

RENEWED INFLATIONARY PRESSURES : AN ASSESSMENT AND POLICY OPTIONS*

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This note, second in the series, revisits issues relating to the possible policy response to emerging inflationary pressures in the context of the pass-through of the increase in prices of petroleum products of August 1, 2004 into headline (WPI) inflation. The note is organised as follows: Section I provides a brief background on the evolution of inflation in recent months. Section II presents an assessment of the forces at work, particularly with a view to identifying the supply and demand influences, both domestic and international, on inflation in India. Section III evaluates the policy options that can be deployed immediately within a measured approach to containing inflation and delineates possible implications. Section IV sets out further work that is proposed to be undertaken to contain inflation in the months ahead.

I. Background

Inflation, measured by year-on-year changes in the wholesale price index (WPI), accelerated to 8.0 per cent as on August 7, 2004 from 4.6 per cent at end-March 2004. This upward drift in headline inflation began in early-May and has gathered momentum since then, except for a brief respite in the third week of June. The hardening of headline inflation has also been reflected in measures of core inflation defined in contextually relevant terms. Of particular significance is the upturn in WPI inflation excluding mineral oils since July, 2004 (Table 1).

* Prepared by DEAP with inputs from MPD, IDMD and DEIO.

Table 1: Measures of Wholesale Inflation (year-on-year)

Quarter ended	Headline Inflation (100%)	Core Inflation			(Per cent)
		Excluding Mineral Oils (93%)	Excluding Mineral Oils and Metals (85%)	Trimmed Mean (80 %)	
		1	2	3	4
2002					
March	1.63	1.68			1.67
June	2.67	2.38		2.6	2.39
September	3.28	3.02		2.9	3.00
December	3.34	3.06		3.1	3.29
2003					
March	6.49	5.10		5.0	5.85
June	5.32	5.45		4.9	5.10
September	5.39	5.15		4.1	4.55
December	5.99	5.38		4.2	5.46
2004					
March	4.64	5.26		3.8	4.08
June	6.09	4.94		2.8	4.98
July	7.61	6.82		4.6	5.30
August 7	7.96	6.83		4.7	N.A.

Note: Figures in brackets indicate the coverage of items in the WPI after the exclusion of contextually relevant items. The trimmed mean core inflation measure does not distinguish between contextually relevant items but is compiled by ordering commodities according to inflation rates and excluding the commodities that registered extreme price variation, both positive and negative *i.e.*, 10 per cent weight on the either side.

The pass-through of upward pressures from international crude oil prices was anticipated in our initial assessment of the inflation outlook. Indeed the Annual Policy Statement of May, 2004 had expected that the inflation rate during 2004-05 is likely to be influenced, to a significant extent, by international oil prices and trends in commodity prices. International crude prices are currently ruling at levels (US \$ 49 per barrel) far above the initial projections. In recent weeks, prices of various other commodities have also been edging up, raising concerns about the likelihood of international crude prices triggering off demand pressures domestically and translating into a more generalised inflationary situation in the months ahead. These apprehensions warrant a re-assessment of the principal components of the recent movements in inflation in India.

II. A Re-Assessment

The acceleration in the inflation rate since mid-May has been generated mainly by increases in the prices of i) the fuel group, especially coal and petroleum products; (ii) iron ore; and iii) iron and steel. All of these either have a significant import content or are influenced by international terms of trade (as in the case of export prices driving up the domestic prices of iron ore). The cumulative weighted contribution of the ‘international’ influences on domestic inflation works out to about 65 per cent of the increase in inflation between end-March 2004 and August 7, 2004. Quite distinct from these ‘imported’ inflation pressures are domestically generated pressures on prices of few items. For instance, prices of vegetables have contributed nearly 15 per cent of the increase in inflation over the same period (Table 2). It is important to note that prices of vegetables, on a year-on-year basis, were actually declining over this period last year and, in fact, this is accentuating the inflationary pressures from vegetables in 2004-05.

Table 2 : Key Drivers of Inflation

Item	Year-on-Year Inflation		Weighted Contribution Between end-March and August 7, 2004
	August 7, 2004	August 9, 2003	
1	2	3	4
A. Domestic Influences			
(a) Vegetables	4.5	-14.7	14.6
B. International' Influences			
(b) Fuel Group	11.6	4.8	32.4
i) Coal Mining	15.9	9.1	7.9
ii) Minerals Oil	17.4	5.7	24.9
(c) Iron Ore	341.9	0.0	11.1
(d) Iron and Steel	46.2	14.9	21.5
Wholesale Price Index	8.0	3.9	100.0

Supply Side Factors

The increase in the domestic prices of POL, coal and iron and steel essentially reflect lagged adjustments to the increase in international prices (Table 3).

