

Fx Derivatives- Simplified

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AUGUST 1, 2015

Agenda

- History of Fx
- Overview of Forex Markets
- Understanding Forex Concepts
- Hedging Instruments
- RBI Guidelines
- Current Forex Markets

History of Fx

History of the Forex

History of Forex can be classified in to three era's.

▶ Gold Standard System (1875-1944)

- ❖ Before the gold standard was implemented, countries would commonly use gold and silver as means of international payment.
- ❖ The main issue with using gold and silver for payment is that their value is affected by external supply and demand. For example, the discovery of a new gold mine would drive gold prices down
- ❖ Gold standard eventually broke during the beginning of World War I

▶ Bretton Woods System

- ❖ In July 1944, more than 700 representatives from the allies convened at Bretton Woods system. Bretton Woods led to the formation of following
 - A method of Fixed Exchange rates.
 - US Dollar replacing Gold standard
 - Creation of three international agencies to to oversee economic activity: the International Monetary Fund (IMF), International Bank for Reconstruction and Development, and the General Agreement on Tariffs and Trade (GATT).
- ❖ By the early 1970s, U.S. gold reserves were so depleted that the U.S. treasury did not have enough gold to cover all the U.S. dollars that foreign central banks had in reserve. Finally, on August 15, 1971, U.S. President Richard Nixon closed the gold window, and the U.S. announced to the world that it would no longer exchange gold for the U.S. dollars that were held in foreign reserves. This event marked the end of Bretton Woods.

History of the Forex

5

▶ Current Exchange System

- ❖ After the Bretton Woods system broke down, the world finally accepted the use of floating foreign exchange rates during the Jamaica agreement of 1976.
- ❖ This meant that the use of the gold standard would be permanently abolished. Most governments employ one of the following three exchange rate systems that are still used today.
 - Dollarization
 - Pegged Rate
 - Managed Floating Rate

Overview of Forex Markets

What is forex?

- ▶ The foreign exchange market (FOREX) is a worldwide decentralized over-the-counter financial market for the trading of currencies.
- ▶ In simple words, it is a place where one currency is exchanged with another currency based on fluctuation rates.

