

# The foreign exchange market

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# The currency is just a financial market

- You have a \$20 bill
- I have a Rs.2000 note
- We exchange this
- This is a currency transaction.
- Free men have done such bargains ever since States started issuing currency.
- Monetary policy is about how the currency is invented; then comes the finance of how it is traded.

# How currency trading takes place across the border

- You and I must both have a bank account in the US
- You and I must both have a bank account in India
- We agree on a deal: One side will pay in \$1 billion in the US, the other side will pay in Rs.7000 crore in India.
- Serious trust issues: What if one side actually pays the Rs.7000 crore, but the other side reneges on his part of the deal?
- What if we are in different time zones, so that we have to finish the Indian leg of the deal by 5 PM IST, but the US payments system only opens at 8 PM IST, but in between, the payer files for bankruptcy? (“Herstatt Risk”).
- We need to design the institutional machinery to solve these problems. CLS Bank.

# Participants on the currency market

- You want to buy a book costing \$10 from Amazon
- The seller wants USD and not rupees.
- You go to the currency market, sell Rs.700 and buy \$10.
- Every import transaction requires selling rupees.
- Every exporter receives foreign exchange, which is useless to him.
- He goes to the currency market and sells this foreign exchange.
- Current account transactions, international trade in goods and services, generate currency transactions.

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- Financial flows are required to fill the breach.
- For finance, the currency is just a tradeable asset.
- Most currency market activity is finance.

# Homework 1

- 1 Go to the BOP, find out gross flows on the current account in and out
- 2 Express this as flows per working day
- 3 Go to WSS and find out the actual USD/INR trading volume per day
- 4 How far apart are these?



# Deep links between currencies and bonds

- You believe JPY will appreciate
- So you exchange INR and get some JPY.
- Do you keep your money in a bank account earning nothing?
- No, you buy a short dated JGB.
- Every currency speculator is dipping into the short end interest rate of the currency that is held.
- The decision to buy INR is always a mix of : (a) The Indian short rate is high and (b) I believe INR will do well.

# Myths and reality

**The government sets the exchange rate** (Which exchange rate - USD/INR or JPY/INR or what?). Some governments do, most do not.

**A weak rupee is a bad thing** A weak rupee is good for exporters and bad for importers, and vice versa.

**Rs.100 to the dollar proves India is a bad country** Japanese Yen is at 130 to the dollar.

**The exchange rate is determined by imports and exports** Most activity on the currency market is financial.

**Short term debt flows are a bad thing** Short term debt flows are how the currency market solves the minute to minute imbalances in the currency trading without huge swings.

# Part I

## The exchange rate regime

# What is the exchange rate regime?

- Every central bank must have an internal process manual which specifies what it does on the currency market.
- The contents of this manual constitutes the Exchange Rate Regime.
- Some CBs make this explicitly known in public, some are opaque, some lie.
- There are a few main possibilities and we should know what these phrases mean.

# The process manual with a floating exchange rate

The text of the process manual:

```
Get to work
while (1) do {
    Look at the exchange rate
    Have a chai
}
```

# Examples

- The US – The FRB last did a trade on the currency market in 1995.
- The ECB – never did a currency trade.
- The BOE – last did a currency trade in 1992.

All these are transparent about floating the exchange rate.

## At the other extreme, a fixed exchange rate

- Hong Kong
- Runs a 'Currency board'
- The local interest rate will move as much as required to ensure that the exchange rate is exactly fixed at 7.766.

# Another method of implementing a fixed exchange rate

- The central bank has a 'monetary balance sheet' on which the liabilities are rupees ("reserve money") and assets are a mix of local and foreign assets.
- The central bank can always increase or decrease the number of rupees.
- Hence the CB can buy \$1 billion, and pay for this using newly invented Rs.7000 crore.
- This is called 'currency intervention'.
- A fixed exchange rate can be achieved by continuously trading on the market.
- China.



