Understanding Forex Markets

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Basics of Foreign Exchange Markets
Evolution of Forex Markets

Bretton Woods System (1945-1972)
- Dollar based Gold Standard
- U.S. dollar was pegged to gold at $35 per ounce and other currencies were pegged to the U.S. dollar.
- Each country responsible to maintain \( \pm 1\% \) of adopted par value.
- Formulation of IMF & the World Bank.

Floating Exchange Rate System (1973 onwards)
- The exchange rate would be determined by market forces without the intervention of the govt.
- However central banks do intervene in markets to smoothen the volatility

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Round the Clock
INR Liberalization

- **Devaluation during 70’s and 80’s:**
  - Oil price shock of early 70’s, lower domestic production, license raj and worsening BOP situation led to devaluation of INR from 7.75 (in 1970) to 12.36 per USD by 1985.

- **Economic Liberalization Era:**
  - From 17.50 in 1990, INR was devalued to 32.42 in just 5 years mainly on account of worst economic crisis with reserves equivalent to cover just 2 week imports. For various reasons since then, INR devalued from 44 to almost 72 currently.
  - Since then on account of liberalized economic policies, INR has been largely linked to global fx markets and India’s foreign currency reserves position.

  - INR is partially convertible meaning it is fully convertible under current account while enjoying selective convertibility under capital account as per RBI guidelines.
Market Participants

- Corporates
- Banks
- Financial Intermediary
- Central Banks
- Hedge Funds
- Speculators
Need of Forex Market

- All international trade (export/import) transactions are essentially two transactions:
  - the transfer of merchandise, services and portfolio products, and
  - the exchange of currencies.
- When buying goods from one country, you have to pay for it in that country’s currency
- Must exchange home currency for an equal value of the other country’s currency
# Currency Abbreviations

<table>
<thead>
<tr>
<th>Currency</th>
<th>Abbreviation</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Dollar</td>
<td>USD</td>
<td>Greenback</td>
</tr>
<tr>
<td>Indian Rupee</td>
<td>INR</td>
<td>Rupee</td>
</tr>
<tr>
<td>Sterling Pound</td>
<td>GBP</td>
<td>Cable</td>
</tr>
<tr>
<td>Euro</td>
<td>EUR</td>
<td>15 Nation Single Currency</td>
</tr>
<tr>
<td>Swiss Francs</td>
<td>CHF</td>
<td>Swissy</td>
</tr>
<tr>
<td>Australian $</td>
<td>AUD</td>
<td>Aussie</td>
</tr>
<tr>
<td>New Zealand $</td>
<td>NZD</td>
<td>Kiwi</td>
</tr>
<tr>
<td>Canada $</td>
<td>CAD</td>
<td>Loonie</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>JPY</td>
<td>Jappy</td>
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</tbody>
</table>
Common Terminology

- **Base currency**
  The first currency quoted in a currency pair on forex. It is sometimes referred to as the "primary currency".

- **Quote currency**
  It's the second currency quoted in a currency pair. It is sometimes referred to as the "secondary currency" or "counter currency".

- **Eg.**
  
  \[
  \begin{array}{c}
  \text{Base Currency} \\
  \downarrow \quad \text{USD / INR} \\
  \text{Quoted Currency}
  \end{array}
  \]

  1 USD = 73.00 INR
Common Terminology

- Eg. USD/INR = 73.00/73.01

- **Bid rate**
  The rate on the left of the quotation. This is the rate at which the quoting party is willing to buy the fixed currency.

- **Offer rate**
  The rate on the right of the quotation. This is the rate at which the quoting party is willing to sell the fixed currency.

- **Spread**
  The difference between the bid and offer rate.
Value Dates

- Inter-bank rates are always quoted on spot basis

- Spot rate is adjusted for value cash and tom transactions as per prevailing call money rates (cost of holding USD)
Hedging Platform

Platforms

Over The Counter
- Done through Authorized Dealers

Scheduled Commercial Banks

Exchange
- NSE and BSE

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Hedging Instruments

- Forward contract
- Futures
- Options
- Swaps
Forward Contract

- Contract to sell or buy a currency at a rate agreed today; for delivery at a pre-determined future date or time period
- Difference between the spot and the forward rate is called, forward points, swap points, or forward margin.
- Outright forward rate = spot rate +/- forward points
- Forward rate is the rate which neutralizes the effect of differences in the interest rates in a given currency pair (Except for USD/INR, which is purely on basis of Demand And Supply)
- Executed as an “Over-the-Counter” (OTC) contract with counterparty
- Participants are mainly corporate and banks having underlying exposure in the currency
Futures

