Monetary Policy in India

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Part I

What is monetary policy and how does it work?

What is monetary policy?

- Monetary policy is the management of money supply and interest rates by central banks to influence prices and employment.
- Monetary policy works through expansion or contraction of investment and consumption expenditure.

The uses of monetary policy

- Monetary policy cannot change long-term trend growth.
- There is no long-term tradeoff between growth and inflation. (High inflation can only hurt growth).
- What monetary policy – at its best – can deliver is low and stable inflation, and thereby reduce the volatility of the business cycle.
- When inflationary pressures build up:
  raise the short-term interest rate (the policy rate)
  which raises real rates across the economy
  which squeezes consumption and investment.
- The pain is not concentrated at a few points, as is the case with government interventions in commodity markets.

How central banks of mature market economies work

- Election cycle in interest rates
- Hence, political independence for the narrow task of monetary policy
- The central bank sets the short rate
- The market either explicitly or implicitly knows the inflation target of the central bank.
- The short rate is unambiguously set by the central bank and is known to everyone.
- The "monetary transmission" : the market process through which changes to the short rate lead to changes in all other interest rates and financial prices.
- There is no contradiction between financial sector development and an effective monetary policy!
- Key words: focus, independence, transparency, predictability, accountability.

Money creation

- Reserve money is created when the central bank either lends to the government, or buys foreign exchange thus adding to reserves.
- Reserve money (M_0) induces broad money (M_3) through the 'money multiplier'.
- India's long-term reform agenda: drop CRR and SLR, which would increase the money multiplier.

Instruments of monetary policy in India

- Net loans to central government (i.e. open market operations)
- Net purchase of foreign currency assets
- Change in cash reserve ratio
- Changes in repo rate and reverse repo rate
- Bank rate

Part II

Impossible trinity

Monetary policy in an open economy

Impossible trinity:

- Open capital account
- Pegged currency regime
- Independent monetary policy

Monetary policy in an open economy

Example

- Let us say you have inflation and so want a contractionary monetary policy.
- You raise interest rates.
- Since the capital account is open, capital flows in from abroad in response to the higher interest rates.
- This puts a pressure on the rupee to appreciate.

But the exchange rate is pegged

Example

- The Central Bank buys up the dollars coming in to prevent rupee appreciation.
- This leads to an expansion in net foreign exchange assets of the Central Bank and and thus of money supply.
- Classic symptom of impossible trinity difficulties: raising interest rates but money supply growth is surging.
- An expansion in money supply will lower interest rates.
- You cannot raise rates, and keep the exchange rate pegged at the same time.

Example

- If the US hikes the Fed rate, and India stays still, capital will flow out and the currency will depreciate.
- If the RBI wants to prevent depreciation of the currency, it will have to sell dollars or raise rates. Both these are contractionary. Currency pegging forces RBI to also raise rates.
- Thus having a peg means following US monetary policy.

Monetary policy in an open economy

- A country with an open capital account cannot hope to have an independent monetary policy if it runs a pegged exchange rate.
- Pegging the exchange rate induces a loss of monetary policy autonomy.

Sterilised intervention

- Can the impossible trinity be dodged?
- The central bank could try to impact money supply through open market operations. This is "sterilising" the impact of the forex intervention.
- This works for a short while (only). There is no long-term escape.
- Constraints to sterilisation:
  - Run out of bonds
  - Mounting fiscal costs
  - Sterilisation means selling bonds → rates go up → sucks in more capital flows.
- India has served up ideal textbook examples of:
  the difficulties of the impossible trinity,
  of the feasibility of sterilised intervention in the short run,
  of the breakdown of sterilised intervention after a short while.

