Recent Challenges in Monetary Policy Design in India

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- **The views expressed are strictly personal and do not belong to the organization of affiliation**

Backgrounder: Monetary Policy Framework in India

- Prior to mid-1980s: Direct Instruments of Monetary Control (based on credit budgeting)

- Mid-1980s to 1998 : Monetary targeting Framework suggested by Sukhmoy Chakaravarty Report (based on money demand stability & money multiplier predictability)

Major Institutional Changes After 1991

- Interest rates freed
- Exchange rate: from managed to free float
- Full current account convertibility & substantial liberalization of capital account
- Direct & portfolio investment encouraged
- Premium on stock market issues freed
- Automatic monetization of budget deficits stopped
- Yields on gilts made market determined
- Private and foreign banks encouraged

How Did the RBI Respond?

- Reserve Requirements (CRR) cut from 15.0% in 1989-1993 to 4.5% in June 2003
- Directed investments in gilts (SLR) brought down from 38.5% in 1990-92 to statutory minimum of 25.0% by Oct. 1997
- In April 1997, refinance rate (bank rate) activated and then brought it down from 11% (12.0% in Oct 1991) to 6.0% in April 2003
- In June 1988 new monetary aggregates suggested
- In Dec.1997 fixed reverse rate repo introduced that helped establish an informal corridor for short-term interest rates; in June 2000 LAF established
- RBI announced that from 1998-99 it would follow a multiple indicator approach

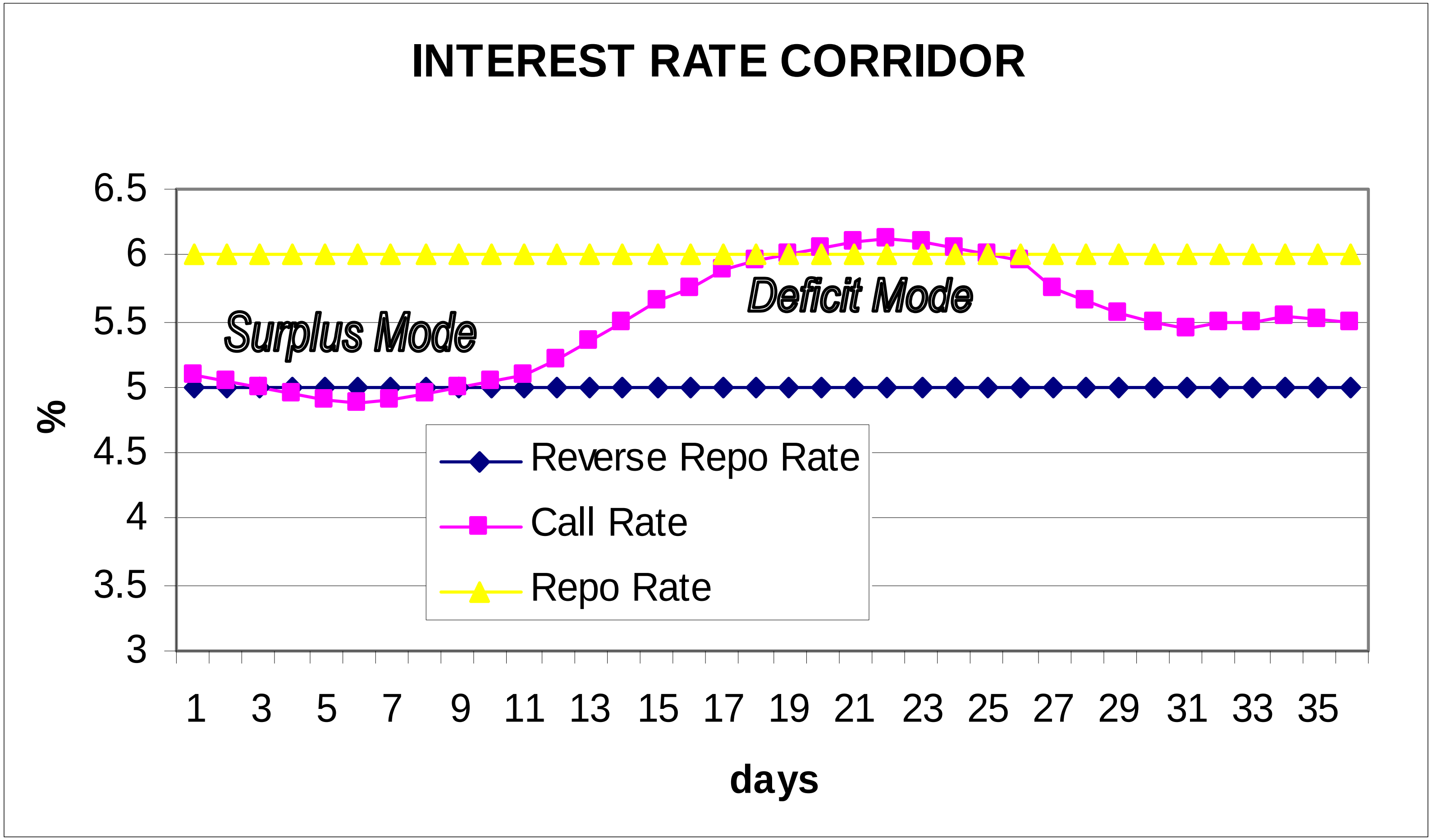
How Was Monetary Transmission Impacted?

- Money demand became less stable and money multiplier less predictable than before
- Disequilibrium in money markets started affecting short-term interest rates
- Relatively, rate channels gained importance over quantum channels
- Evidence of increased integration amongst financial markets
- Term structure is still segmented. FX-market efficiency holds only at short-end.

