract that gives the buyer the right, but not the obligation, to buy or sell a certain **currency** at a specified exchange rate on or before a specified date. For this right, a premium is paid to the seller.

Currency options are similar to options in the commodity market.

- 1. Currency options give investors the right, but not the obligation, to buy or sell a particular currency at a pre-specific exchange rate before the option expires.
- 2. Currency options allow traders to hedge currency risk or to speculate on currency moves.

There are two main types of options, calls and puts.

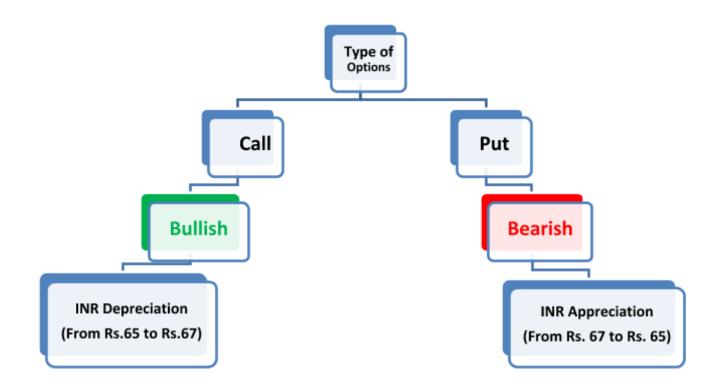
- 1. Call options provide the holder the right (but not the obligation) to purchase an underlying asset at a specified price (the strike price), for a certain period of time.
 - Investors buy calls when they think the share price of the underlying security will rise or sell a call if they think it will fall.
- 2. Put options give the holder the right to sell an underlying asset at a specified price (the strike price). The seller (or writer) of the put option is obligated to buy the stock at the strike price. Put options can be exercised at any time before the option expires.
 - Investors buy puts if they think the share price of the underlying stock will fall, or sell one if they think it will rise.

Put buyers - those who hold a "long" - put are either speculative buyers looking for leverage or "insurance" buyers who want to protect their long positions in a stock for the period of time covered by the option.

Put sellers hold a "short" expecting the market to move upward (or at least stay stable) A worst-case scenario for a put seller is a downward market turn.

The maximum profit is limited to the put premium received and is achieved when the price of the underlying is at or above the option's strike price at expiration.

The maximum loss is unlimited for an uncovered put writer.



15 Typical Currency Trade Statistics

15.1 Typical Online Trade Statistics on NSE

| Instrument | Underlying | Volume (Contracts) | Turnover (crs) | Premium Turnover (crs) | OI | Trades |
|------------|------------|-----------------------|----------------|------------------------------|-----------|--------|
| Futures | USDINR | 672983 | 4,796.12 | - | 3,311,572 | 25753 |
| Options | USDINR | 1041773 | 7,416.83 | 12.91 | 3,311,600 | 19131 |
| Futures | GBPINR | 39148 | 365.10 | - | 114,228 | 4556 |
| Options | GBPINR | 910 | 8.51 | 0.02 | 7,934 | 49 |
| Futures | EURINR | 34580 | 269.33 | - | 95,291 | 2797 |
| Options | EURINR | 9 | 0.07 | 0.00 | 705 | 6 |
| Futures | JPYINR | 27521 | 180.00 | - | 37,436 | 3354 |
| Options | JPYINR | 5 | 0.03 | 0.00 | 249 | 1 |

Total 1816929 13,035.99 12.93 6,879,015 55647

15.2 Typical Online Trade Statistics - Cross Currency on NSE

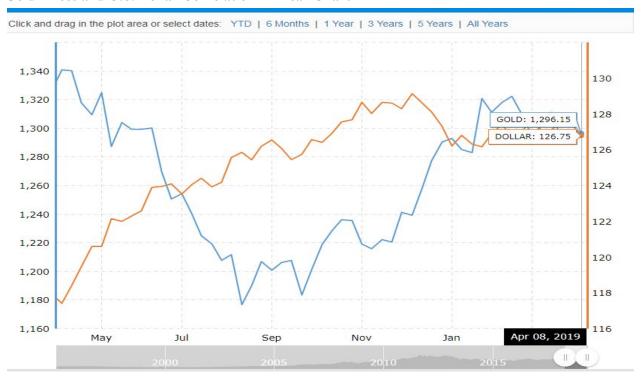
| Instrument | Underlying | Volume (Contracts) | Turnover (Quote Currency) (Crs) | Premium Turnover (lacs) | OI | Trades |
|------------|------------|-----------------------|------------------------------------|-------------------------------|-------|--------|
| Futures | EURUSD | 603 | 0.07 | - | 4,055 | 53 |
| Options | EURUSD | 0 | 0.00 | - | 0 | 0 |
| Futures | GBPUSD | 547 | 0.07 | - | 2,552 | 45 |
| Options | GBPUSD | 0 | 0.00 | - | 6 | 0 |
| Futures | USDJPY | 97 | 1.06 | - | 174 | 15 |
| Options | USDJPY | 0 | 0.00 | - | 0 | 0 |