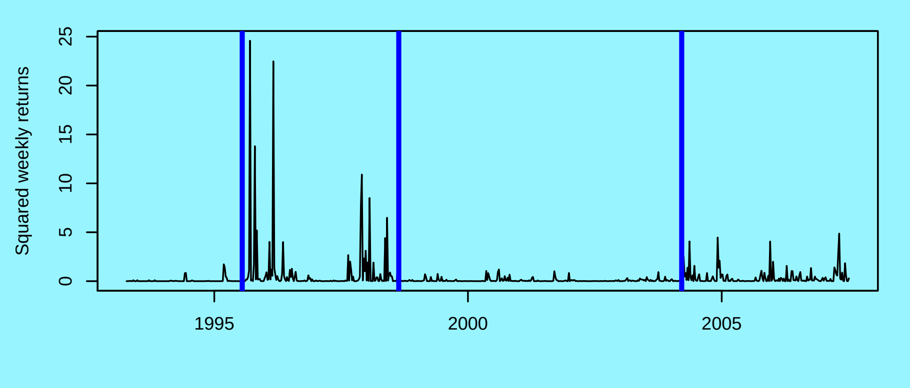
Part III

The story of Indian monetary policy

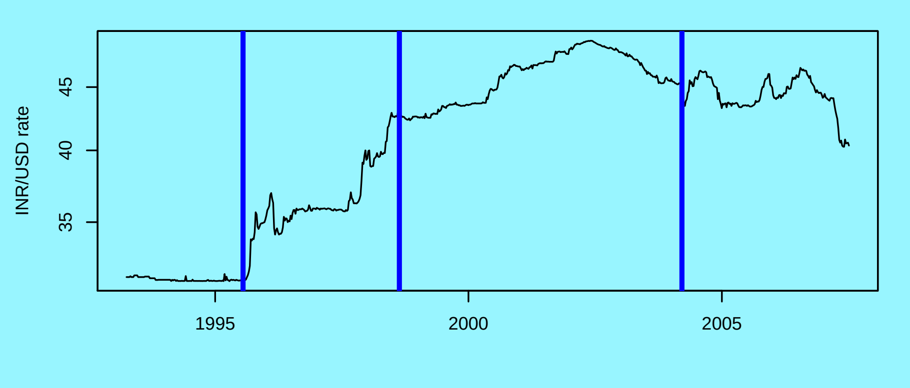
Conceptual framework

1. What was happening in the exchange rate regime?
2. How was the currency regime being implemented?
3. What were the consequences of the implementation of the exchange rate regime for monetary policy?

Four phases of the INR exchange rate regime



Four phases of the INR exchange rate regime



INR/USD volatility in the 4 periods

Period	Annualised INR/USD vol
I	1.71
II	7.02
III	2.02
IV	4.57

For a comparison: Euro/USD annualised vol is 9.6%.

The evolution of the INR exchange rate regime

Period 1: April 1993 to February 1995 Period where trading in the INR first began. For most of this period the exchange rate was Rs.31.37 per dollar.

Period 2: February 1995 to August 1998 The period of the Asian crisis, there was the highest-ever currency flexibility in India's experience.

Period 3: August 1998 to March 2004 Tight pegging, with low volatility and some appreciation.

Period 4: March 2004 - Greater currency flexibility.

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Monetary policy in the four phases

Period 1: April 1993 to February 1995 Unsterilised intervention.

Period 2: February 1995 to August 1998 Asian crisis; least pegging.

Period 3: August 1998 to March 2004 Sterilised intervention.

Period 4: March 2004 - Confusion.

Period 1

1. Began as a surge in capital inflows.
2. RBI bought USD to prevent appreciation beyond Rs.31.37.
3. There was no bond market to speak of.
4. NFA and M_0 went up.
5. M_3 growth accelerated.
6. Inflation rate rose to 16 percent.
7. Monetary tightening through CRR and interest rate hikes started when faced with high inflation. This was after a year of almost no sterlisation.

Period 2: “loss of control”

- Period of the Asian crisis
- High rupee vol
- January 1998: interest rate defence of rupee.

Period 3: Successful sterilised intervention

1. By now the bond market was much better developed.
2. The bond market was actively used for OMO.
3. CRR phaseout program stayed on course.
4. M_0 and M_3 growth were contained
5. Inflation remained below 10 percent.
6. But the real rate dropped to negative numbers, thus setting the stage for trouble after Period 3.
7. Period 3 broke down when RBI ran out of government bonds for OMO.

Part IV

Current challenges to monetary policy (Period IV)

Challenge of open economy

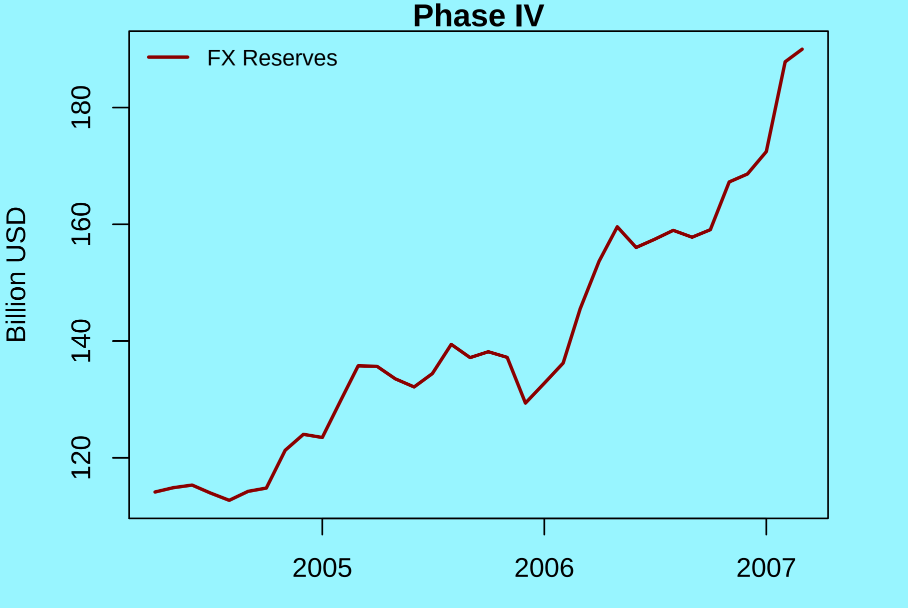
Year	Gross flows	
	Trillion rupees	Percent to GDP
1999-00	9.16	51.28
2006-07	41.18	110.01

Measured in rupees: gross flows across the current and capital accounts grew by 4.5 times in seven years.

