

Currency Futures in India – A Viable Option for Hedging Exchange Rate Risks

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Abstract

Globalization and increased cross-border flow of funds have increased the exposure to market risk and hedging of such exposures has become critical. If the country has to sustain its growth momentum in the long run, an effective hedging mechanism which would enable them to cope better against their currency exposures is necessary. The introduction of currency derivatives is a landmark achievement benefiting importers, exporters and companies with foreign exchange exposure. During the 11th plan period that prolongs till 2011, the RBI currently has a five year plan to move towards full capital account convertibility. This would increase the scope of international finance and trade and thus foreign exchange market in India. So, currency futures assume greater significance in this context.

Key words: *Derivatives, Euro, Marked to market margin, Floating exchange rate, Convertibility of rupee*

Introduction

A number of structural changes were taken place in the Indian economy in the early 1990's as a result of liberalisation and globalisation. Till then, economies were not fully integrated and the rupee was partially convertible. Besides, a number of barriers restricted international trade and exchange. However, Indian economy has become a free market economy with the opening of the economy to multinationals and through the introduction of liberalised policies. The integration of markets witnessed high volatility in stock market operations, increase in trading volume, enlarged foreign financial flows, increase in the international banking network and an amazing utilisation of multi-currency transactions. All these have led the players in the market to various market risks such as economic risk, political risk, interest rate risk, counter party risk and foreign

exchange risk. Market players are keen towards how to hedge all these risks and manage them. Therefore, risk management is inevitable for the very existence of the market players. However, now this area has become a point of attraction to numerous market operators on account of the vast potentials it offers. Of course, derivatives have become a pivotal tool in hedging all types of risks.

India had a pegged exchange rate regime which was partially floated in March 1992 and then was fully floated in March 1993. The rupee has been convertible on the current account since 1994 which implies it can be converted in to foreign currency for trade specific transactions like imports, remittances of interest etc., if required. But it is not convertible on capital account which means that it cannot be changed freely in to

foreign currencies for activities such as acquiring overseas assets. During the 11th plan period that prolongs till 2011, the RBI currently has a five year plan to move towards full capital account convertibility. This would increase the scope of international finance and trade and thus foreign exchange market in India. So, currency futures assume greater significance in this context.

Evolution

The origin of futures can be traced back to 1948 when the Chicago Board of Trade (CBOT) introduced standardised commodity futures. Currency futures gathered significance when different countries started adopting floating rate mechanism after the collapse of the Bretton wood's system. Currency futures were first introduced at the Chicago Mercantile Exchange (CME) in 1972, within one year after abandonment of fixed exchange rate system along with the Gold standard. Some traders at the exchange have no access to the interbank exchange markets at that time. So they established the International Monetary Market (IMM) as a division of CME and launched trading in seven currency futures on 16th May, 1972. Thus CME was the first exchange in the world to start currency futures trading. CME offers the following currency futures at present:-

- EUR- Euro to US dollar
- GBP- Great Britton Pound to US dollar
- CHF- Swiss Franc to US dollar
- AUD- Australian dollar to US dollar
- CAD- Canadian dollar to US dollar
- RP- Euro to British Pound
- RF- Euro to Swiss Franc

Brazil launched Brazilian Real US Dollar futures contracts in 1991. In Mexico, Mexican Derivatives Exchange (MexDer) was established to introduce currency futures in 1998. First futures contract in South Korea was traded in 2005. In South Africa, currency futures were introduced in 2007. The Dubai Gold and Commodities Exchange (DGCEX) which already provided a platform for trading

in Euro/US dollar, Pound sterling/US dollar and Japanese Yen/US dollar introduced a non-deliverable rupee dollar futures contract in June 2007.

In India, RBI and SEBI jointly constituted a Standing Technical Committee to evolve norms and oversee the implementation of Exchange Traded Currency Derivatives. Prior to this, only Over The Counter (OTC) currency derivatives prevailed in India. The committee submitted its report on Exchange Traded Currency Futures on 29th May, 2008. NSE became the first stock exchange in India to launch currency futures on 29th August 2008. On the very first day of introduction, there were around 70,000 contracts traded. At present in India, the NSE, the Multi Commodity Exchange of India (MCX), and the United Exchange of India (started on September 2010 by BSE) offer trading in currency futures. After over a year of introduction of exchange-traded currency futures in the USD-INR pair on the stock exchanges in the country, in January 2010, the market regulators permitted trading of Euro-INR, Japanese Yen-INR and Pound Sterling-INR on the exchange platform.