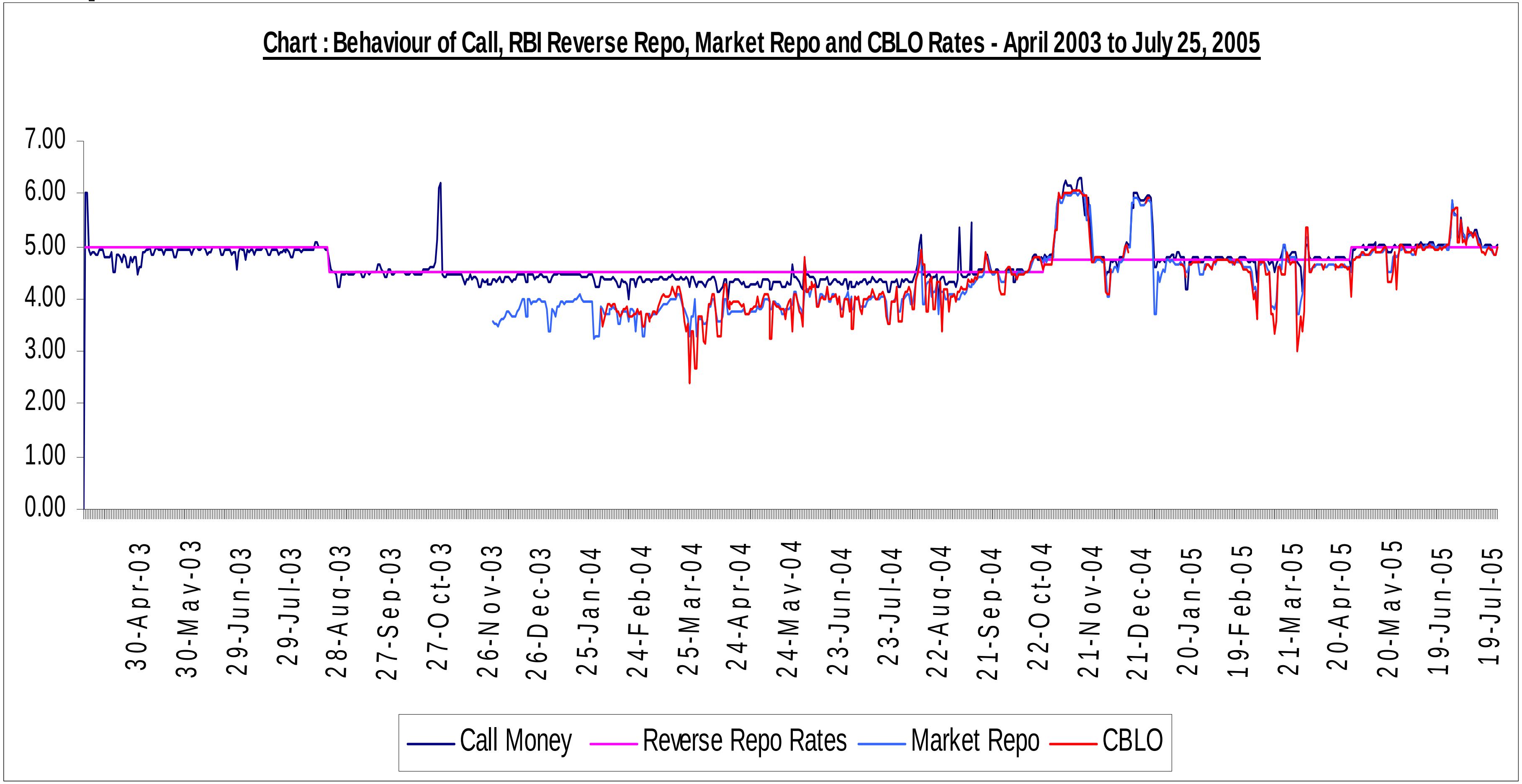
Current Operating Framework & Operating Procedures

- Mix of targeting bank reserves and short-term interest rates
- Bank reserves are targeted through reserve requirements as well as open market operations
- Open market operations are primarily used to keep short-term interest rates in an informal corridor set by reverse repo & repo rates
- The central bank conducts fixed rate repo operations under LAF on daily basis