Difficulties

1. RBI ran out of stocks of government bonds in May 2004, at the end of Period 3.
2. M_0 is smaller than NFA(!).
3. Monetary Stabilisation Bonds were started – but explicit fiscal cost; no longer the hidden costs of pegging.
4. Forex intervention continued - endeavour to get exchange rate back under control.
   Greater globalisation requires bigger market manipulation - e.g. $12 billion in February 2007 alone.
   Only partly sterilised.
5. In 2006-07 reserve money growth rose to 23 per cent.
6. Rising inflation a worry

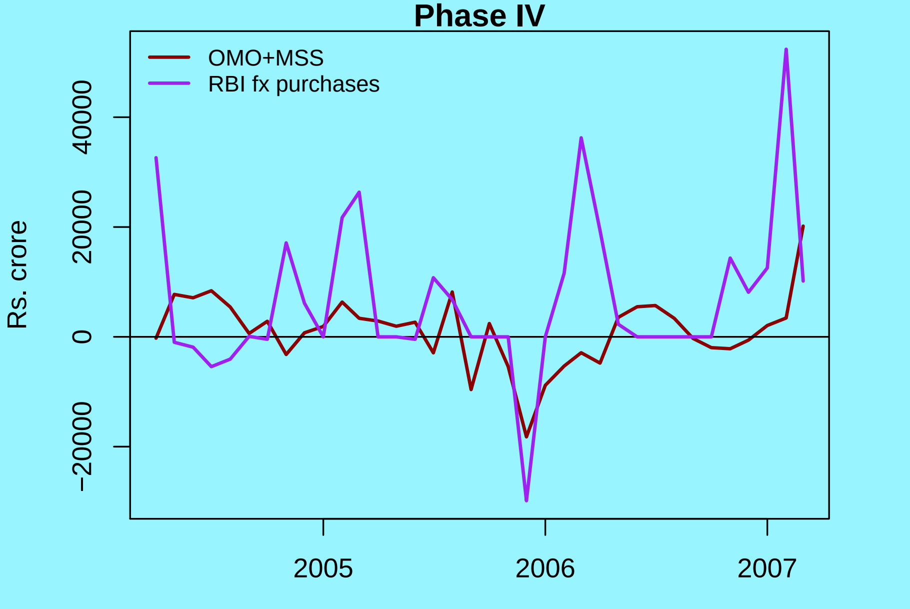
Massive reserves buildup



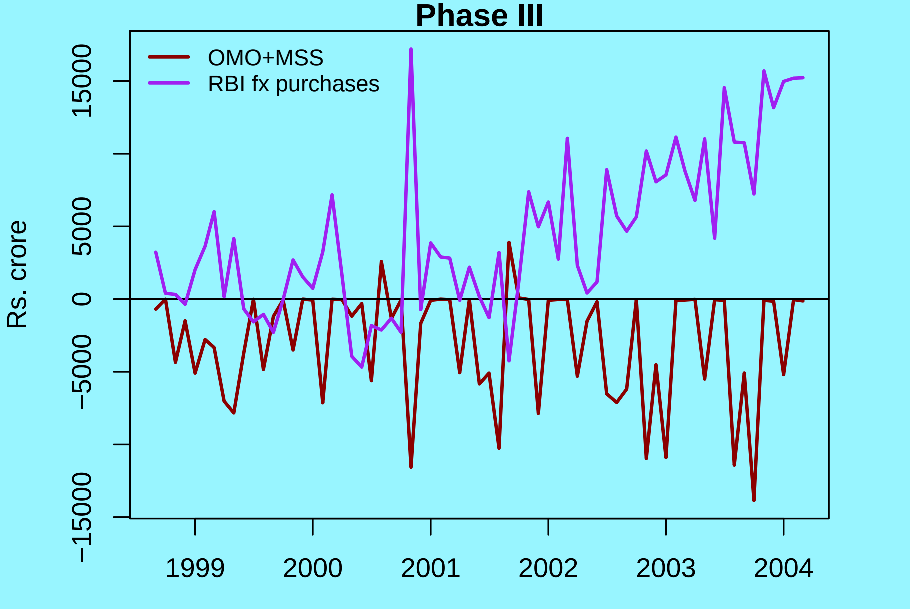
Was sterilisation effective?