Meaning

Currency futures are contracts just like any other derivatives, stock, index etc. Unlike the stock, the underlying asset is currency. The value of the currencies determines the value of currency derivatives. It is a futures contract to exchange one currency for another at a specified date in the future at a price (exchange rate) that is fixed on the date of purchase. It is also known as foreign exchange future or FX future. It is a forex derivative.

As per the guidelines of RBI, currency future means "a standardised foreign exchange derivative contract traded on a recognized stock exchange to buy or sell one currency against another on a specified future date, at a price specified on the date of contract, but does not include a forward

contract". Currency Futures market means the market in which currency futures are traded.

Because currency futures contracts are marked-to-market daily, investors can exit their obligation to buy or sell the currency prior to the contract's delivery date. This is done by closing out the position. With currency futures, the price is determined when the contract is signed, just as it is in the forex market, only and the currency pair is exchanged on the delivery date, which is usually sometime in the distant future. However, most participants in the futures markets are speculators who usually close out their positions before the date of settlement, so most contracts do not tend to last until the date of delivery.

Currency futures are traded according to the rules and regulations that are drawn by the futures exchanges. The trading can be done either on the floors of these futures exchanges or these exchanges can facilitate electronic trading for its members. The Chicago Mercantile Exchange is the world's largest and most successful exchange for trading in currency futures, with offices in Chicago, New York, Washington, London and Tokyo.

Like all futures contracts, currency futures are standardized contracts too. The futures exchange sets the contract specifications. However, only the exchange rate can be negotiated by the buyers and sellers. The remaining specifications, such as defining the underlying currency, trading unit and delivery month, are set by the futures exchange.

The following are the obvious benefits of currency trading in India:

- Easy Accessibility - Small investors would get an easy access to currency futures trading on the popular exchanges
- Easy Affordability - Margins are very low and the contract size is very small

- Low Transaction Cost - As opposed to the high pay-out of commissions in overseas forex trading, currency futures carries low costs for investors
- Transparency - It is possible for you to verify trade details on NSE if you have a doubt that the broker has tried to cheat you
- Counter-party default risk - All the trades done on the recognized exchanges are guaranteed by the clearing corporations and hence it eliminates the risks associated with counter party default. NSCCL (National Securities Clearing Corporation Limited) carries out all the notation, clearing and settlement process of currency futures trading
- Standardized Contracts - Exchange Traded currency futures are standardized in respect of lot size (\$1000) and maturity (12 monthly contracts). Retail investors with their limited resources would find it tremendously beneficial to take positions in standardised USD INR futures contracts.

Moreover, the currency futures market is used by some companies for hedging. These companies either purchase currency futures for their future payables, or sell the futures on currencies for their future receipts. Speculators may also buy or sell futures on a foreign currency as a protection against the strengthening or weakening of the US dollar. So, speculators may be able to earn profit from the rise or fall of these exchange rates.

Features

- Standardised foreign exchange derivative contract.

- Traded on a recognised stock exchange.
- Price and date of delivery are predetermined.
- Margin Requirements.
- Eliminate counter party risk.
- Transparency in pricing
- Settlement through clearing house.
- Underlying is the exchange rates.
- Traded in a limited number of currencies.
- Contracts are quoted and settled in Indian Rupees.
- The maturity of the contracts shall not exceed 12 months.
- Settled on a specific future date known as settlement date.
- Only resident Indians are allowed to trade in currency futures.
- Future price = spot price + cost of carry.
- The Final settlement price (FSP) would be the RBI reference rate on the last trading day.
- No person other than a person resident in India' as defined in section 2(v) of the Foreign Exchange Management Act, 1999 (Act 42 of 1999) shall participate in the currency futures market.
- All non-deposit taking NBFCs with asset size of Rs. 100 crore and above may participate in the designated currency futures exchanges recognized by SEBI as clients.
- The membership of the currency futures market of a recognised stock exchange shall be separate from the membership of the equity derivative segment or the cash segment. Membership for both trading and clearing, in the currency futures market shall be subject to the guidelines issued by the SEBI. Banks authorized by the Reserve Bank of India under section 10 of the Foreign Exchange Management Act, 1999 as 'AD Category - I bank' are permitted to become trading and clearing members of the currency futures market of the recognized stock exchanges, on their own account and on behalf of their clients, subject to fulfilling the following minimum prudential requirements:
 - a) Minimum net worth of Rs. 500 crores.
 - b) Minimum CRAR of 10 per cent.
 - c) Net NPA should not exceed 3 per cent.
 - d) Made net profit for last 3 years.
 Important features and specifications of various currency futures in India are:-