Informal Interest Rate Corridor



Short-term Interest Rates: in Enduring Surplus Mode

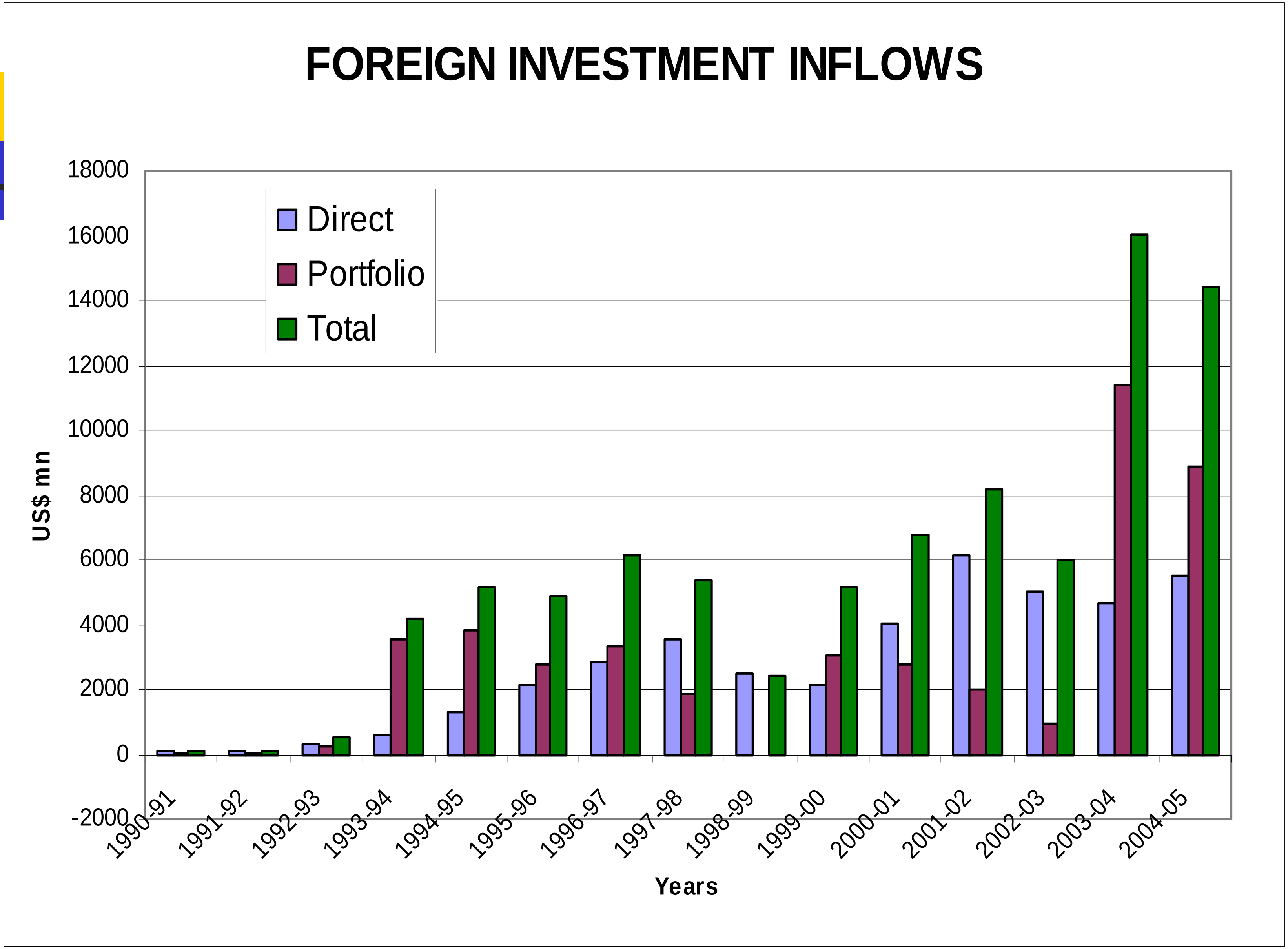


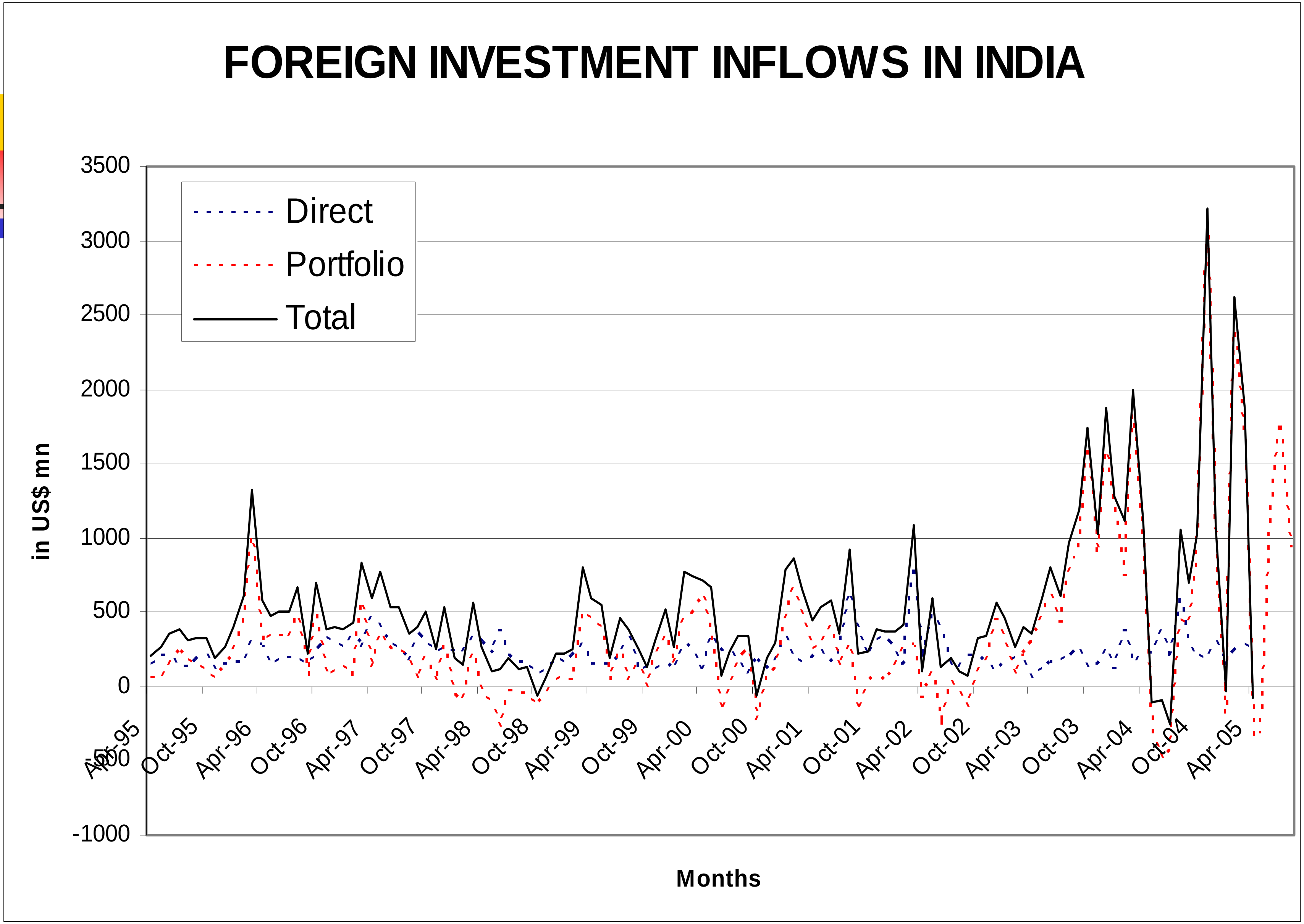
Recent Challenges to Monetary Policy Design …(i)

- Large capital inflows, which sometimes become unpredictable and volatile
- Lowering inflation expectations amidst oil price shock
- Handling Asset Price Considerations in Monetary Policy
- Large credit growth driven by consumption as well as investment demand; possible unknown future financial stability risks in current debt driven credit boom supported by retail credit