- Effective sterilisation means that the graph of RBI purchases of foreign currency should be the mirror image of the graph of RBI sale of bonds through OMO + MSS.
- This is broadly the case in Period III but not in Period IV.

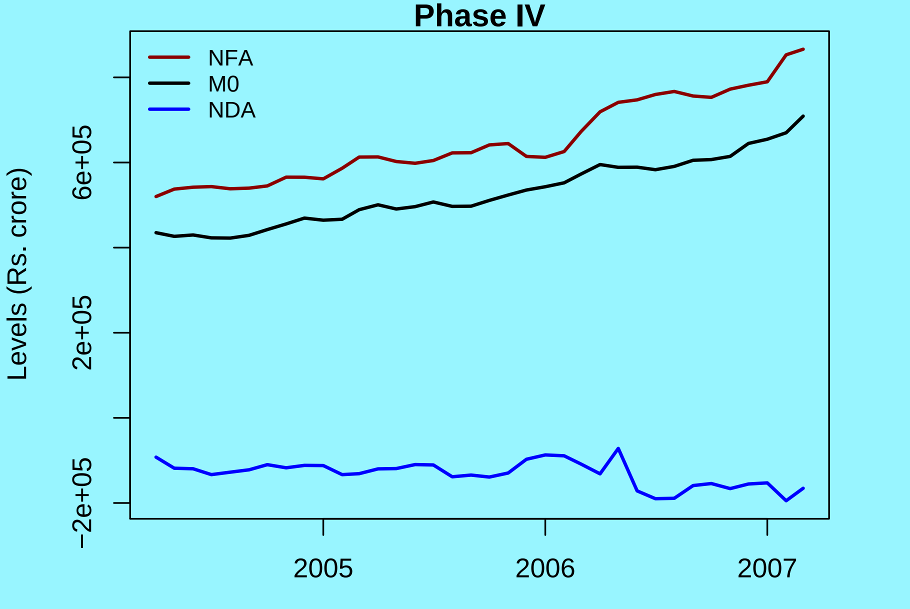
Ineffectual sterilisation - OMO + MSS



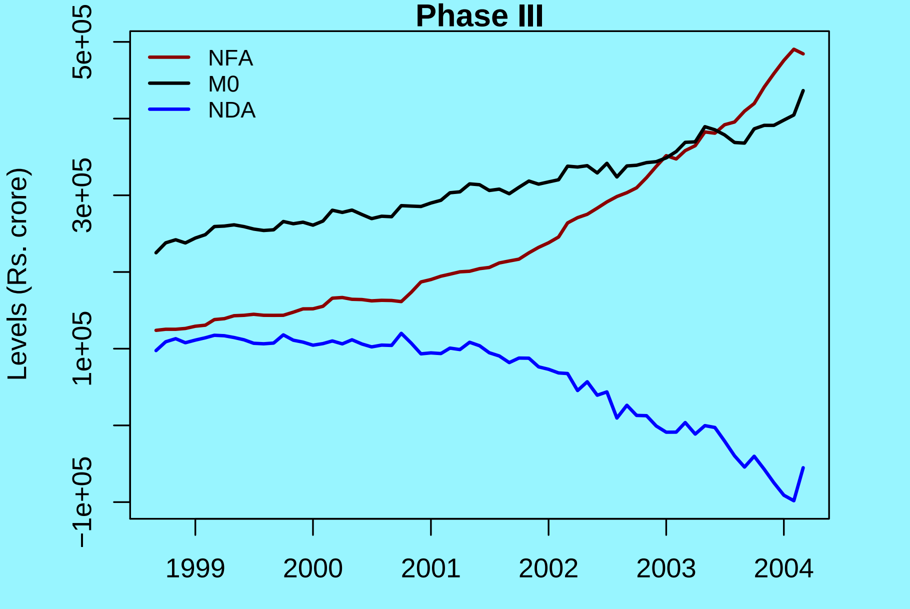
Compare against sterilisation of Period III