Codes for selected Currencies

USD – US Dollar

EUR – Euro

GBP – British Pound

IEP – Irish Pound

JPY – Japanese Yen

CHF – Swiss Franc

CAD – Canadian Dollar
Dollar

AUD – Australian
Dollar

SEK – Swedish Kroner

MEP – Mexican Peso

DKK – Danish Kroner

NZD – New Zealand \$

INR – Indian Rupee

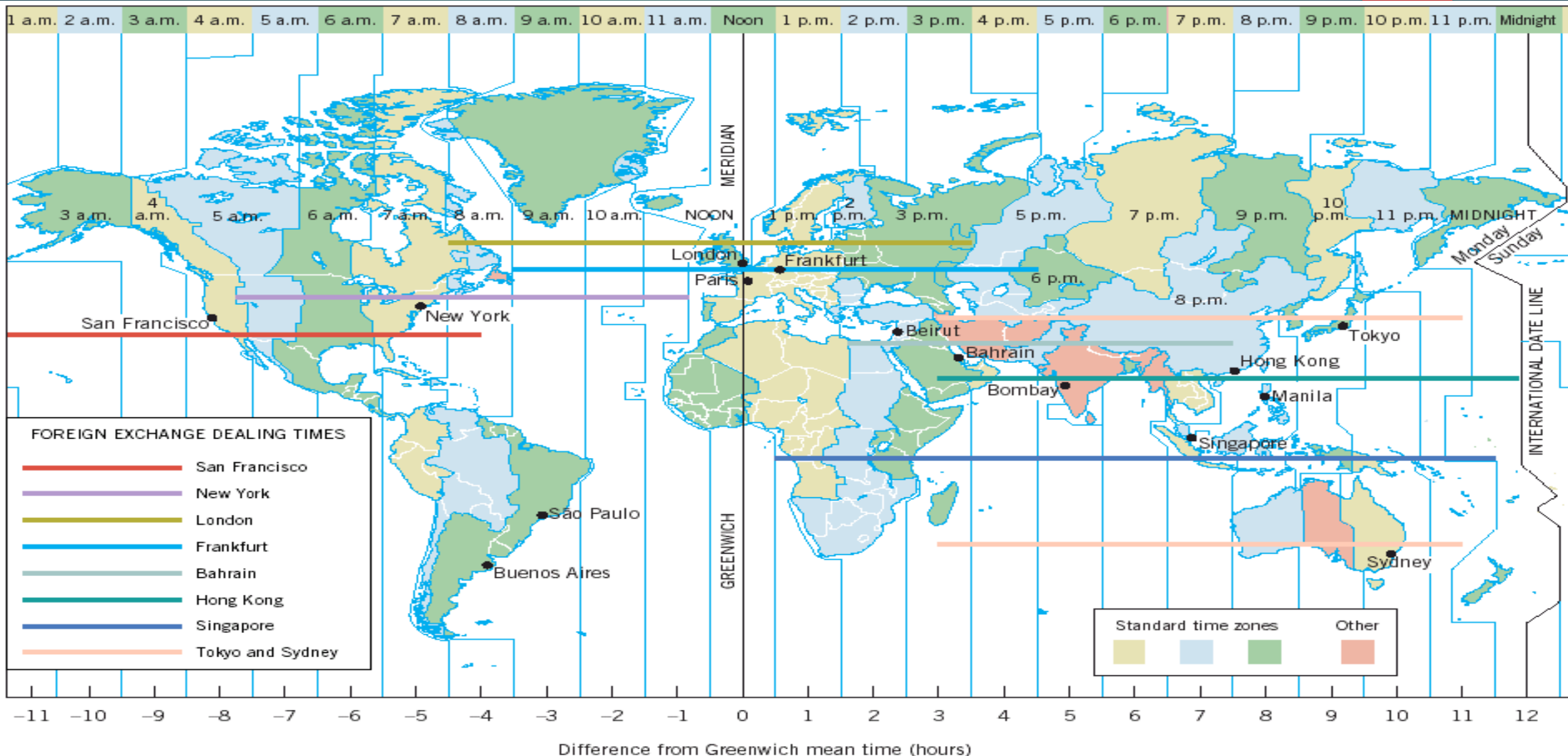
SAR – Saudi Riyal

Forex Market

- The total turnover in Forex Market 5.3 USD trillion per day.
- Indian Market USD 5.30 BN per day.
- Round the clock market starting from Sydney and Tokyo in the east through Hong Kong, Singapore, Bahrain, London and New York.
- Participants are –central banks , commercial banks, investment funds, corporate, individuals and brokers.
- Over the counter market