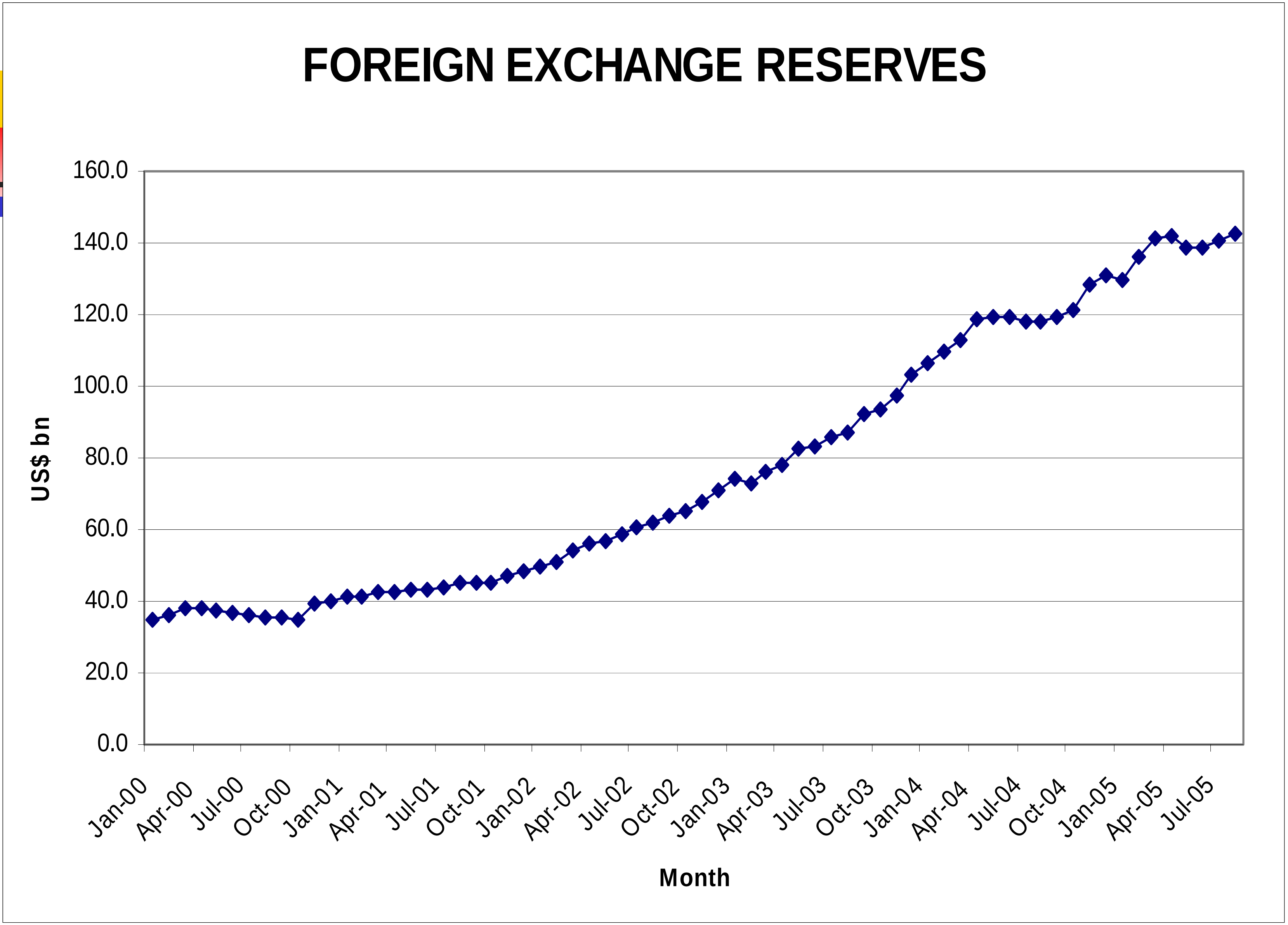
Recent Challenges to Monetary Policy Design ...(ii)

- Issues of Autonomy, Accountability, Transparency & Decision-making structures
- Seeking Greater Central Bank Independence while ensuring monetary-fiscal coordination
- Continued large fiscal deficits, placing debt management burden on monetary policy
- FRBM is correcting this... but would bring new challenges for conduct of monetary operations


FOREIGN INVESTMENT INFLOWS
Direct
Portfolio
Total
US$ mn
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
-2000
1990-91
1991-92
1992-93
1993-94
1994-95
1995-96
1996-97
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
Years



FOREIGN INVESTMENT INFLOWS IN INDIA
Direct
Portfolio
Total
3500
3000
2500
2000
1500
1000
500
0
-500
-1000
in US$ mn
Apr-95
Oct-95
Apr-96
Oct-96
Apr-97
Oct-97
Apr-98
Oct-98
Apr-99
Oct-99
Apr-00
Oct-00
Apr-01
Oct-01
Apr-02
Oct-02
Apr-03
Oct-03
Apr-04
Oct-04
Apr-05
Months