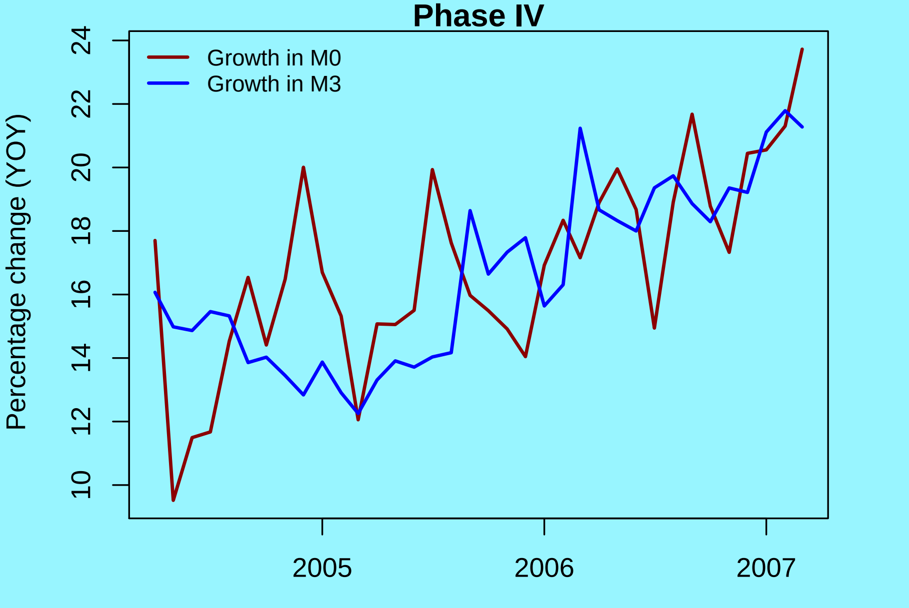
Movement of NFA and M_0



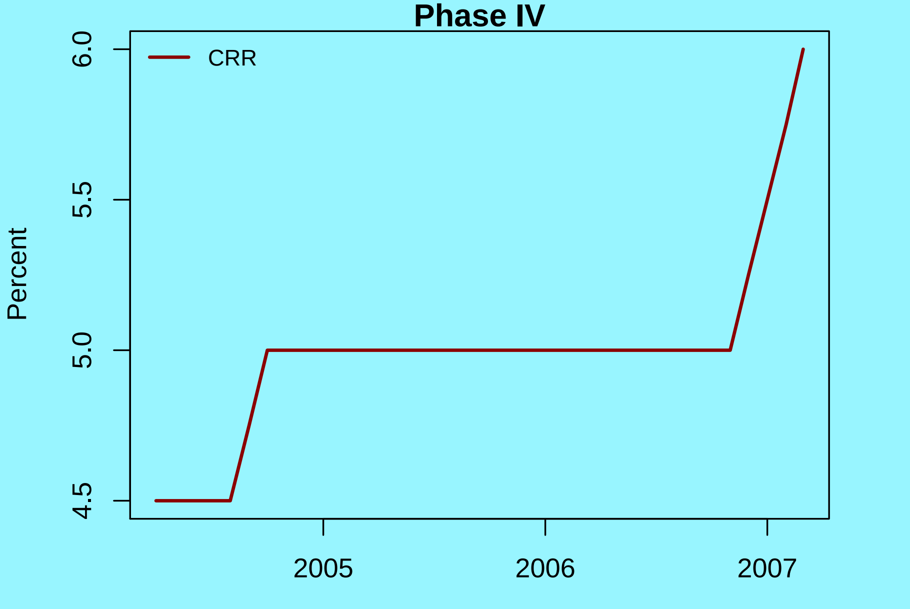
Compare against the picture in Period III