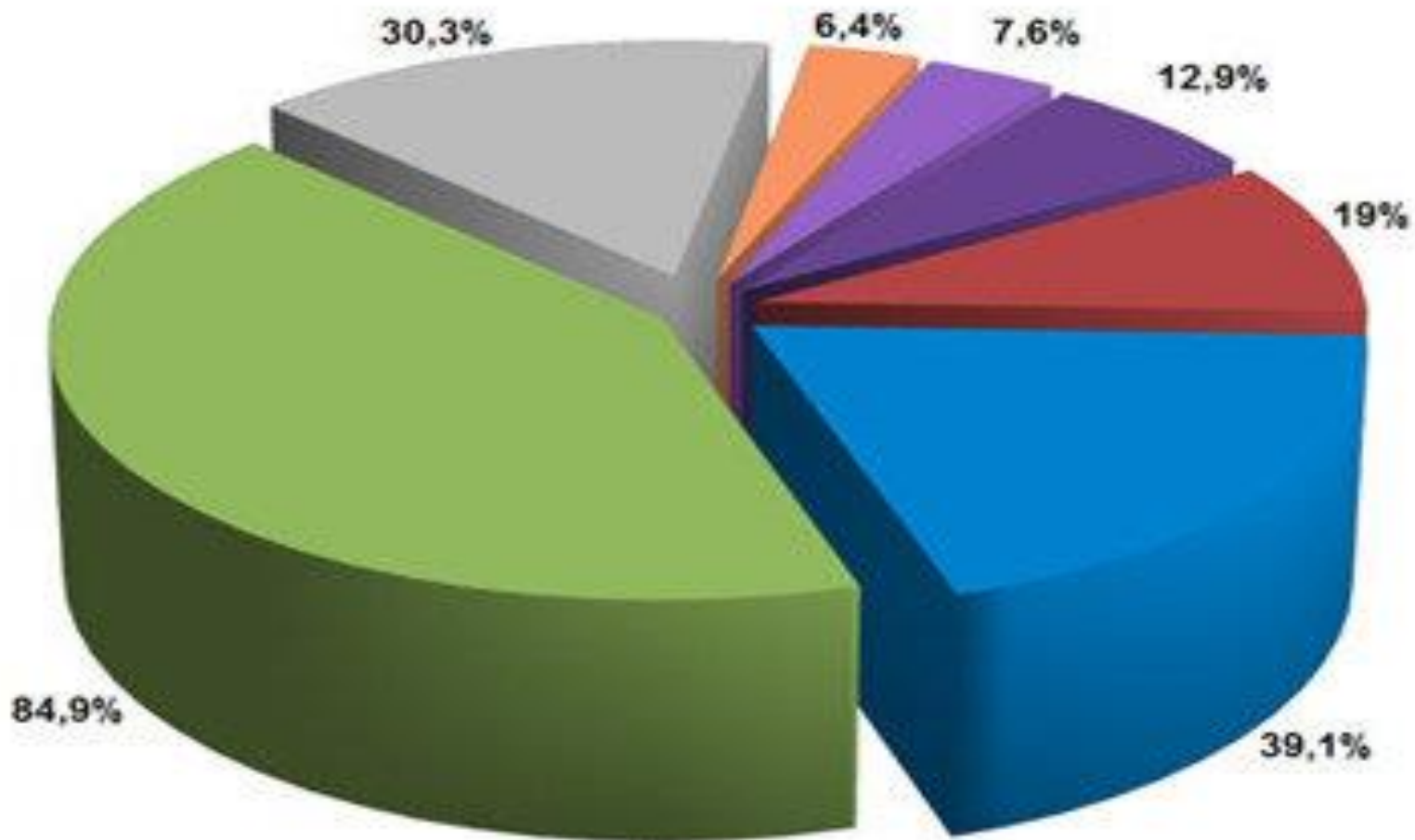


A Day of Foreign-Exchange Trading



Forex Market

- USD
- EUR
- JPY
- GBP
- AUD
- CHF
- Other



► What is Exchange Rate ?

- ❖ Exchange Rate is a rate at which one currency can be exchanged into another currency. In other words it is value one currency in terms of other say:

$$\text{US \$ 1} = \text{Rs.63.90}$$

This rate is the conversion rate of every US \$ 1 to Rs. 63.90

Types of Transaction: Value Date Concept

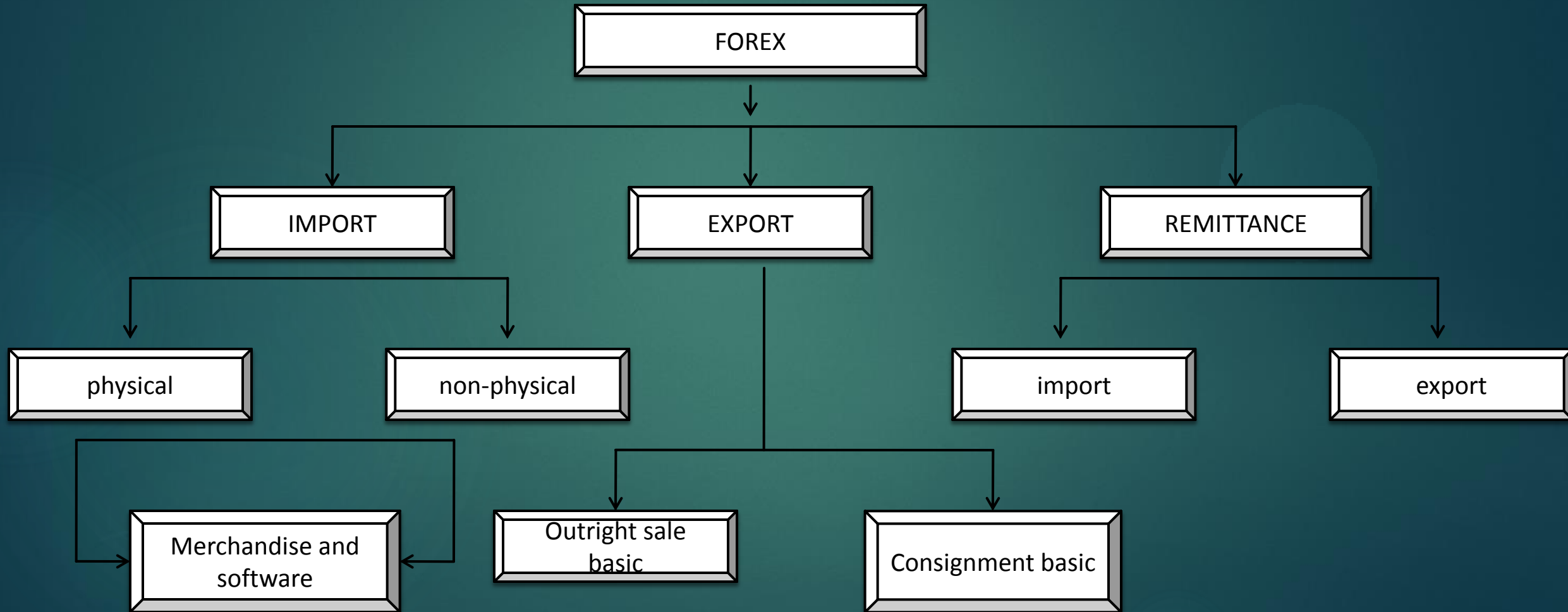
13

Due to vastness of the market and origin of transactions and settlements may take place at different time zones, most of times deal dates and settlement date differs. Market uses different terminology which are used universally to avoid conflict.

Type of TXN	Date of Deal	Value Date
Cash/Ready	03.08.2015 Monday	03.08.2015 Monday
TOM	03.08.2015 Monday	04.08.2015 Tuesday
Spot	03.08.2015 Monday	05.08.2015 Wednesday
Forward	03.08.2015 Monday	Any day after 05.08.2015

Forex system in banking

14





The prices these Indian 15
shoppers pay for foreign-
made goods are affected by
fluctuations in the value of
the INR in the foreign-
exchange market

Understanding Forex



Factors Determining Exchange Rates

17

(a). Fundamental Reasons:

- Balance of Payment – surplus leads to stronger currency.
- Economic Growth Rates –High/Low growth rate.
- Fiscal / Monetary Policy- deficit financing leads to depreciation of currency.
- Interest Rates –currency with higher interest will appreciate in the short term.
- Political Issues –Political stability leads to stable rates

(b). Technical Reasons

- Government Control can lead to unrealistic value.
- Free flow of Capital from lower interest rate to higher interest rates.

(c). Speculation – higher the speculation higher the volatility in rates

Methods of Quotation

- ▶ Method – I
- ▶ One Orange = Rs 2
- ▶ One Apple = Rs 2.50
- ▶ Method – II
- ▶ Rs. 10 = 5 Oranges
- ▶ Rs. 10 = 4 Apples

■ Price under both the methods is the same though expressed differently

Method - I

DIRECT(FC fixed)

USD 1 = Rs 62.14

GBP 1 = Rs.102.20

EUR 1 = Rs 84.10

Method - II

INDIRECT(HC fixed)

Rs 100 = USD 1.6092

Rs 100 = GBP 0.9784

Rs 100 = EUR 1.1891

With Effect from 02.08.1993, all exchanges are quoted in Direct Method

Currency appreciation/depreciation

19

- ▶ Increase in foreign currency price
- ▶ From Rs.62 to Rs.64/ USD
 - ▶ Foreign currency appreciation
 - ▶ Home currency depreciation

Bloomberg Screen

20

<HELP> for explanation.