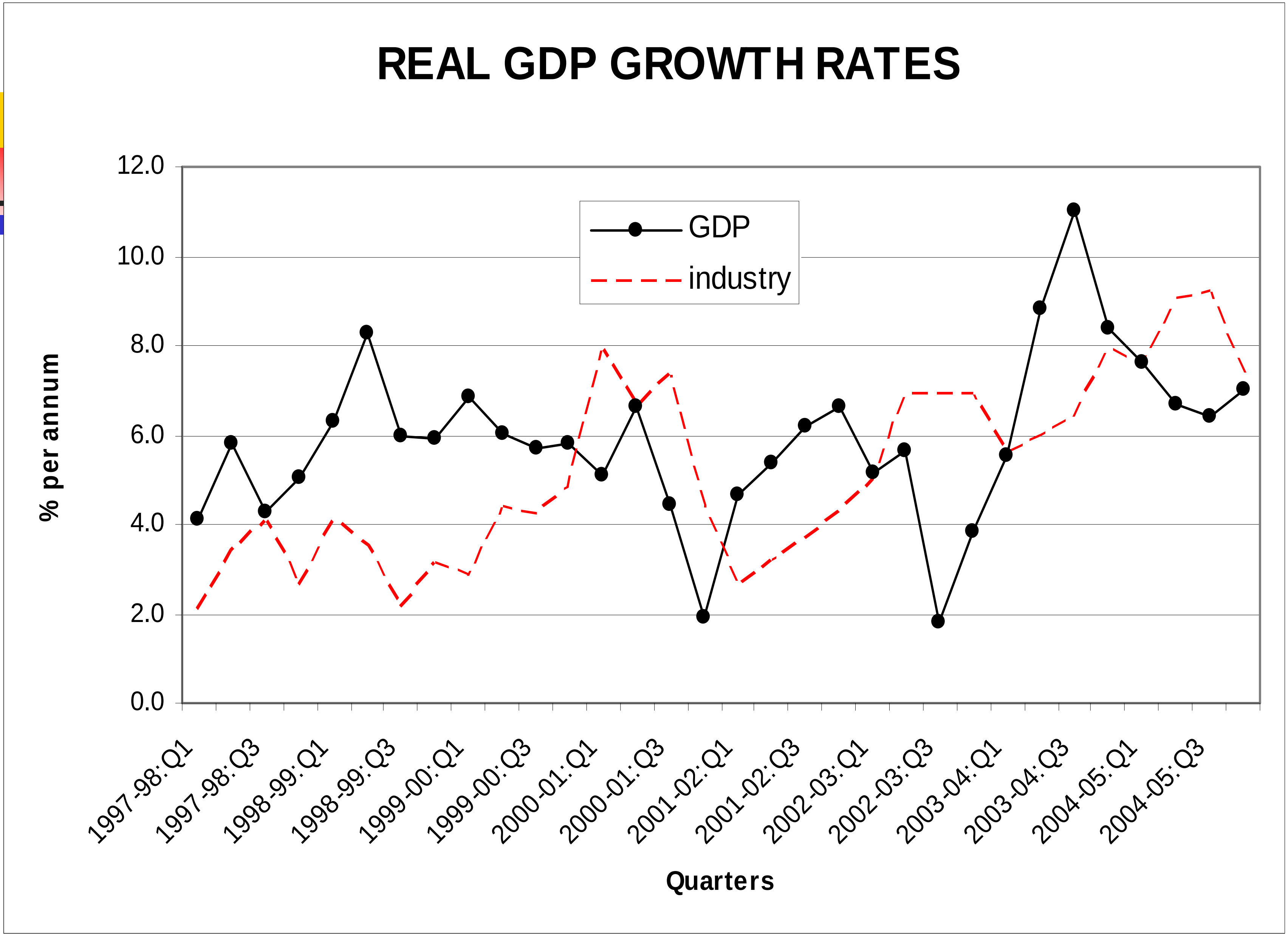

FOREIGN EXCHANGE RESERVES
US$ bn
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Jan-00
Apr-00
Jul-00
Oct-00
Jan-01
Apr-01
Jul-01
Oct-01
Jan-02
Apr-02
Jul-02
Oct-02
Jan-03
Apr-03
Jul-03
Oct-03
Jan-04
Apr-04
Jul-04
Oct-04
Jan-05
Apr-05
Jul-05
Month

Surplus Liquidity in Money Markets

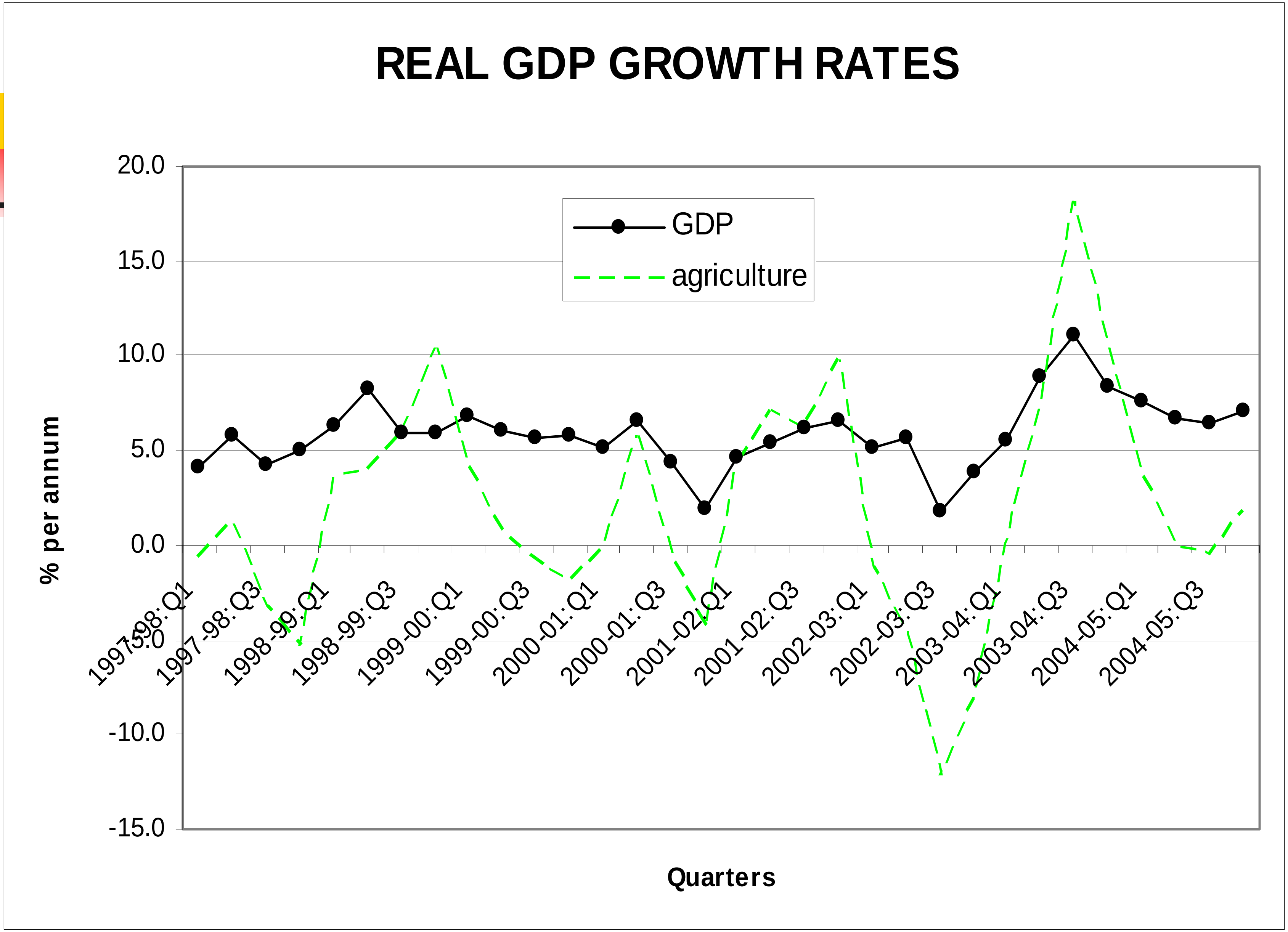
- Large capital inflows have resulted in substantial surplus liquidity in money markets.
- Surplus was around US$17 bn by end-Mar.2004 and is currently about US$25 bn
- Surplus liquidity was being absorbed by reverse repos under LAF estimated at US$12 bn in Mar. 2004. LAF absorption levels had fallen from US$13 bn in July 2005 to some injections in Nov. 2004, but absorptions have climbed back to about US$8 bn in early Aug. 2005.
- Sterilization bonds have been issued by Govt. in the form of MSS and the proceeds of about US$16bn are being imobilized at RBI, which have helped bring down LAF levels.