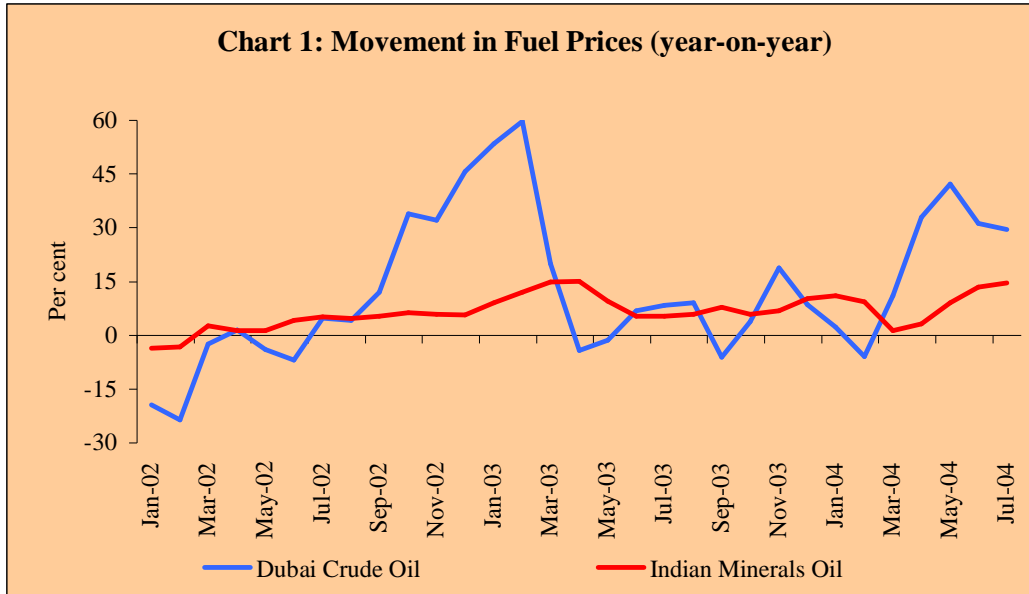
Table 3: Main Commodities – International Markets

	(Per cent)			
	Year-on-year Price Changes (As on July 2004)		Fiscal Year Price Changes (July over March 2004)	
	International	Domestic	International	Domestic
1	2	3	4	5
1. Coal	141.0	15.9	24.5	15.8
2. Crude oil	29.4	14.2	13.2	5.7
3. Steel products	61.6	45.0	11.6	19.2

Note: International crude oil prices relate to Dubai variety. Domestic prices are components of WPI.

(a) Fuel Prices

Fuel prices have been increasing sharply throughout 2004, reflecting higher global demand driven by robust growth in the US and China, geopolitical tensions, more stringent product specifications and refining and distribution industry bottlenecks in some major consuming regions. Dubai crude prices increased by 42 per cent between end-January and August 13, 2004 (Chart 1). The current surge in oil prices, which was initially believed to be purely temporary due to factors such as financial difficulties faced by the Russian oil major Yukos, is showing no signs of abating. The decision to enhance output by the OPEC has not succeeded in cooling an already nervous market. Furthermore, there are apprehensions that OPEC production may be approaching a supply constraint. Oil prices are, therefore, expected to remain at elevated levels for some time. September Crude oil futures crossed US \$49 a barrel on the New York Mercantile Exchange on concerns that disturbances in southern Iraq may affect supply. A Bloomberg survey reports that two thirds of oil traders who were polled predicted that the rally in oil prices would continue in the short term.



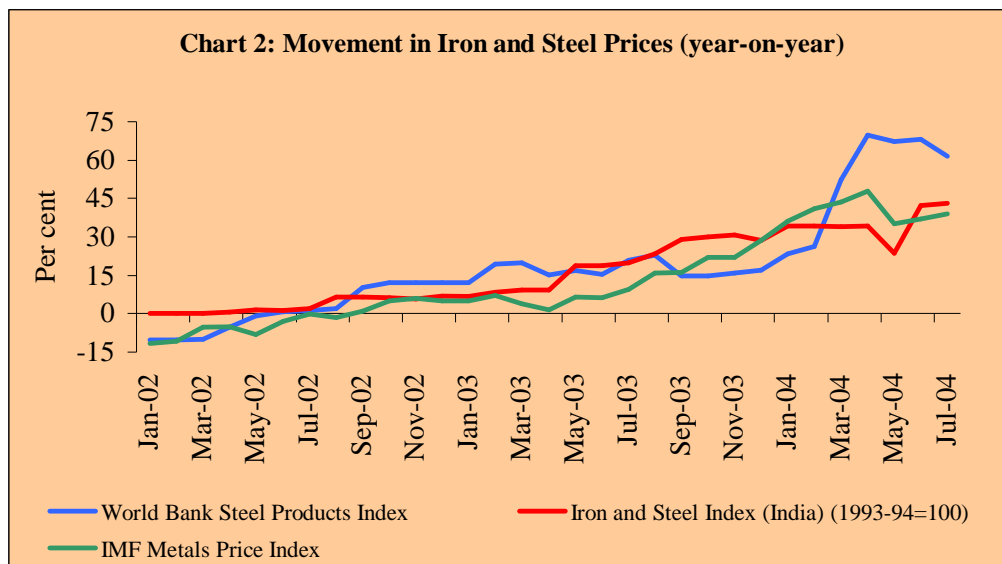
Changes in petroleum product prices affect domestic inflation directly as well as indirectly. Prices of all other commodities using petroleum products as inputs would rise over time and feed through into generalised inflation. A one US dollar increase in oil prices (per barrel) in the international market is estimated to lead to an increase of 40 paise per litre in import (cost) price and up to Rs.1.20 at the retail level if the full cost is loaded on to prices facing the consumer. The difference in import price and domestic retail prices essentially arises on account of customs and excise duties on base price as well as States' sales taxes. It is estimated that a one rupee increase in petroleum and diesel prices in the domestic market would lead to a direct and immediate impact on WPI inflation to the extent of about 25 basis points and a total impact of about 50 basis points over a period of time. It is observed that it takes about 4 to 6 months for the indirect impact to get fully reflected in the WPI.