Table No.1
US Dollar - Rupee Currency Futures Contract Specifications

Symbol	USDINR
Instrument Type	FUTCUR
Unit of trading	1 (1 unit denotes 1000 USD)
Underlying	The exchange rate in Indian Rupees for one US Dollar
Tick size	0.25 paisa or INR 0.0025
Contract trading cycle	12 month trading cycle.
Last trading day	Two working days prior to the last business day of the expiry month at 12 noon.
Final settlement day	Last working day (excluding Saturdays) of the expiry month. The last working day would be taken to be the same as that for Interbank

	Settlements in Mumbai.						
Quantity Freeze	10,001 or greater						
Base price	Theoretical price on the 1st day of the contract. On all other days, DSP of the contract						
Price Operating Range	Tenure upto 6 months Tenure greater than 6 months +/- 3% of base price +/- 5% of base price						
Position limits	<table border="1"> <thead> <tr> <th>Clients</th> <th>Trading Members</th> <th>Banks</th> </tr> </thead> <tbody> <tr> <td>Higher of 6% of total open interest or USD 10 million</td> <td>Higher of 15% of the total open interest or USD 50 million</td> <td>Higher of 15% of the total open interest or USD 100 million</td> </tr> </tbody> </table>	Clients	Trading Members	Banks	Higher of 6% of total open interest or USD 10 million	Higher of 15% of the total open interest or USD 50 million	Higher of 15% of the total open interest or USD 100 million
Clients	Trading Members	Banks					
Higher of 6% of total open interest or USD 10 million	Higher of 15% of the total open interest or USD 50 million	Higher of 15% of the total open interest or USD 100 million					
Initial margin	SPAN Based Margin based on 99% VAR with a minimum of 1.75% on day 1 and 1% thereafter						
Extreme loss margin	1% of MTM value of open position.						
Calendar spreads	Rs. 400 for a spread on 1 month, Rs. 500 for a spread of 2 months, Rs. 800 for a spread of 3 months, Rs. 1000 for a spread of 4 months or more.						
Settlement	Daily settlement : T + 1 Final settlement : T + 2						
Mode of settlement	Cash settled in Indian Rupees						
Daily settlement price (DSP)	Calculated on the basis of the last half an hour weighted average price.						

Table No.2
Euro - Rupee Currency Futures Contract Specifications

Symbol	EURINR						
Instrument Type	FUTCUR						
Unit of trading	1 (1 unit denotes 1000 EUR)						
Underlying	The exchange rate in Indian Rupees for one Euro						
Tick size	0.25 paisa or INR 0.0025						
Contract trading cycle	12 month trading cycle.						
Last trading day	Two working days prior to the last business day of the expiry month at 12 noon.						
Final settlement day	Last working day (excluding Saturdays) of the expiry month. The last working day would be taken to be the same as that for Interbank Settlements in Mumbai.						
Quantity Freeze	10,001 or greater						
Base price	Theoretical price on the 1st day of the contract. On all other days, DSP of the contract						
Price Operating Range	Tenure upto 6 months Tenure greater than 6 months +/- 3% of base price +/- 5% of base price						
Position limits	<table border="1"> <thead> <tr> <th>Clients</th> <th>Trading Members</th> <th>Banks</th> </tr> </thead> <tbody> <tr> <td>Higher of 6% of total open interest or EUR 5 million</td> <td>Higher of 15% of the total open interest or EUR 25 million</td> <td>Higher of 15% of the total open interest or EUR 50 million</td> </tr> </tbody> </table>	Clients	Trading Members	Banks	Higher of 6% of total open interest or EUR 5 million	Higher of 15% of the total open interest or EUR 25 million	Higher of 15% of the total open interest or EUR 50 million
Clients	Trading Members	Banks					
Higher of 6% of total open interest or EUR 5 million	Higher of 15% of the total open interest or EUR 25 million	Higher of 15% of the total open interest or EUR 50 million					
Initial margin	SPAN Based Margin based on 99% VAR with a minimum of 2.80% on day 1 and 2% thereafter						