Does Surplus Liquidity Imply that Monetary Management Has Been Slack?...(i)

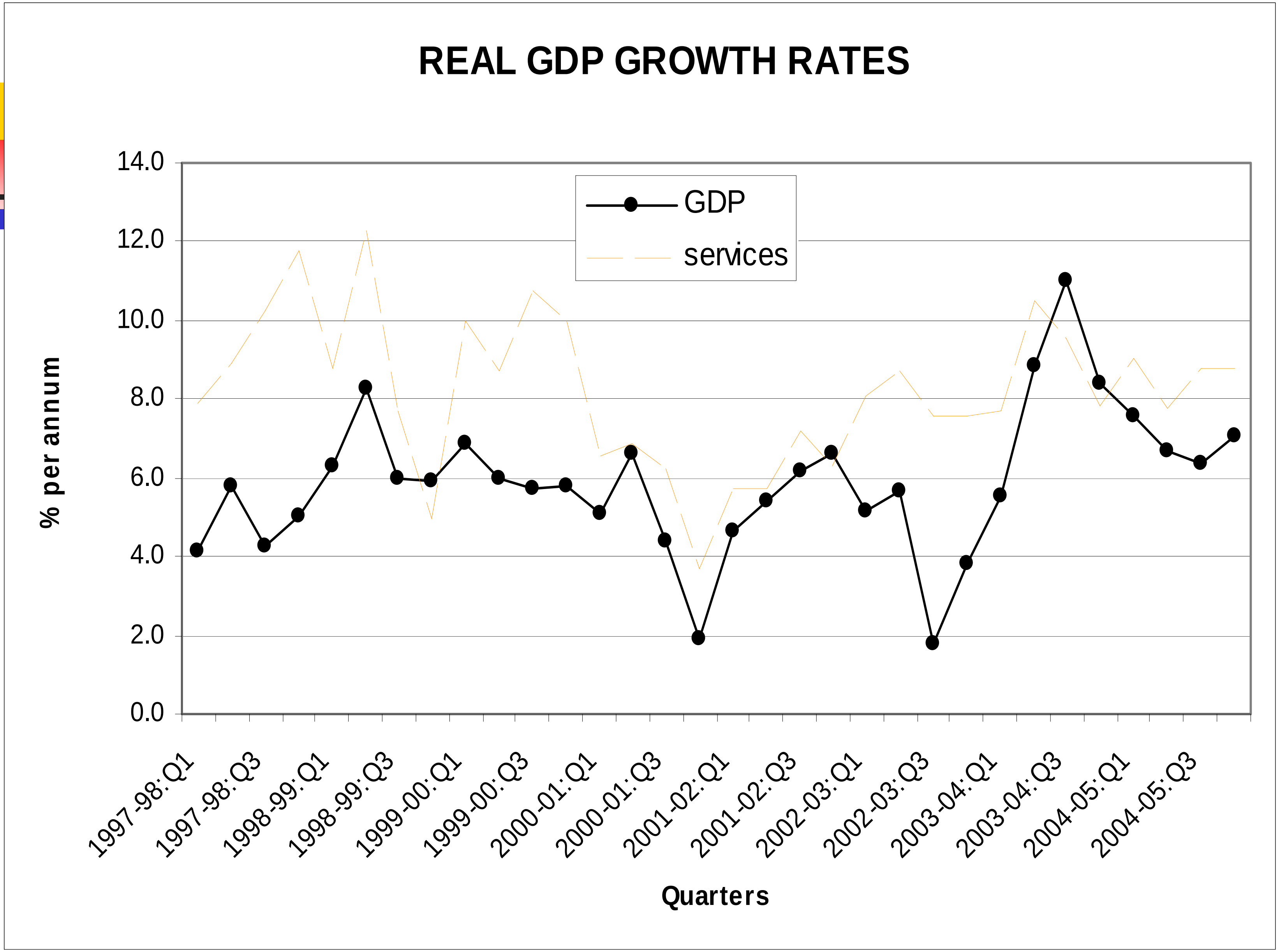
- Since 2001 policy of rate cuts acquired global response. Soft bias was introduced as a conscious policy to revive economy.
- Industrial growth rate had remained below 5% for 10 quarters in a row during 1997-98 to 1999-00. It rose temporarily for next 3 quarters before again falling below 5% for next 6 quarters.
- Growth picked up since 2002-03 helped by monetary stimulus from preceding year. Industrial growth has now recorded 5.0% plus growth for 12 quarters in succession. Real GDP growth has averaged 8.5% in this period. Manufacturing growth currently exceeds 10.0%



REAL GDP GROWTH RATES
GDP
industry
% per annum
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1997-98:Q1
1997-98:Q3
1998-99:Q1
1998-99:Q3
1999-00:Q1
1999-00:Q3
2000-01:Q1
2000-01:Q3
2001-02:Q1
2001-02:Q3
2002-03:Q1
2002-03:Q3
2003-04:Q1
2003-04:Q3
2004-05:Q1
2004-05:Q3
Quarters



REAL GDP GROWTH RATES
GDP
agriculture
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
% per annum
1997-98:Q1
1997-98:Q3
1998-99:Q1
1998-99:Q3
1999-00:Q1
1999-00:Q3
2000-01:Q1
2000-01:Q3
2001-02:Q1
2001-02:Q3
2002-03:Q1
2002-03:Q3
2003-04:Q1
2003-04:Q3
2004-05:Q1
2004-05:Q3
Quarters


REAL GDP GROWTH RATES
GDP
services
% per annum
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1997-98:Q1
1997-98:Q3
1998-99:Q1
1998-99:Q3
1999-00:Q1
1999-00:Q3
2000-01:Q1
2000-01:Q3
2001-02:Q1
2001-02:Q3
2002-03:Q1
2002-03:Q3
2003-04:Q1
2003-04:Q3
2004-05:Q1
2004-05:Q3
Quarters