97) Change Country ▾		18:44:56		Treasury & Money Markets: India					
Indicative Call		OI Swaps		Stock Market		INR Forwards		LIBOR	
Call	7.05 7.15	3M	7.30 7.36	BSE	27459.23 -102.15	JAN	227.50 229.50	O/N	0.12650
MIBOR	MIBID	6M	7.35 7.40	NSE	8337.00 -24.00	FEB	266.00 268.00	1W	0.15000
O/N	7.20 --	1Y	7.44 7.46	DJIA	17440.59 -127.94	MAR	304.50 306.50	1M	0.18900
14D	7.53 7.44	2Y	7.14 7.18	CCMP	5039.78 -48.85	APR	345.50 347.50	3M	0.29360
1M	7.66 7.58	3Y	7.15 7.17	S&P 500	2067.64 -12.01	MAY	385.00 387.00	6M	0.46970
3M	7.86 7.78	5Y	7.14 7.17	Oil Rates		JUN	421.00 423.00	12M	0.80710
Liquidity LAF		Bullion		Brent		JUL	0.50 2.00	AAA Ylds	
1D RRepo Amt	13.76	Gold & Silver	46.66 -1.86	52.15 -0.02		AUG	38.75 40.75	1Y	8.2250
RRepo Yld	6.25	Gold	1095.35 +1.35	47.40 +0.01		SEP	76.25 78.25	2Y	8.2250
1D Repo Amt	20.96	Silver	14.63 +0.07	47.41 +0.02		OCT	113.75 115.75	3Y	8.2250
Repo Yld	7.25	INR ATM Vols		Nymex 2		NOV	152.50 154.50	5Y	8.4650
RRepo (Net)	-20.96	6M	5.85 6.54	47.83 -0.02		DEC	191.00 193.00	10Y	8.4600
Policy Rates		1Y	6.39 6.89	Spot FOREX		Cash/Tomorrow		Govt Yields	
Repo Rate	7.25	T-Bills		INR	63.9100 63.9200	O/N	1.02 1.48	1Y	7.599
Rev Repo Rate	6.25	1M	7.322	EUR	1.1030 1.1031	C/S	1.87 3.13	2Y	7.762
CRR	4.00	2M	7.404	JPY	123.6875 123.6975	T/N	1.01 1.49	5Y	7.943
SLR Policy	21.50	3M	7.480	GBP	1.5587 1.5588	Comm Paper P1+		7Y	8.065
SLR Effective	21.50	6M	7.551	CHF	0.9655 0.9656	1M	7.56	10Y	7.805
		9M	7.561	AUD	0.7308 0.7308	2M	7.64	RBI Ref Rate	
		12M	7.571	CAD	1.3006 1.3007	3M	7.93	RT 64.0270	
				SGD	1.3671 1.3673				
				KRW	1164.4000 1164.9800				

30) Economic Releases (ECO)												
	Date	Time	C	A	M	R	Event	Period	Surv(M)	Actual	Prior	Revised
31)	07/27	07/31	IN	🔊	📧	...	Eight Infrastructure Industries	Jun	--	--	4.4%	--
32)	07/30	10:30	IN		📧	...	Bloomberg July India Economic Survey					
33)	07/31	16:00	IN		📧	...	Fiscal Deficit INR Crore	Jun	--	--	81101	--
34)	08/03	10:30	IN		📧	...	Nikkei India PMI Mfg	Jul	--	--	51.3	--

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000
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Understanding Two Way Exchange Quotes

21

In Forex markets , there are two way quotes i.e. both buying and selling rates are given.

▶ 1 USD = INR 63.90/ 92

- ❖ $\$/RE = RE\ 63.92$ – Rate at which you will buy dollars for import payment
- ❖ $\$/RE = RE\ 63.90$ – Rate at which you will sell dollars for export proceeds.

Understanding Exchange Rates

22

EURO/Dollar– EUR/USD

Note the order of the currencies

“EUR” comes before the “USD”

The first currency(€) - Base currency

Second currency (\$) - Terms currency

It is important to remember that Bid & Offer in trading always refers to the BASE CURRENCY.