Extreme loss margin	0.3% of MTM value of gross open position.
Calendar spreads	Rs. 700 for a spread on 1 month, Rs. 1000 for a spread of 2 months, Rs. 1500 for a spread of 3 months or more
Settlement	Daily settlement : T + 1 Final settlement : T + 2
Mode of settlement	Cash settled in Indian Rupees
Daily settlement price (DSP)	Calculated on the basis of the last half an hour weighted average price.

Table No.3
British Pound - Rupee Currency Futures Contract Specifications

Symbol	GBPINR						
Instrument Type	FUTCUR						
Unit of trading	1 (1 unit denotes 1000 GBP)						
Underlying	The exchange rate in Indian Rupees for one British Pound						
Tick size	0.25 paisa or INR 0.0025						
Contract trading cycle	12 month trading cycle.						
Last trading day	Two working days prior to the last business day of the expiry month at 12 noon.						
Final settlement day	Last working day (excluding Saturdays) of the expiry month. The last working day would be taken to be the same as that for Interbank Settlements in Mumbai.						
Quantity Freeze	10,001 or greater						
Base price	Theoretical price on the 1st day of the contract. On all other days, DSP of the contract						
Price Operating Range	Tenure upto 6 months Tenure greater than 6 months +/- 3% of base price +/- 5% of base price						
Position limits	<table border="0"> <tr> <td>Clients</td> <td>Trading Members</td> <td>Banks</td> </tr> <tr> <td>Higher of 6% of the total open interest or GBP 5 million</td> <td>Higher of 15% of the total open interest or GBP 25 million</td> <td>Higher of 15% of the total open interest or GBP 50 million</td> </tr> </table>	Clients	Trading Members	Banks	Higher of 6% of the total open interest or GBP 5 million	Higher of 15% of the total open interest or GBP 25 million	Higher of 15% of the total open interest or GBP 50 million
Clients	Trading Members	Banks					
Higher of 6% of the total open interest or GBP 5 million	Higher of 15% of the total open interest or GBP 25 million	Higher of 15% of the total open interest or GBP 50 million					
Initial margin	SPAN Based Margin based on 99% VAR with a minimum of 3.20% on day 1 and 2% thereafter						
Extreme loss margin	0.5% of MTM value of gross open position.						
Calendar spreads	Rs. 1500 for a spread on 1 month, Rs. 1800 for a spread of 2 months, Rs. 2000 for a spread of 3 months or more						
Settlement	Daily settlement : T + 1 Final settlement : T + 2						
Mode of settlement	Cash settled in Indian Rupees						
Daily settlement price (DSP)	Calculated on the basis of the last half an hour weighted average price.						

Table No.4
Yen - Rupee Currency Futures Contract

Symbol	JPYINR
Instrument Type	FUTCUR
Unit of trading	1 (1 unit denotes 1,00,000 JPY)