Rate Cuts of 2001

	US Fed	**BoE**	**ECB**	**BoJ @**	**RBA**	**RBI ***	
Policy Rate	*Fed Funds Target Rate*	*14-day Repo Rate*	*Repo Rate*	*Current Account(CA) Target@*	*Cash Rate Target*	*Reverse Repo Rate*	*Cash Reserve Ratio*
Policy Rate at Start of 2001	6.50	6.00	4.75	0.50 ODR 0.25 Call 4trYen:Feb.	6.25	8.00	8.50
Policy Rate at End of 2001	1.75	4.00	3.25	0.10: ODR 0.00: Call 10-15trYen	4.25	6.50	5.50
No. of cuts in 2001	11 (8,3)	7 (1,6)	4 (3,1)	3: ODR 2: Call 4: CA	6 (2,4)	4 (2,2)	5 175+(1,3)
Basis Points Change in 2001	- 425	- 200	- 150	- 40:ODR - 25: Call + 11trYen	- 200	- 150	- 300
Minimum Policy Rate since 2001	1.00	3.50	2.00	0: Call	4.25	4.50	4.50
Maximum Policy Rate since start of 2002	3.50	4.75	3.25	0: Call	5.50	6.50	5.50
Present Policy Rate	3.50	4.50	2.00	30-35 trYen	5.50	5.00	5.00

Policy Rate Changes Since 2002

	US Fed	**BOE**	**ECB**	**BOJ**	**RBA**	**RBI**	**RBI**
Policy Rate	*Fed Funds Target Rate*	*14-day Repo Rate*	*Repo Rate*	*Current Account(CA) Target@*	*Cash Rate Target*	*Reverse Repo Rate*	*Cash Reserve Ratio*
No. of cuts since start of 2002 #	2 (1,1)	3 (0,3)	3 (2,1)	6: CA	0	5 (3,2)	4 (1,3)
No. of hikes since start of 2002 #	10 (0,10)	5 (0,5)	0	0	5 (0,5)	2 (0,2)	2 (0,2)
Basis Points Change since start of 2002	+ 175	+ 50	- 125	20trYen	+ 125	- 150	- 50
Basis Points Change since start of 2001	- 250	- 150	- 275	31trYen	- 75	- 300	- 350
Last cut on	June 25, 2003	Aug. 4, 2005	June 6, 2003	Jan. 20, 2004 CA	Dec. 5, 2001	Aug. 25, 2003	June 14, 2003
Last hike on	Aug. 9, 2005	Aug. 5, 2004	Oct. 6, 2000	Aug. 30, 1990 ODR	March 2, 2005	Apr. 29, 2005	Sept 18, 2004
Last policy meeting announcement	Aug. 9, 2005	Aug. 4, 2005	Aug. 4, 2005	Aug. 9, 2005	Aug.3, 2005	July 26, 2005	
Next policy meeting announcement	Sept. 20, 2005	Sept. 8, 2005	Sept. 1, 2005	Sept. 8, 2005	Sept. 7, 2005	Oct 25, 2005	

Stance of the Monetary Policy in 2003-04

- Provision of adequate liquidity to meet credit growth and support investment demand in the economy while continuing a vigil on movements in the price level.
- In line with the above, to continue with the present stance of preference for a soft and flexible interest rate environment within the framework of macroeconomic stability.

Stance of the Monetary Policy in first half of 2004-05

- Provision of adequate liquidity to meet credit growth and support investment and export demand in the economy while keeping a very close watch on the movements in the price level.
- Consistent with the above, while continuing with the status quo, to pursue an interest rate environment that is conducive to maintaining the momentum of growth and, macroeconomic and price stability.

Signaling Change in Stance of the Monetary Policy since Oct. 2004

- Provision of appropriate liquidity to meet credit growth and support investment and export demand while placing equal emphasis on price stability
- Consistent with the above, to pursue an interest rate environment that is conducive to macroeconomic and price stability, and maintaining the momentum of growth
- To consider measures in a calibrated manner, in response to evolving circumstances with a view to stabilising inflationary expectations

Has Monetary Management Been Slack?...(ii)

- Central bank has signaled change in stance of monetary policy and raised policy rate & CRR by 50 bps in steps, but the unwinding of excess liquidity has not taken place as a result of incessant capital inflows
- Inflation remains benign and, therefore, monetary stimulus has not been withdrawn. Some lagged effects possible.

Lowering Inflation Expectations: A success story of macroeconomic management

- Current headline inflation rate is 3.8%

  (for week-ended July 30, 2005 released on Aug.12, 2005)

- Inflation expectations are also currently low and is seen in G-sec yields declining & business and consumer confidence surveys

- Headline inflation has now averaged below 5.0% over last 5 years, though on weekly average basis it is slightly higher. Consumer price inflation has averaged even lower at around 4.0% and is currently 3.3%.

- Monetary management has succeeded in keeping inflation low in spite of large & volatile capital inflows.

The current Oil Price Shock

- World crude prices are currently hovering at US$ 55 a barrel (OPEC) and NYMEX futures has crossed US$ 65 a barrel, with oil prices showing no signs of abating
- India is 5th largest energy consumer in the World and oil accounts for a third of that consumption
- About 3/4th of its crude oil consumption is imported, though its high refining capacities ensure that all its petro-products consumption is met domestically.
- India currently spends about US$ 30 bn annually in import of crude oil & petro products, which is about 28% of its total import bill.

Oil Prices: NYMEX Futures

Challenge: To keep Inflation Expectations Low Amidst Oil Price Shock ...(i)

RBI response to headline inflation touching 8.7% in end-Aug. 2004

- Communicating its assessment of the nature of inflation to the market on several occasions.
- Given the supply induced nature of inflation, the Government responded with fiscal measures (cut taxes on oil & oil products)
- Government raised the ceiling of MSS from about US$13bn to US$ 17.5 bn.
- More flexible management of liquidity, overnight fixed rate repo under LAF was introduced.
- CRR was raised by 50 bps to 5.0 per cent.
- Interest rate on eligible CRR balances was delinked from the Bank Rate and reduced to 3.5%
- Reverse repo rate raised 25 bps to 4.75%

Challenge: To keep Inflation Expectations Low Amidst Oil Price Shock …(ii)

Policy Options if oil prices rise further

- Fiscal burden sharing options gets limited
- Need to avoid stagflationary possibilities if oil prices continue to rise at same rate
- Interest rate smoothing and orderly unwinding of surplus liquidity important