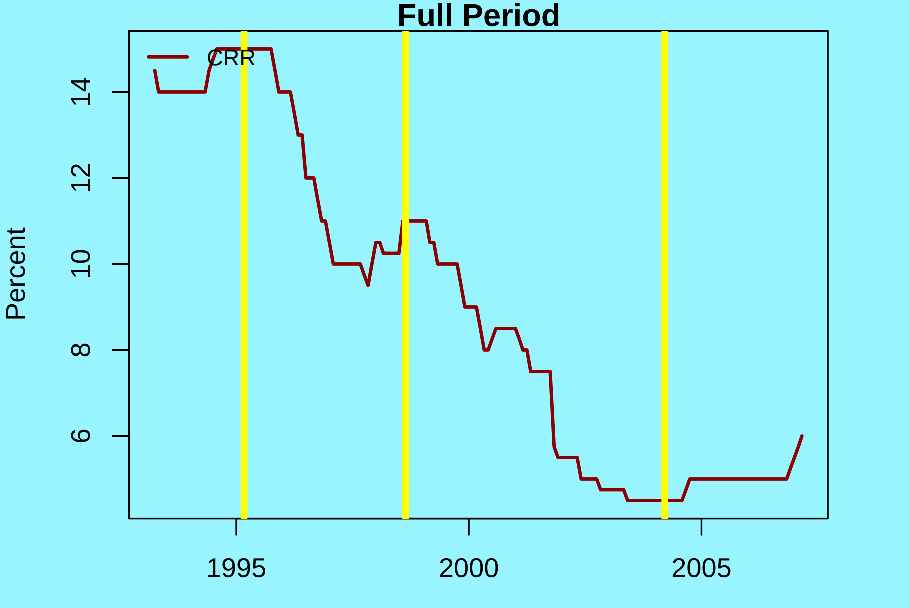
Acceleration in M_0 and M_3 growth



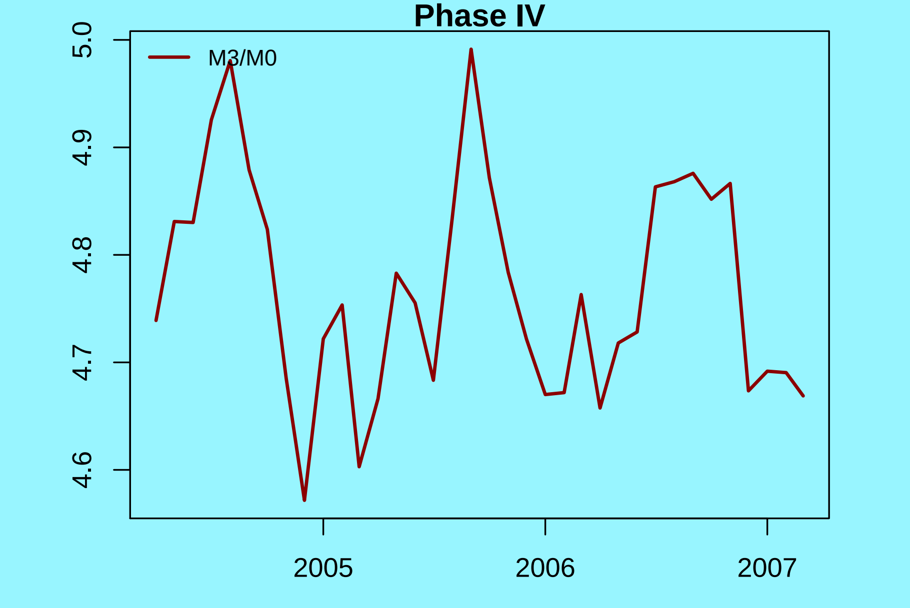
Reversal of reforms on CRR phaseout



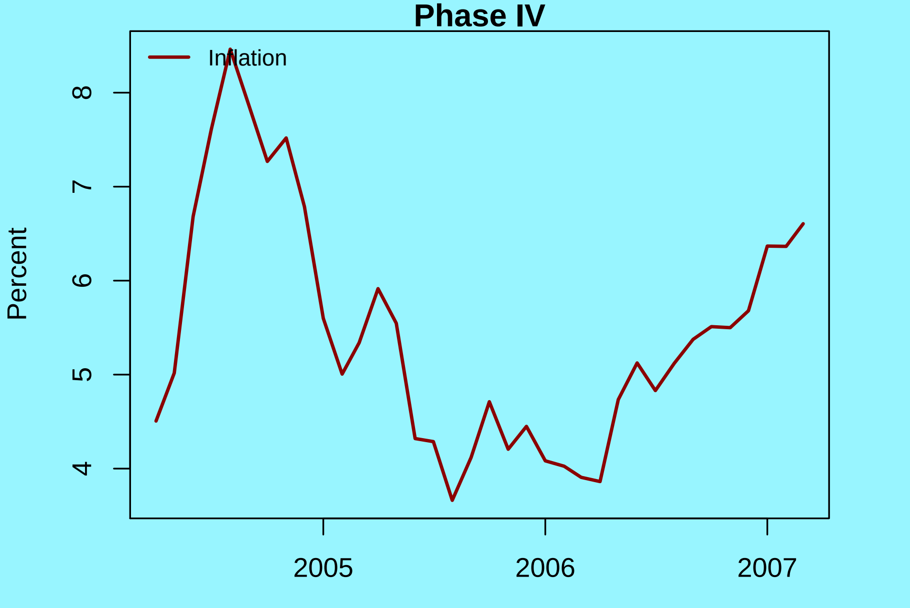
Compare against the fuller picture on CRR phaseout



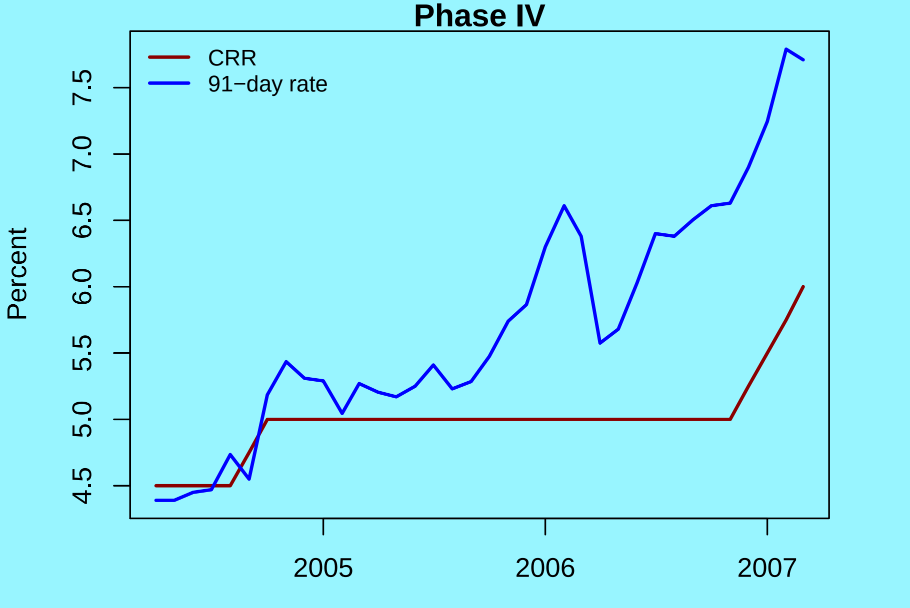
Improvement of money multiplier got stalled