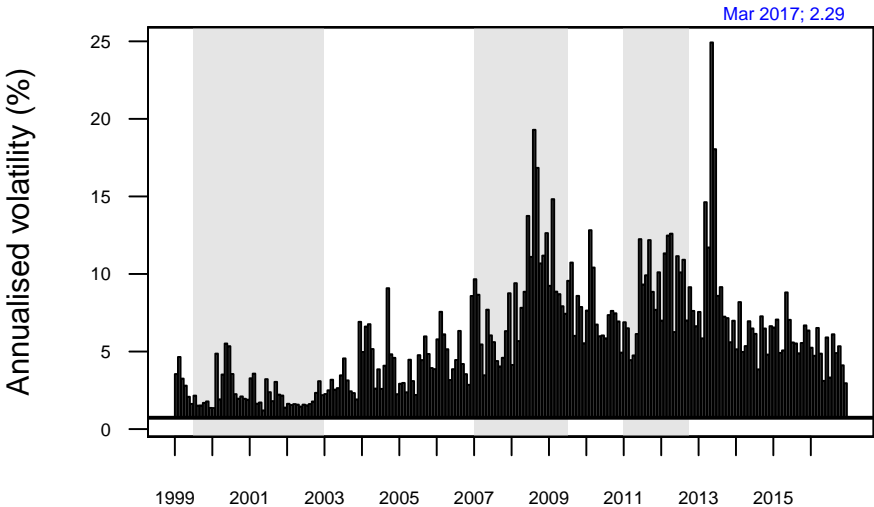
# A soft peg

- The CB trades on the exchange rate
- It has an objective in mind but it does not tell you what the objective is
- It does not stop currency fluctuations
- But it does not allow the market to do its work.

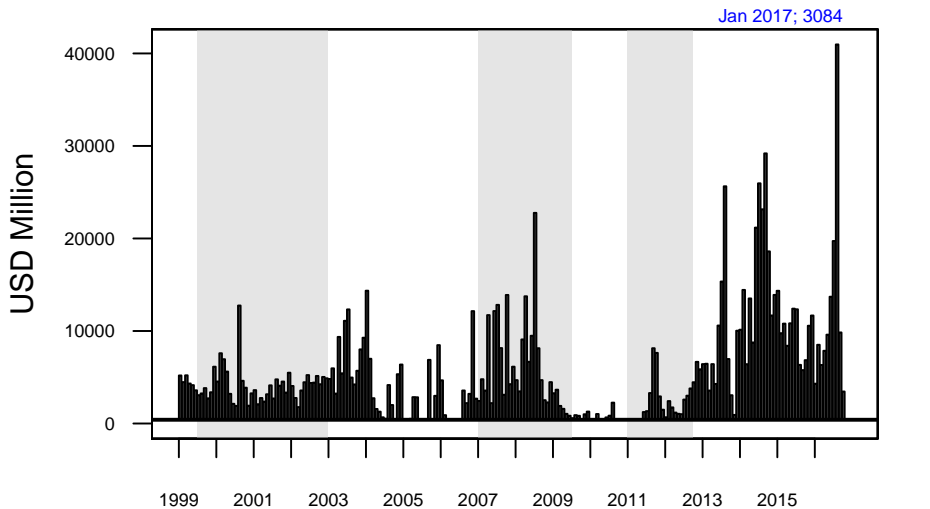
# USD/INR exchange rate



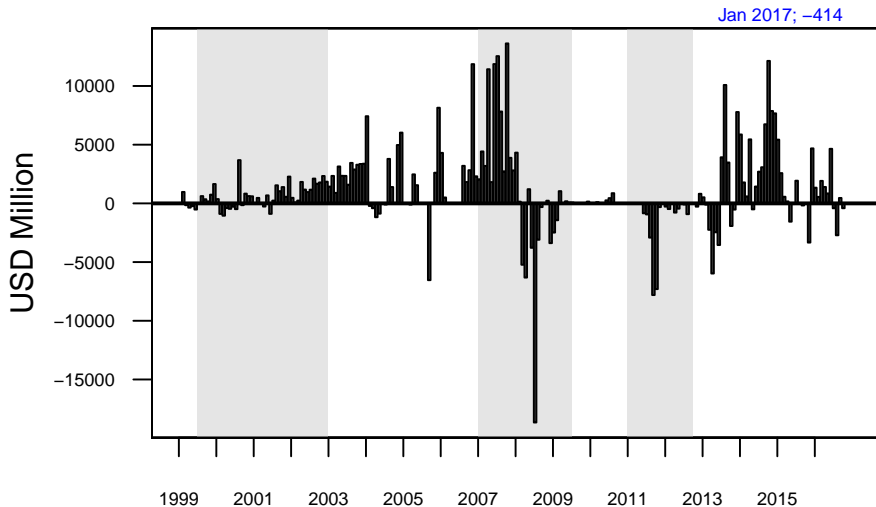
## USD/INR exchange rate realised volatility each month