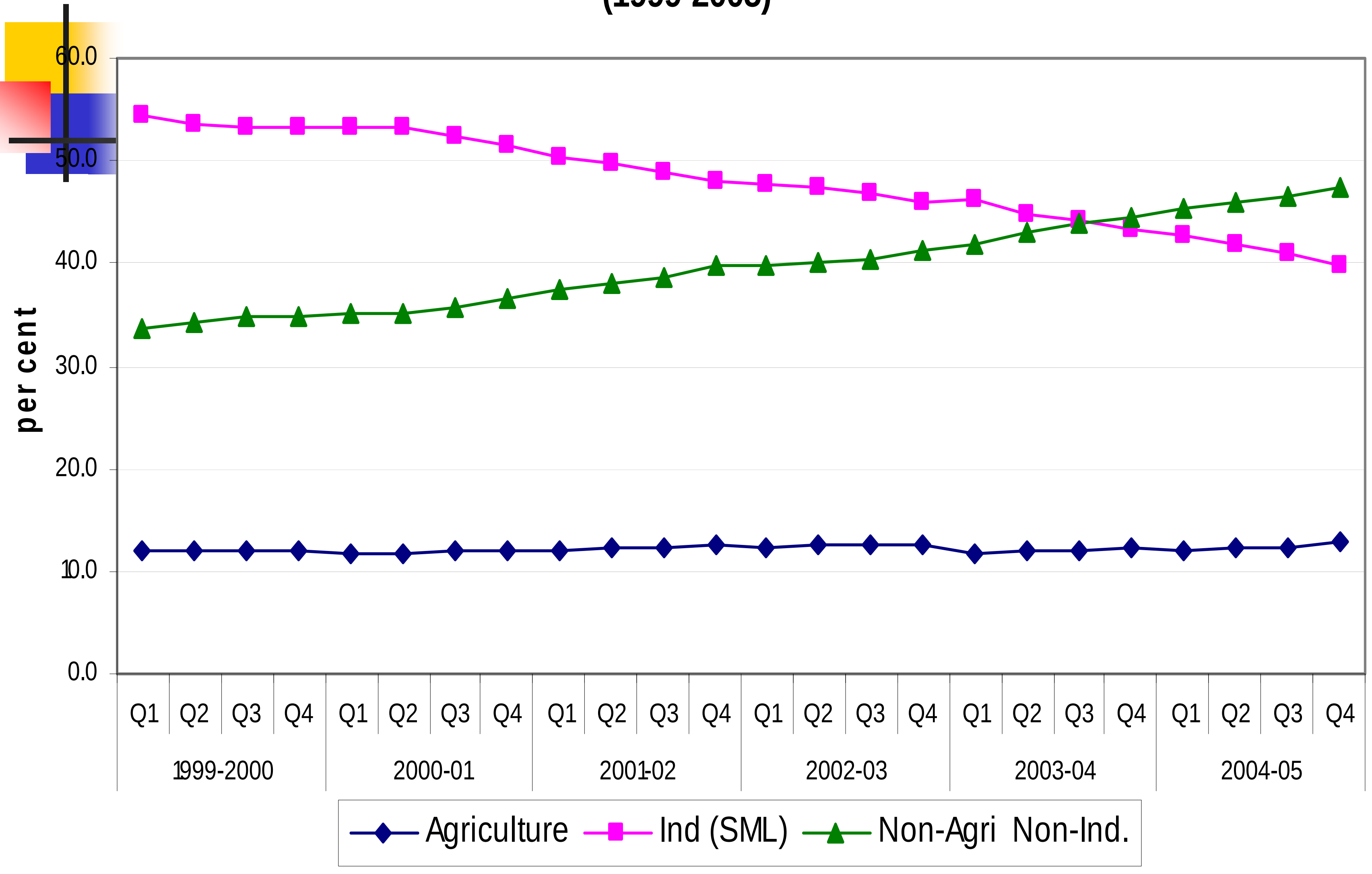
The current asset price boom

- Stock indices have shot up creating asset price boom (However, fundamentals good; corporate profits growing 40% p.a.)
- Of late, real estate prices in select pockets of meteropolis have seen sharp rise
- Exchange Rate has appreciated sharply over last 1-year and in terms of REER is currently overvalued by nearly 10% (some Balassa-Samuelson effect exist)
- Bond market positions taken in falling interest rate regime are yet to be unwinded.

Credit Boom: Pent up Release or a bubble?

- Non-food credit grew 27% in 2004-05 and is continuing to grow at a similar rate this year.
- High credit growth has been sparked by retail assets mainly in form of consumer credit. This is a new feature in credit markets in India and has resulted in a structural shift in lending.
- Currently both consumption and investment demand is high and this is reflected in credit growth becoming broad-based.

Chart 1: Broad Sectoral Shares
(1999-2005)



Challenges: response to high credit growth?

- Retail credit boom started on a low base. delinquency rates very low
- As housing loans are long term, potential future NPAs can’t be ignored.
- Risk weight increased from 50% to 75% in case of housing loans and 100% to 125% in case of consumer credit including personal loans and credit cards.

Issues of autonomy, accountability & transparency & decision-making structure

- Improved autonomy through ‘Supplemental Agreement’, FRBM and now fiscal rules
- No MPC like structure exist, but RBI has recently set up a Technical Advisory Committee (TAC) on Monetary Policy with outside experts. RBI also has other similar bodies for financial markets and for financial stability issues and formalised internal structures for monetary policy and market operations
- Considerable instrument independence and transparency exist though not formalized in legal and institutional structures

Fiscal deficits & Fiscal Rules

- There has been some improvement in central Govt. finances which has been substantially offset by State govt. finances. As a result, combined fiscal deficit stays close to 10% of GDP

- Fiscal responsibility legislation (FRBM) enacted in 2004 marks a watershed

- RBI will completely stop subscribing to primary issues of Govt. debt from April 2006, paving way for de-facto separation of debt and monetary management. New Challenges for monetary operations.

Improving Credit Delivery

- Over last 2-3 years, RBI has been laying considerable emphasis on improving credit delivery to meet social objectives

- As part of this, RBI has encouraged micro-finance institutions, suggested a framework for SME lending and taken steps to remove impediments in lending to agriculture

- It has also encouraged transparency in lending and deposit rates and looked to address customer complaints.

- How to take this momentum forward

Final Issue: The Issue of Trilemma

- What to emphasize less: free capital mobility, monetary policy independence or exchange rate misalignments?
- Importance of managing capital account in macro-economic framework of large & volatile capital flows in an emerging market
- Should we not intervene at all? Should we sterilize or not?
- Is the framework fine?
- Should the operating procedures be altered?

Thank you all