Understanding Exchange Quotes

23

- ▶ In the FX market, Time is of great importance.
- ▶ Therefore, there are short forms for everything.
- ▶ While quoting, the dealers use only the third & fourth decimals.
 - ❖ USD/CHF 0.9651 / 52
 - ❖ USD/INR 63.9175 / 00
 - ❖ GBP/USD 1.5600 / 04
- ▶ BIG FIGURE
- ▶ In a live dealing scenario dealers would quote only 51/52 , 75/figure , figure/04 and the market assumes that all players already know the BIG FIGURE

Calculating Cross Rates

24

- India is a market maker for Indian Rupee
- Dollar/ Rupee trading (the first quotes) start in the Mumbai Market
- BUT WHAT ABOUT OTHER CURRENCIES ?
- WHERE DO RATES FOR CHF, GBP, EUR ETC COME FROM? HOW ARE THEY CALCULATED?
- A CHF/RUPEE RATE IS A CROSS OF DOLLAR/RUPEE & DOLLAR / CHF.
 - ❖ DOLLAR / RUPEE = 63.90/92
 - ❖ DOLLAR / CHF = 0.9651/ 52
 - ❖ CHF / RUPEE = 66.22 / 25
 - ❖ In other words, $63.92 / 0.9652 = 66.22$ AND
 - ❖ $63.94 / 0.9651 = 66.25$

Hedging Instruments

Hedging Methodologies

26

▶ Options

- ❖ Pricing determined by volatility, expiry
- ❖ Expiry and strike selected by hedger

▶ Forwards/Futures

- ❖ Pricing of both determined by interest rate differences (deposit rates)
- ❖ Futures expiry and strike selected from discrete market offerings (e.g. CME)
- ❖ Forwards expiry and strike set by contract, trade OTC

▶ Money Market

- ▶ Pricing determined by interest rate differences (deposit rates)
- ▶ Size and duration by contract (typical min \$250k)

▶ Currency Swaps

- ❖ Pricing determined by interest rate differences (deposit rates)
- ❖ Size and duration by contract (typical min \$250k)

Instruments

- ▶ Forward Cover
- ▶ Options
- ▶ SWAPS
 - ▶ Full Currency Swap (FCS)

Forward Rate

- ▶ What is a Forward Rate ?
- ▶ Rate agreed for settlement on an agreed date in the future
- ▶ All rates are derived from **Spot rates**
- ▶ Forward rate is the spot rate adjusted for the premium / discount

- ▶ Forward Rate = Spot Rate + / - premium or discount

Premium/Discount

- ▶ Forward price = Spot price plus or minus forward margin.
- ▶ Premium –forward value of currency is higher than spot rate. A currency with lower rate of interest is said to be at premium in the forwards. Forward margins added to spot rate.
- ▶ Discount – forward value of currency is lower than spot rate. A currency with higher rate of interest is said to be at discount. Forward margins deducted from spot rate.

Derivative Instruments

30

Derivatives instruments are management tools derived from underlying exposures (Assets) such as Currency, Commodities, Shares, Bonds or any other indices, used to reduce or neutralize the exposure on the underlying contracts.

Derivatives could be Over the Counter (OTC) i.e. made to order or Exchange Traded Facilities which are standardized in terms of quantity, quality, start & ending dates.

What is Fx option?

- ▶ An FX option contract gives the buyer (or holder) the right, but not the obligation, to:
 - ❖ Buy Rupees, in the case of a Rupee call/ Dollar put option, against Dollars (or sell Rupees against Dollars in the case of a Rupee put/Dollar call option);
 - ❖ For a predetermined quantity of Rupees;
 - ❖ At a predetermined fixed price (the strike or exercise price);
 - ❖ European style) or American style;
 - ❖ For a premium (option price) negotiated at the time of dealing.

- ▶ Comparison between forward & options is as follows

Particulars	Forward (To Buy)	Plain Vanilla Call Option
Definition	It is a specified contract to buy or sell any asset at specified future time at price agreed upon today	An Agreement that gives an investor a right (but not the obligation) to buy any asset at a specified price at specified future time.
Premium Payment (Cash Flow)	In arrears on Maturity	Upfront
Impact of USDINR spot rate on Payment date	Nil. As the rate is already agreed.	Yes
Risk Appetite	Recommended in case of conservative approach.	Recommended in case of Volatility play with still remaining hedged and worst case known.