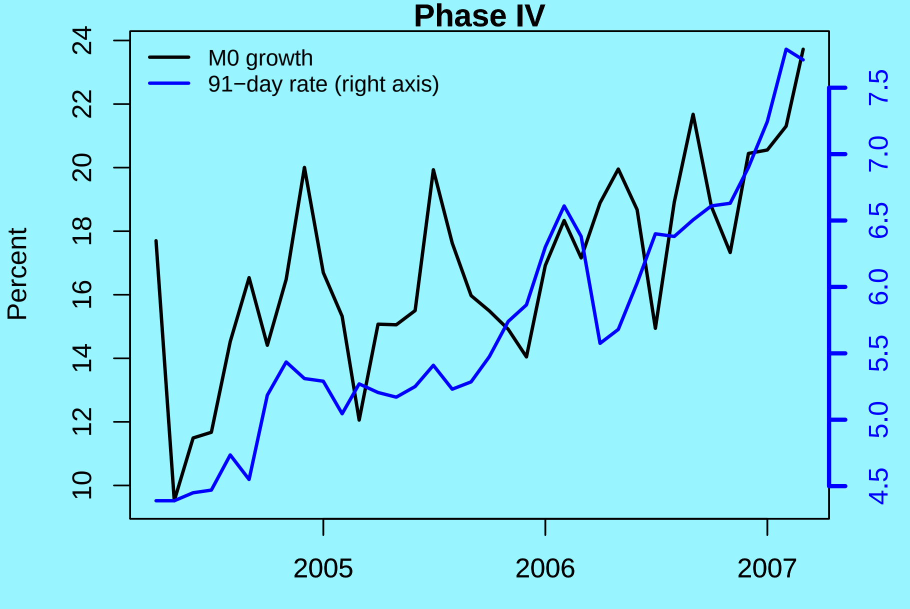
Inflationary pressures



Monetary policy has tried to tighten?



What is the monetary policy?