Underlying	The exchange rate in Indian Rupees for 100 Yen						
Tick size	0.25 paisa or INR 0.0025						
Contract trading cycle	12 month trading cycle.						
Last trading day	Two working days prior to the last business day of the expiry month at 12 noon.						
Final settlement day	Last working day (excluding Saturdays) of the expiry month. The last working day would be taken to be the same as that for Interbank Settlements in Mumbai.						
Quantity Freeze	10,001 or greater						
Base price	Theoretical price on the 1st day of the contract. On all other days, DSP of the contract						
Price Operating Range	Tenure upto 6 months Tenure greater than 6 months +/- 3% of base price +/- 5% of base price						
Position limits	<table border="1"> <thead> <tr> <th>Clients</th> <th>Trading Members</th> <th>Banks</th> </tr> </thead> <tbody> <tr> <td>Higher of 6% of total open interest or JPY 200 million</td> <td>Higher of 15% of the total open interest or JPY 1000 million</td> <td>Higher of 15% of the total open interest or JPY 2000 million</td> </tr> </tbody> </table>	Clients	Trading Members	Banks	Higher of 6% of total open interest or JPY 200 million	Higher of 15% of the total open interest or JPY 1000 million	Higher of 15% of the total open interest or JPY 2000 million
Clients	Trading Members	Banks					
Higher of 6% of total open interest or JPY 200 million	Higher of 15% of the total open interest or JPY 1000 million	Higher of 15% of the total open interest or JPY 2000 million					
Initial margin	SPAN Based Margin based on 99% VAR with a minimum of 4.50% on day 1 and 2.3% thereafter						
Extreme loss margin	0.7% of MTM value of gross open position.						
Calendar spreads	Rs. 600 for a spread on 1 month, Rs. 1000 for a spread of 2 months, Rs. 1500 for a spread of 3 months or more						
Settlement	Daily settlement : T + 1 Final settlement : T + 2						
Mode of settlement	Cash settled in Indian Rupees						
Daily settlement price (DSP)	Calculated on the basis of the last half an hour weighted average price.						

Rationale behind Currency Futures

Futures markets were designed to solve the problems that exist in forward markets. A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contracts, the futures contracts are standardized and exchange traded. To facilitate liquidity in the futures contracts, the exchange specifies certain standard features of the contract. A futures contract is standardized contract with standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, (or which can be used for reference purposes in settlement) and a standard timing of such settlement. A futures contract may be offset prior to

maturity by entering into an equal and opposite transaction. The standardized items in a futures contract are:

- Quantity of the underlying
- Quality of the underlying
- The date and the month of delivery
- The units of price quotation and minimum price change
- Location of settlement

The rationale for introducing currency futures in the Indian context has been outlined in the Report of the Internal Working Group on Currency Futures (Reserve Bank of India, April 2008) as follows;

“The rationale for establishing the currency futures market is manifold. Both residents and non-residents purchase domestic currency assets. If the exchange rate remains

unchanged from the time of purchase of the asset to its sale, no gains and losses are made out of currency exposures. But if domestic currency depreciates (appreciates) against the foreign currency, the exposure would result in gain (loss) for residents purchasing foreign assets and loss (gain) for non-residents purchasing domestic assets. In this backdrop, unpredicted movements in exchange rates expose investors to currency risks. Currency futures enable them to hedge these risks. Nominal exchange rates are often random walks with or without drift, while real exchange rates over long run are mean reverting. As such, it is possible that over a long – run, the incentive to hedge currency risk may not be large. However, financial planning horizon is much smaller than the long-run, which is typically inter-generational in the context of exchange rates. As such, there is a strong need to hedge currency risk and this need has grown manifold with fast growth in cross-border trade and investments flows.

The argument for hedging currency risks appear to be natural in case of assets, and applies equally to trade in goods and services, which results in income flows with leads and lags and get converted into different currencies at the market rates. Empirically, changes in exchange rate are found to have very low correlations with foreign equity and bond returns. This in theory should lower portfolio risk. Therefore, sometimes argument is advanced against the need for hedging currency risks. But there is strong empirical evidence to suggest that hedging reduces the volatility of returns and indeed considering the episodic nature of currency returns, there are strong arguments to use instruments to hedge currency risks. Currency risks could be hedged mainly through forwards, futures, swaps and options. Each of these instruments has its role in managing the currency risk.

The main advantage of currency futures over its closest substitute product, viz. :-

forwards which are traded over the counter lies in price transparency, elimination of counterparty credit risk and greater reach in terms of easy accessibility to all. Currency futures are expected to bring about better price discovery and also possibly lower transaction costs. Apart from pure hedgers, currency futures also invite arbitrageurs, speculators and those traders who may take a bet on exchange rate movements without an underlying or an economic exposure as a motivation for trading. From an economy-wide perspective, currency futures contribute to hedging of risks and help traders and investors in undertaking their economic activity. There is a large body of empirical evidence which suggests that exchange rate volatility has an adverse impact on foreign trade. Since there are first order gains from trade which contribute to output growth and consumer welfare, currency futures can potentially have an important impact on real economy. Gains from international risk sharing through trade in assets could be of relatively smaller magnitude than gains from trade. However, in a dynamic setting these investments could still significantly impact capital formation in an economy and as such currency futures could be seen as a facilitator in promoting investment and aggregate demand in the economy, thus promoting growth.