Full Currency Swap

- ▶ Risk on Buyer's credit (Loan) is as follows
 - ❖ Exchange rate risk on Principal amount
 - ❖ Exchange rate risk on interest amount
 - ❖ LIBOR risk on interest amount
- ▶ When we enter into forward/option, we hedge only the risk on principal portion of the Currency exposure. The other two risks still remain unhedged. In case we decide to hedge all the risks, we can enter into full currency swap.
- ▶ If the exposure is hedged through Full currency swap, it becomes a Rupee loan from risk perspective. For Ex- ABC Limited avails a loan of USD 1 Million for a tenor of 3 year at 6m USD LIBOR +130 bps per annum. In case the said exposure is hedged through swap, ABC Limited will have to pay 9% per annum and all the risks will be covered.

RBI Guidelines

- ▶ In present times, corporates needs to submit below mentioned certificates to Banks. Details are as under

Name of Certificate	Frequency	Due Date	By Whom
Annual certificate for fx & Derivative Transactions	Annually	30 th April	Self- Certification
Past performance	Annually	30 th June	Statutory Auditors
Contracted Exposure	Annually	30 th June	Statutory Auditors
Unhedged Foreign Currency Exposures	Quarterly/Annually	Within 90 days from end of the quarter	Self certification/Statutory Auditors