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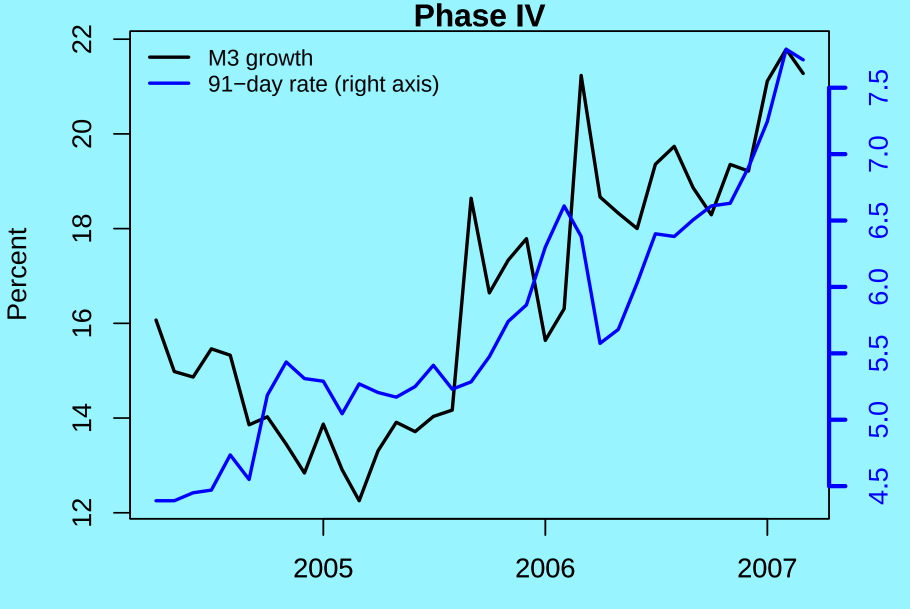
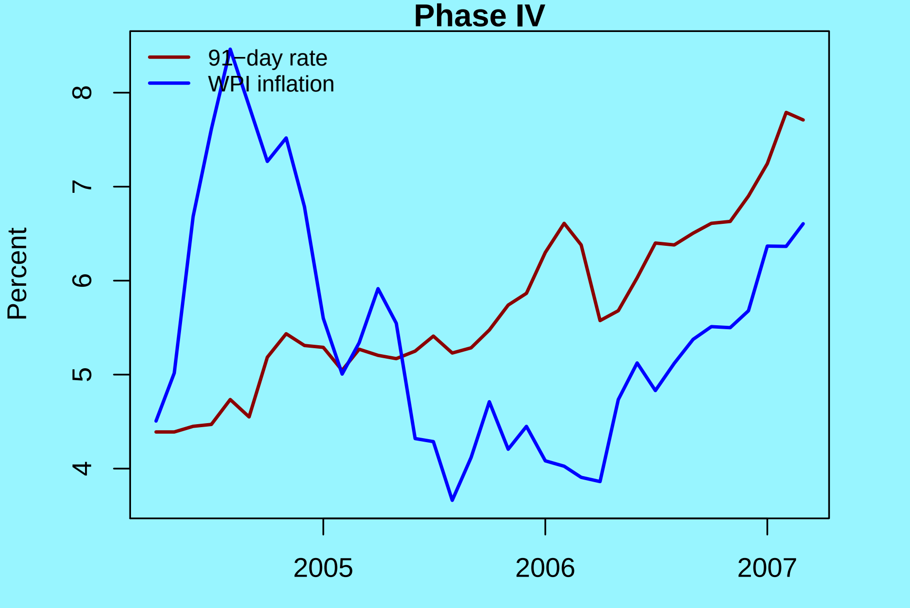
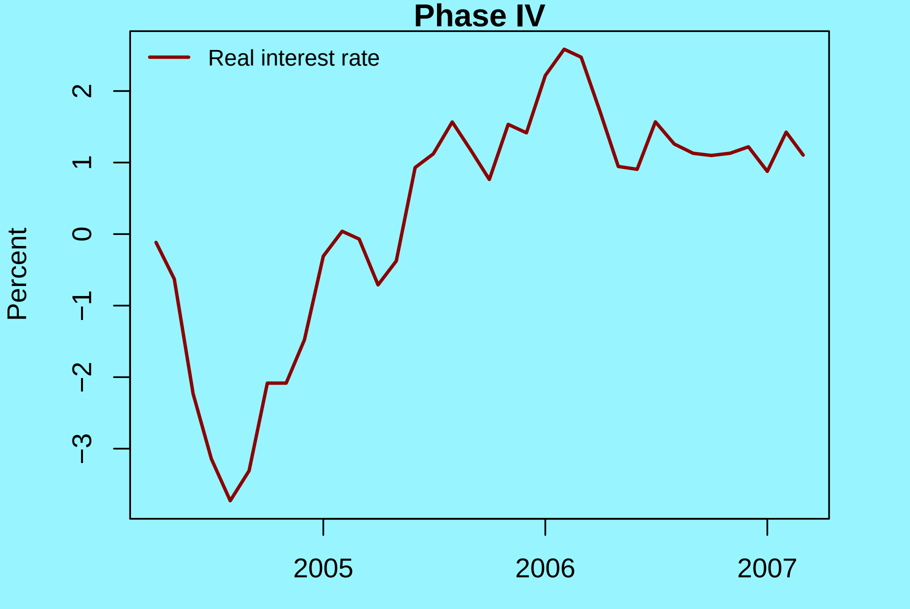


Monetary policy has been behind the curve



Real rates remain too low to reduce inflation



What is the monetary policy?

- In a mature market economy, the central bank unambiguously pins down the short rate.
- The financial markets are told the ‘monetary policy rule’ so they have expectations about future values of the short rate.
- Using this, the market traces out the full yield curve.
- RBI has two short rates, not one: 6% and 7.75%.
- At 7.75% the transactions are roughly zero.
- At 6% the transactions are capped at Rs.3000 crore.
- The central bank has stopped performing its core function, that of pinning down the short rate.

Part V

Summary

Key messages

- Monetary policy is supposed to be about pinning down the short rate so as to achieve an inflation target, and thus stabilise the macroeconomy.
- Pegged exchange rate + de facto convertibility “uses up” the lever of monetary policy.
  There is a loss of autonomy in the conduct of monetary policy.
- India’s monetary regime is largely India’s exchange rate regime:

Period 1	MP was dominated by Rs.31.37 (unsterilised)
Period 2	Currency flexibility + interest rate defence
Period 3	Sterilised intervention
Period 4	Confusion.

- The biggest question today: What is the monetary policy?

Further reading

India's experience with a pegged exchange rate by Ila Patnaik, in *India Policy Forum 2004*, Brookings Institution Press and NCAER, 2005, edited by Suman Bery, Barry Bosworth and Arvind Panagariya. http://openlib.org/home/ila/PDFDOCS/Patnaik2004_implementation.pdf

Thank you.