Comparison with OTC Currency Derivatives

Prior to the introduction of exchange traded currency derivatives, Indian companies used to hedge their currency risks by using Over The Counter (OTC) markets forwards, options and swaps. The OTC derivative segment of the Foreign exchange in India increased significantly to register a daily average turnover of 24 billion dollars, which makes it 17th largest among all countries. The main points of distinction between OTC and exchange traded futures are

Table No.5
Difference between OTC and Exchange Traded Currency Futures

Basis	OTC Futures	Exchange Traded Futures
1.Participants	Contracts are mostly between a bank (authorised dealer) and the client (importers, exporters, borrowers of foreign currency loans and Indian overseas investors).	Apart from exporters, importers, companies and banks many retail traders and investors participate.
2.Collateral	Negotiable	Margin Requirements
3.Accessibility	Low	High
4. Counter party risk	High	Low
5.Transparency	Low	High
6. Specifications	Customised	Standardised
7.mark-to market Margins	No need of payment	Need to be paid
8.Turnover	Low	High
9.Participation	To all	Only resident Indians.
10.Flexibility	Low	High
11.Maturity	Negotiable	Maximum 12 months
12. Beneficiaries	Large corporates and companies	Benefits even for small players.
13. Contract size	Big	Small
14. Fees	Bid-ask spreads	Bid-ask spreads, commission.
15.Delivery of currencies	Takes place	Only cash settlement.

Uses of Currency Futures

Hedging: Assume Entity A is expecting a remittance for USD 1000 on 30th September 2010. It wants to lock in the foreign exchange rate today so that the value of inflow in Indian rupee terms is safeguarded. The entity can do so by selling one contract of USDINR futures since one contract is for USD 1000. Presume that the current spot rate is Rs.43 and 'USDINR 30th September 2010' contract is trading at Rs.44.2500. Entity A shall do the following: Sell one September contract today. The value of the contract is Rs.44,250. Let us assume the RBI reference rate on September 30, 2010 is Rs.44.0000. The entity shall sell on September 30, 2010, USD 1000 in the spot market and get Rs. 44,000. The futures contract will settle at Rs.44.0000 (final settlement price = RBI reference rate). The

return from the futures transaction would be Rs. 250, i.e. (Rs. 44,250 – Rs.44,000). As may be observed, the effective rate for the remittance received by the entity A is Rs.44.2500 (Rs.44,000 + Rs.250)/1000, while spot rate on that date was Rs.44.0000. The entity was able to hedge its exposure.

Speculation: Bullish, buy futures: Take the case of a speculator who has a view on the direction of the market. He would like to trade based on this view. He expects that the USD-INR rate presently at Rs.42, is to go up in the next two-three months. How can he trade based on this belief? In case he can buy dollars and hold it, by investing the necessary capital, he can profit if say the Rupee depreciates to Rs.42.50. Assuming he buys

USD 10000, it would require an investment of Rs.4,20,000. If the exchange rate moves as he expected in the next three months, then he shall make a profit of around Rs.5000. This works out to an annual return of around 4.76%. It may please be noted that the cost of funds invested is not considered in computing this return.

A speculator can take exactly the same position on the exchange rate by using futures contracts. If the INR- USD is Rs.42 and the three month futures trade at Rs.42.40. The minimum contract size is USD 1000. Therefore the speculator may buy 10 contracts. The exposure shall be the same as above USD 10000. Presumably, the margin may be around Rs.21,000. Three months later if the Rupee depreciates to Rs. 42.50 against USD, (on the day of expiration of the contract), the futures price shall converge to the spot price (Rs.42.50) and he makes a profit of Rs.1000 on an investment of Rs.21,000. This works out to an annual return of 19 per cent. Because of the leverage they provide, futures form an attractive option for speculators.