- Exchange traded Futures
- It is a derivative instrument
- Futures are traded in organized exchanges
- Futures are transacted through brokers
- Traded only in a limited number of currencies
- Purpose is to provide a mechanism for price risk management
- Provide price curve of expected future prices
# Forwards vs. Futures

<table>
<thead>
<tr>
<th>Forwards</th>
<th>Futures</th>
</tr>
</thead>
<tbody>
<tr>
<td>• OTC tailored contracts</td>
<td>• Exchange traded contracts</td>
</tr>
<tr>
<td>• Underlying exposures required</td>
<td>• No underlying required</td>
</tr>
<tr>
<td>• Larger range of delivery dates</td>
<td>• Limited range of delivery dates</td>
</tr>
<tr>
<td>• Amount to be exchanged is negotiable</td>
<td>• Contracts are for standardized amounts</td>
</tr>
<tr>
<td>• Each party faces some counter party risk</td>
<td>• Contracts are guaranteed by futures exchange</td>
</tr>
<tr>
<td>• No margin is required</td>
<td>• Initial margin is required; valuation margin can be called for</td>
</tr>
<tr>
<td>• Profit/Loss only realizable on maturity of contract</td>
<td>• Profit/Loss can be realized prior to maturity</td>
</tr>
</tbody>
</table>
Options

- Option contracts give you a right to buy or sell the underlying currency at an agreed price in Future
- Option Premium: Cost required to be paid to purchase the right
- Call Option: Right to Buy but not Obligation
- Put Option: Right to Sell but not Obligation
- Illustration: ABC Co. buys a USDINR call option at a strike price of 74 for maturity at 28 Mar 2019. It has paid a premium of Rs.100,000. Hence on maturity if rate is below 74, then ABC will not exercise its right and buy at prevailing spot rate. If rate is above 74, then it will exercise its right and buy USD at 74.
Swaps

A swap is an agreement to provide a counterparty with something he wants in exchange for something that you want.

Different kinds of swaps:
- Principal Only Swap
- Interest Rate Swap
- Full Currency Swap

MIFOR: A rate that Indian banks and other derivative market participants used as a benchmark for setting prices on forward rate agreements and interest rate derivatives. MIFOR is a mix of the LIBOR and a forward premium derived from Indian forex markets.
Hedging Mechanism
Macro Factors Affecting INR

Basic Tenets

- GDP
  - Affects: Capital flows, Monetary Policy, Per Capita Income

- Inflation
  - Affects: Currency Purchasing Power, Monetary Policy

- Interest Rate
  - Affects: Tool to manage Inflation and money supply, Indicates returns on currency, Affects GDP

- Debt
  - Affects: Interest Burden, Higher fixed obligation, Credit Rating, Long term stability

- Fiscal Deficit
  - Affects: Inflation, Money Supply, Credit Rating, Long term Stability
Risk Management: Overview

- All market operations are to mitigate risk
- Benchmarking on “COST” is the basis of starting point FX and for loans.
- Use of progressive Stop Loss and Take Profit triggers should be used to safeguard cost and improve value.
- Business support is the motto of Treasury.
- Balance Sheet management and share holder value is final objective.
Typical Risk Management Mechanism

- **Identify Underlying Risks**
  - Study the “As-is” process to find any leakages
  - Breakdown the risks into multiple levels for a clearer picture

- **Quantification of Risk**
  - Organize data currency and month wise
  - Arrive at the benchmark values

- **Market Risk Simulation**
  - Conduct Sensitivity Analysis for adverse market movements to capture potential risk on balance Sheet

- **Define Risk Appetite**
  - Based on impact on net worth and EBITDA, risk ratio is defined

- **Hedging Framework**
  - Formulate Risk management policy

- **Monitor & Report**
  - Assist in deal execution
  - Highlight any deviations on a regular basis
  - Prepare management notes
Risk Quantification

- What if Scenarios! & Impact Analysis
- Asset Liability Mismatch
  - Currency Risk
  - Liquidity Risk
  - Interest Rate Risk
  - Capital Adequacy
  - Credit Risk
Benchmarking

- In line with the Balance Sheet Objective
- Benchmarking alternatives:
  - Cost of imports/exports in functional currency
  - Cost of borrowings in alternative currency
  - All inclusive hedging cost
  - Short term/long term borrowing
Hedging Mechanism