15.3 Day-wise Turnover Statistics

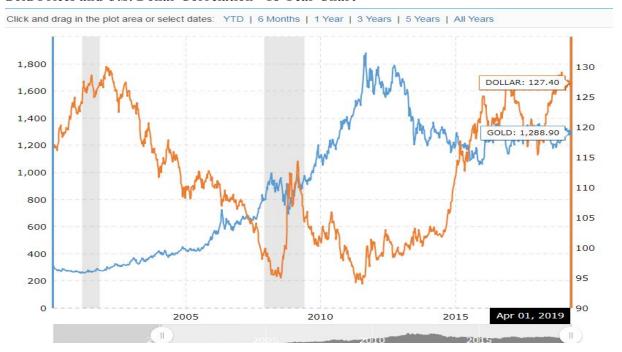
| Trade Date | Volume (Contracts) | Turnover (crs) | Premium Turnover (crs) | Spread volume | Open Interest |
|-------------|--------------------|-------------------|---------------------------|---------------|---------------|
| | | | | | |
| 24-Jan-2020 | 5983813 | 49,093.16 | 50.80 | 85520 | 77,63,510 |
| 23-Jan-2020 | 4333576 | 34,310.98 | 29.82 | 99146 | 73,13,165 |
| 22-Jan-2020 | 3031387 | 25,146.06 | 17.82 | 74406 | 70,38,468 |
| 21-Jan-2020 | 3857706 | 32,243.08 | 29.87 | 17334 | 68,91,520 |
| 20-Jan-2020 | 3126713 | 28,596.07 | 21.17 | 40434 | 66,42,348 |

16 Correlation Gold with USD

Gold Prices and U.S. Dollar Correlation - 1 Year Chart



Gold Prices and U.S. Dollar Correlation - 18 Year Chart



17 Why Currency Derivative:

17.1 Less Volatility

Higher the volatility higher is the risk. Since in the currency market the volatility is low therefore risk is also low.

17.2 Less Margin and low cost of transaction

Requirement of margin in the currency market is low as compared to equity or commodity market. Therefore, one can start with funds as low as RS 2,500.

See the comparison table given in point 18.

17.3 Hedging Tools

Hedging is easily done in the currency market for all those who have businesses spread across different countries to minimize the impact of currency exchange rate fluctuations.

17.4 Easy to understand

There are thousands of companies in the equity market. There are not many commodities in the commodity market. However there are a few currency pairs. Therefore, one can easily understand fundamentals.

18 Low Cost of Transaction

Segment Wise Cost On Per Cr. Volume

| Type of Charges (Cost per Crore) | Futures Segment | MCX Commodity | NCDEX Commodity | NSE Currency | MCX-SX Currency |
|--------------------------------------|--------------------|------------------|--------------------|--------------|--------------------|
| Exchange Transaction Fee (In Rs.) | 190 | 150 | 220 | 110 | 115 |
| SEBI fees (In Rs.) | 20 | - | - | 20 | 20 |
| STT/CTT (In Rs.) | 1,000* | 1000* | - | - | - |
| Stamp Duty (Maharashtra) (In Rs.) | 200 | 100 | 100 | 200 | 200 |
| Total Levies (In Rs.) | 1410 | 1250 | 320 | 330 | 335 |

*Brokerage not included

19 Currency Pair Trading In International Exchanges

USD/INR Pair is traded on 5 International Exchanges thus more participation

Singapore Exchange (SGX) 7.30 AM To 3.30 PM

Dubai Gold & Commodities Exchange (DGCX) 8.30 AM To 1.00 AM

Chicago Mercantile Exchange (CME) 5.30 PM To 12.30 AM

Intercontinental Exchange (ICE), New York 7.00 PM To 10.00 AM

Bahrain Stock Exchange (BSE) 9.30 AM To 1.00 PM

20 Difference between Equity & Currency Market

| Particular | Equity | Currency |
|------------------|------------------|---------------------|
| Payment | Full Payment | Margin Payment 3-5% |
| Exchange Traded | NSE, BSE | NSE-CDs, BSE, MSE |
| Expiry/Contracts | No Limit | Up to Expiry |
| Trading Hours | 9.15am To 3.30pm | 9.00am to 5.00pm |
| Unit Size | Not Applicable | Applicable |
| Shares Dr/Cr | Applicable | Not Applicable |
| Risk | Less | More |
| Mark To Market | Not Applicable | Applicable |
| Stop Loss | Not Required | Required |
| Loan Facility | Applicable | Not Applicable |