Speculation: Bearish, sell futures: Futures can be used by a speculator who believes that an underlying is over-valued and is likely to see a fall in price. In the absence of a deferral product, there wasn't much he could do to profit from his opinion. Today all he needs to do is sell the futures.

Typically futures move correspondingly with the underlying, as long as there is sufficient liquidity in the market. If the underlying price rises, so will the futures price. If the underlying price falls, so will the futures price. Now take the case of the trader who expects to see a fall in the price of USD-INR. He sells one two-month contract of futures on USD say at Rs.42.20 (each contract for USD 1000). He pays a small margin on the same. Two months later, when the futures contract expires, USD-INR rate let us say is Rs.42. On the day of expiration, the spot and the futures price converges. He has made a

clean profit of 20 paise per dollar. For the one contract that he sold, this works out to be Rs.200.

Arbitrage: Arbitrage is the strategy of taking advantage of difference in price of the same or similar product between two or more markets. That is, arbitrage is striking a combination of matching deals that capitalize upon the imbalance, the profit being the difference between the market prices. If the same or similar product is traded in say two different markets, any entity which has access to both the markets will be able to identify price differentials, if any. If in one of the markets the product is trading at higher price, then the entity shall buy the product in the cheaper market and sell in the costlier market and thus benefit from the price differential without any additional risk.

One of the methods of arbitrage with regard to USD-INR could be a trading strategy between forwards and futures market. The futures price and forward prices are arrived at using the principle of cost of carry. Those entities that can trade both forwards and futures shall be able to identify any mispricing between forwards and futures. If one of them is priced higher, the same shall be sold while simultaneously buying the other which is priced lower. If the tenor of both the contracts is same, since both forwards and futures shall be settled at the same RBI reference rate, the transaction shall result in a risk less profit











Trading of currency futures in India

In India, currency futures' trading has stabilised very well on all the three exchanges (NSE, MCX-SX and USE) and awareness of the product is growing among the investors. In India currency futures contracts are available in US Dollar-Indian Rupee (USDINR), Euro-Indian Rupee (EURINR), Pound Sterling-Indian Rupee (GBPINR) and Japanese Yen-Indian Rupee

(JPYINR), four actively traded currencies of the world.

Table No.6

Most traded currencies (Currency distribution of reported FX market turnover)

Rank	Currency	ISO 4217 code (Symbol)	% daily share (April 2011)
1	 United States dollar	USD (\$)	84.9%
2	 Euro	EUR (€)	39.1%
3	 Japanese yen	JPY (¥)	19.0%
4	 Pound sterling	GBP (£)	12.9%
5-6	 Australian dollar	AUD (\$)	7.6%
5-6	 Swiss franc	CHF (Fr)	6.4%
5-6	 Canadian dollar	CAD (\$)	5.3%
7	 Hong Kong dollar	HKD (\$)	2.4%
8	 Swedish krona	SEK (kr)	2.2%
9-10	 New Zealand dollar	NZD (\$)	1.6%
Other Currencies			18.6%
Total			200%

Compiled from www.en.wikipedia.org

MCX Stock Exchange (MCX-SX), was launched on October 7, 2008, under the regulatory framework of Securities & Exchange Board of India (SEBI). The exchange received approval from SEBI and Reserve Bank of India (RBI) to launch a nationwide electronic platform for trading in currency derivatives. Within a year of its launch, MCX-SX has achieved a stupendous growth in average daily turnover and open interest. The average daily turnover increased from Rs 355.66 crore during in the first month of its operations (Oct 7, 2008 till Nov 6, 2008)

to Rs 14617.24 crore for the month of January 2010. While NSE and United Stock Exchange - the third player promoted by BSE - are allowed to offer trading in both currency futures and options, MCX-SX is only in the futures segment. At the same time, on the first day of trading in USE, the trading volume of dollar-rupee currency pair stood at Rs 23,607.42-crore, pound-rupee at Rs 252.17-crore, euro-rupee at Rs 225.39-crore and yen-rupee at Rs 163.47-crore. No other exchange in the world has traded more than 9.88-million contracts on its first day of trading.

Table No.7

Day-wise Turnover Statistics in the three Exchanges (Values in crores of Rs.)