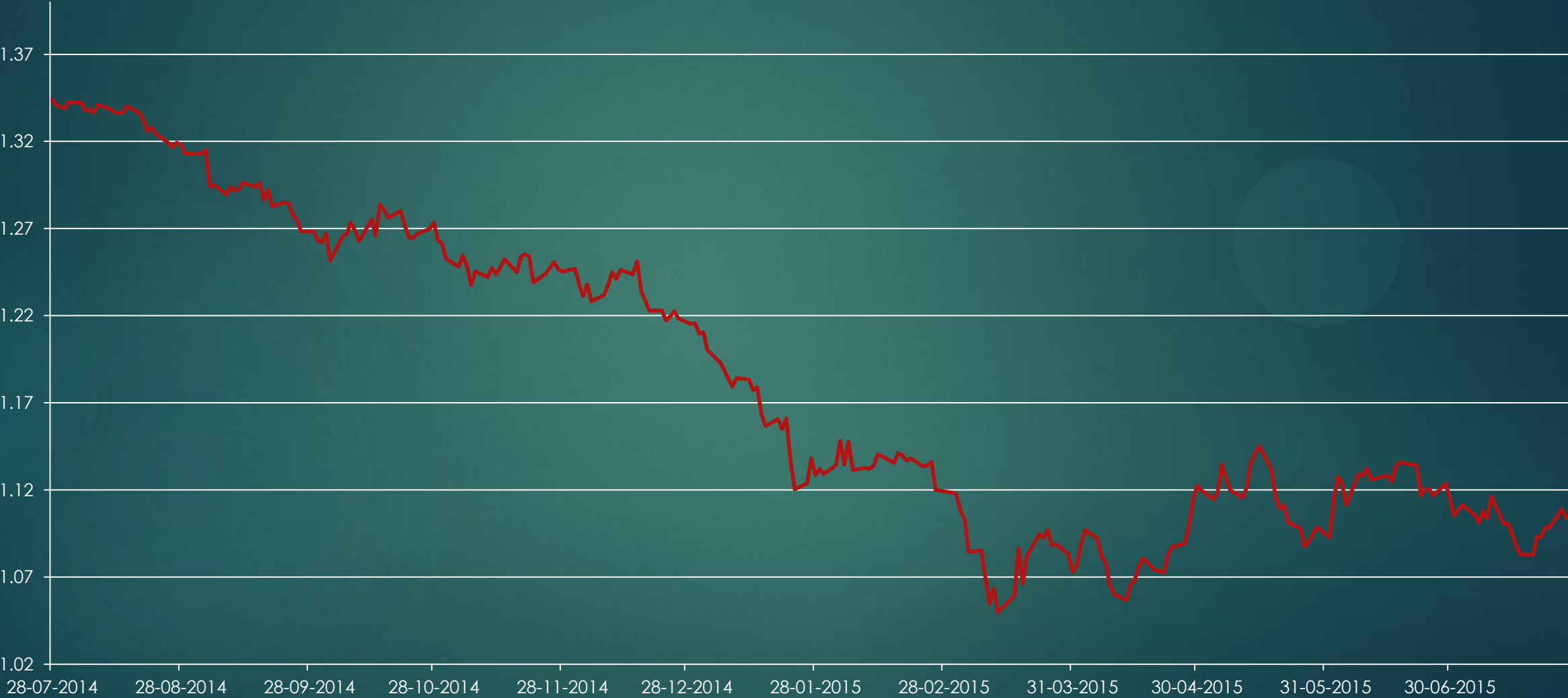
Current Forex markets

USD-INR – Last 1 Year

37

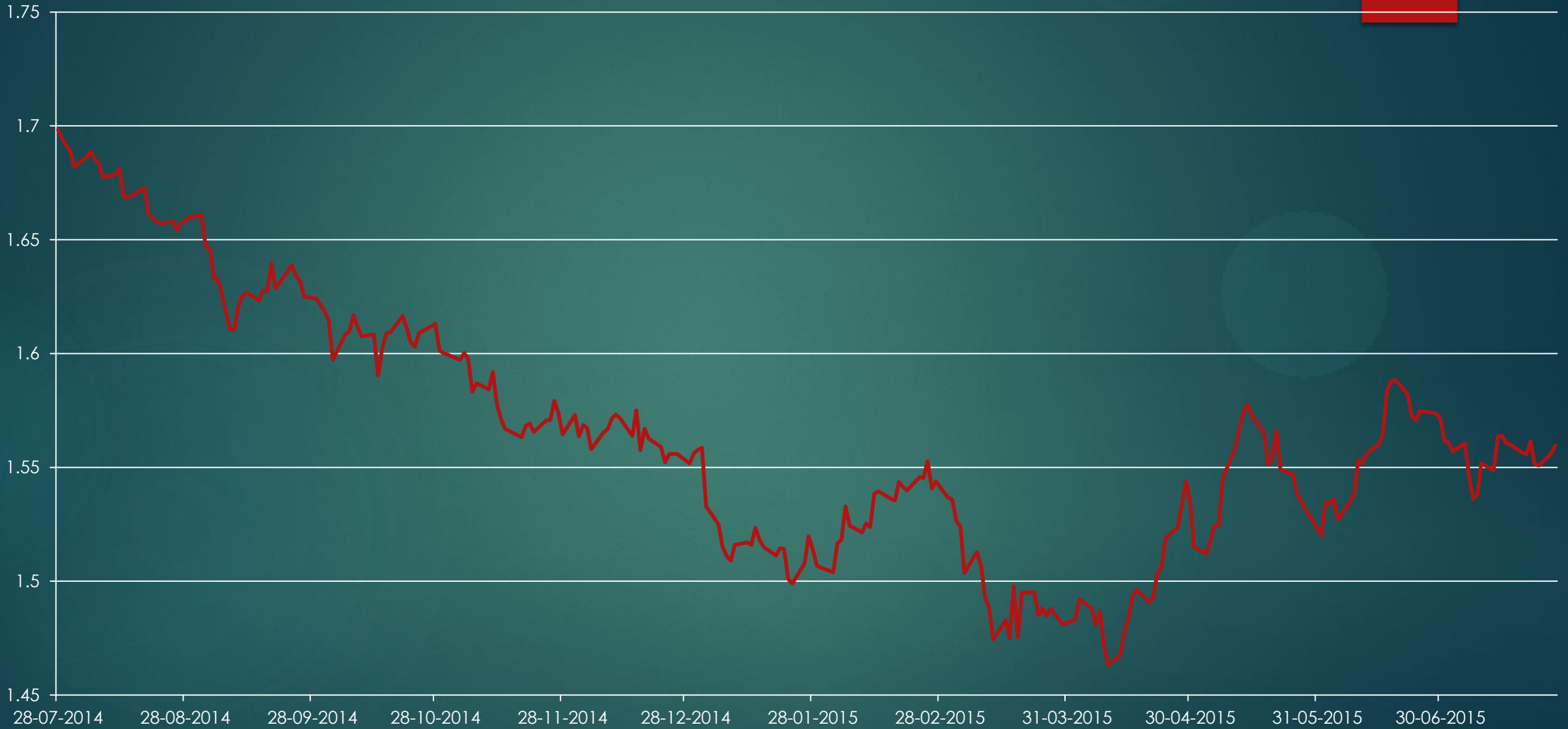


EUR-USD – Last 1 Year



GBP-USD – Last 1 Year

39



Questions?

THANK YOU