- Differentiating between confirmed exposures and forecasted exposures
- Hedging Ratio – Core hedge & Pending hedge
- Defining Trigger points for pending hedges - Stop Loss and Take Profits
- Marked to Market Reporting
- Periodic Review Mechanism
Reporting & Compliance

- Exposure Valuation report
- MTM report
- Reports to ALCO and RMAC
- Risk management policy compliance
- Generating deviation reports
- Performance appraisal vis-à-vis benchmark
- Medium and Long term market assessment
Mapping Hedging with Business Objectives

**Business Objectives**
- Protect Benchmarks
- Predictability of cash flows
- Protect shareholder returns
- Calculated risk taking

**Market Analysis**
- Decipher Medium to Long term trends
- Resistance & Supports
- Stop Loss
- Emergence of new trends

**Annual Budgeting**
- When to Hedge
- Hedging Ratio

**Hedging Instrument**
- What Tenor to Hedge

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The Psychology of Winning

Be :-
- Intuitive/Creative
- Non Competitive
- Non greedy
- Non fearful
- Equipoise
- Technically sound

Have in mind :-
- Risk appetite
- Risk/Reward
- STOPS at all times
The Psychology of Winning

- All market activity has to be dealt as a “business”.
- **It has to be strategy based rather than price based.**
- Entry level is determined by “stop loss”.
- Use stops mercilessly.
- When stops get triggered regularly-stand aside.
- Run profits with trailing stop if fearful.
- Own up losses quickly.
Case Study
## Details of the loan

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curr.</td>
<td>JPY</td>
</tr>
<tr>
<td>Loan drawn on</td>
<td>10\textsuperscript{th} Mar 2011</td>
</tr>
<tr>
<td>Loan Amount</td>
<td>12 billion</td>
</tr>
<tr>
<td>Fixed Interest Rate (half-yearly)</td>
<td>2.85%. p.a.</td>
</tr>
<tr>
<td>Tenure</td>
<td>10-Mar-26</td>
</tr>
</tbody>
</table>
Factors to be taken into while hedging

- Market Analysis
- Derivative Market Liquidity
- Amount and Tenure to hedge.
- Hedging Cost
## Hedging Cost (POS)

<table>
<thead>
<tr>
<th>Currency Pair</th>
<th>2 Years</th>
<th>5 Years</th>
<th>10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD/INR</td>
<td>4.16%</td>
<td>4.55%</td>
<td>4.63%</td>
</tr>
<tr>
<td>JPY/INR</td>
<td>7.15%</td>
<td>7.53%</td>
<td>7.52%</td>
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</tbody>
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## IRS

<table>
<thead>
<tr>
<th>Currency</th>
<th>2 yrs</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR</td>
<td>7.20%</td>
<td>7.65%</td>
<td>7.82%</td>
</tr>
<tr>
<td>USD</td>
<td>3.04%</td>
<td>3.10%</td>
<td>3.19%</td>
</tr>
<tr>
<td>JPY</td>
<td>0.05%</td>
<td>0.12%</td>
<td>0.30%</td>
</tr>
<tr>
<td>Mumbai</td>
<td>New Delhi</td>
<td>Kochi</td>
<td></td>
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<tr>
<td>------------------------</td>
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<td></td>
</tr>
<tr>
<td>F– 601 Remi Biz Court,</td>
<td>D-12, Phase 1,</td>
<td>Kanjilal Bhavan,</td>
<td></td>
</tr>
<tr>
<td>Off Veera Desai Rd,</td>
<td>Ashok Vihar,</td>
<td>37/2235A- Ponoth Road,</td>
<td></td>
</tr>
<tr>
<td>Andheri (W),</td>
<td>New Delhi – 110052</td>
<td>Kaloor,</td>
<td></td>
</tr>
<tr>
<td>Mumbai 400058</td>
<td>Contact:</td>
<td>682017</td>
<td></td>
</tr>
<tr>
<td>Contact: 91 22 67021266-68</td>
<td>91 9210010028</td>
<td>Contact:</td>
<td></td>
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<tr>
<td><a href="mailto:narendra@forexserve.com">narendra@forexserve.com</a></td>
<td>91 11 47069490</td>
<td>91 484 2348207/307</td>
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<td><a href="mailto:ankit@forexserve.com">ankit@forexserve.com</a></td>
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