Day	NSE		MCX-SX		USE	
	Volume	Value	Volume	Value	Volume	Value
29-Nov-2010	26,38,133	12,264.07	32,73,277	15,176.41	4,67,436	2,152.24
26-Nov-2010	36,57,797	16,929.28	44,17,594	20,417.61	5,27,406	2,422.03
25-Nov-2010	27,61,567	12,721.52	37,79,547	17,353.86	7,52,795	3,434.84
Day of	42,964	189	59,952	287	65,685(BSE)	307(BSE)

Launching						
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Compiled from the websites of respective exchanges

Table No.8
Trade Statistics as on 29.11.2010 at NSE (Values in crores of Rs.)

Instrument	Underlying	Volume	Value
FUTCUR	USDINR	23,17,879	10,674.68
“	GBPINR	13,352	95.98
“	EURINR	35,887	218.75
“	JPYINR	22,539	123.50
OPTCUR	USDINR	248,476	1,151.16
Total		26,38,133	12,264.07

Compiled from www.nse.com.

Table No.9
Trade Statistics as on 29.11.2010 at MCX-SX(Values in crores of Rs.)

Instrument	Underlying	Volume	Value
FUTCUR	USDINR	32,11,974	14,792.81
“	GBPINR	13,586	97.66
“	EURINR	39,761	242.39
“	JPYINR	7,956	43.55
OPTCUR	Nil		
Total		32,73,277	15,176.41

Compiled from www.mcx-sx.com.

Table No.10
Trade Statistics as on 29.11.2010 at USE(Values in crores of Rs.)

Instrument	Underlying	Volume	Value
FUTCUR	USDINR	4,67,436	2,152.24
“	GBPINR	0	0
“	EURINR	0	0
“	JPYINR	0	0
OPTCUR	USDINR	0	0
Total		4,67,436	2,152.24

Compiled from www.useindia.com.

Risks and Challenges

The trading in currency futures has come a long way since its inception. The volume and variety of currency derivatives have increased considerably over the two years. The Bank for International Settlements (BIS) has reported that turnover in the currency futures market increased dramatically in 2009 throughout the Asia-Pacific region, from 127 billion dollars in

the first quarter to 692 billion dollars in the third quarter. Introduction of trading in more and more currencies would attract more and more players to the field. This also results in more complexities and issues as detailed below:

- Allowing multiple currency futures and most importantly, settlement on

other currencies will become a major challenge to the RBI. As the settlement is only permitted in Indian Rupees, there would not be any pressure on the Balance Of Payments. But allowing settlement in foreign currency would put a lot of pressure on the balance of payments in case the settlement preferred by most is in foreign currency.

- Another important challenge is the counter party risk. Even though the clearing houses would mitigate this risk to some extent by charging margins, it cannot be eliminated completely.

- The currency futures would make sense when the capital account is fully convertible and different players can move capital in and out of the country freely. However, it would become a major challenge to the RBI in the years to come.

- When the currency futures are open up for all, it would be difficult to control speculators, who could play havoc with the currency rate.

- Sometimes expectations regarding market movements may go wrong. Therefore, speculators have to suffer huge losses just like stock market crashes.

- There would be a lot of scope for arbitrage especially by banks which are active both in OTC and exchange traded markets. Also at the same time, currency trading in Indian Rupee takes place in Singapore, Hong Kong and Dubai. So, they would keep in mind the rates in all these markets to take advantage of the situation.

Conclusion

The Indian economy has been expanding rapidly over the last twenty years, and innovations in its capital markets and financial instruments have accelerated at a similar pace. Now independent traders, large Financial Institutions, trading companies, importers, exporters, and commercial hedgers have a fully functioning system for buying and selling Indian Rupees all over the world. Currency Futures, considered to be one of the niche segments of the derivative

investments, does not seem to be going well with its pace in India because of lack of awareness among retail investors and knowledge gap faced by the brokers. Most analysts attribute this lackluster performance of currency futures to the lack of awareness and publicity among investor masses. Currency futures are niche segment of asset class in India and they face multitude of such intricate problems which are to be resolved immediately. The regulatory agencies and government should take proactive measures to address and redress such issues.

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