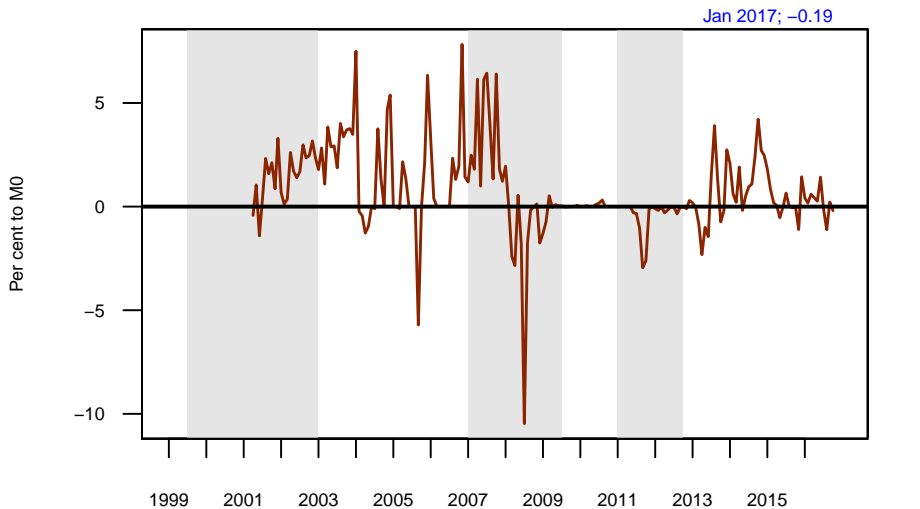
# RBI's gross currency turnover



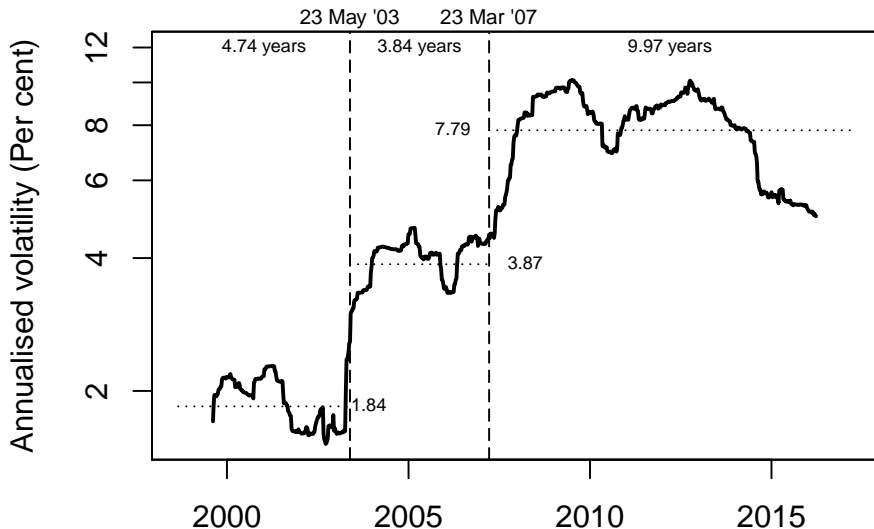
# RBI's net currency turnover



# RBI's net currency turnover, percent to M0



# USD/INR volatility



# Conclusion

- The exchange rate is the most important price of the economy
- The currency market is the world's biggest financial market
- Once the currency is an asset, all our financial economics knowledge directly applies – time-series of returns, portfolio theory, derivatives trading, option pricing, etc.
- In the next class we go to a class of unique results about exchange rates.



Thank you.