(b) Metal Prices

Metals prices have been increasing sharply, driven up by strong Chinese demand. The World Bank's index of steel products jumped by about 60 per cent in July 2004, on a year-on-year basis. In the US, mill transaction prices continued to climb in July and even in China domestic prices for strip products

are beginning to recover. Steel prices in Japan remain firm with mills struggling to meet orders. Prices of all other metals such as copper and nickel have also been rising rapidly in view of supply constraints. Despite expectations that steel output will respond to demand in 2004 – a rise in output of 400, 000 tonnes is projected for India - the market prognosis is that metal prices would continue to be at elevated levels. While demand remains strong and rising, a shortage of raw materials such as coking coal is capping production. Recent market reports from MEPS, a leading supplier of international steel information, anticipate that steel prices would moderate only in 2005.

In India, prices of iron and steel have been rising sharply since August 2003 driven by higher international prices (Chart 2). On a year-on-year basis, iron and steel prices increased by as much 46 per cent on August 7, 2004. Even if prices continue at their present level, steel prices would still end 2004-05 higher by almost 20 per cent.



(c) Agricultural Commodities

Developments in international prices of agricultural commodities have been influenced by two factors: i) crop output effect of weather conditions and ii) rising Chinese demand in case of cotton. Year-on-year price increases of

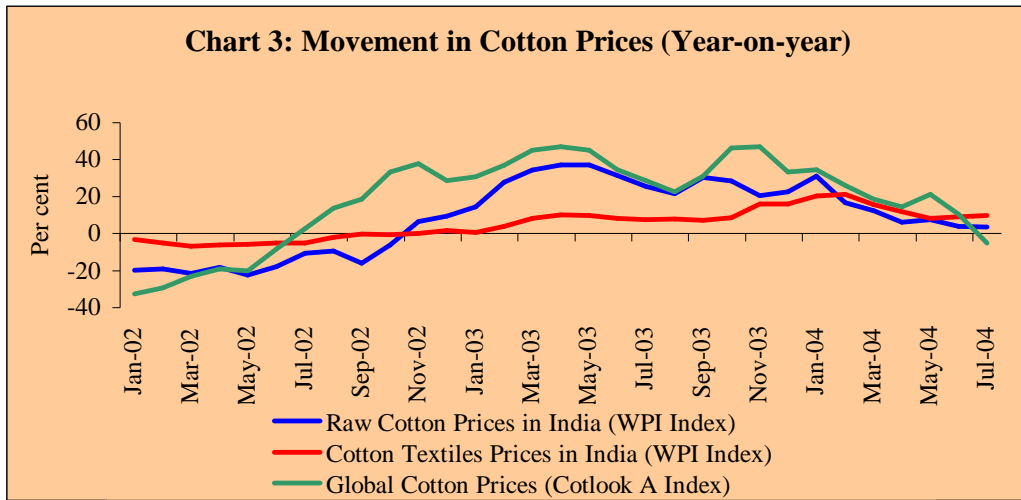
most agricultural commodities crossed double digits in the first half of 2004 although during the year, they declined mainly due to base effects of higher prices last year (Table 4).

Table 4 : Agricultural Commodities – International Markets

Item	Year-on-year Price Changes (As on July 2004)	(Per cent)
		Fiscal Year Price Changes (March-July 2004)
1	2	3
1. Rice	16.3	-2.9
2. Wheat	14.4	-9.4
3. Soybean Oil	14.1	-13.6
4. Palm Oil	3.6	-22.5
5. Cotton	-5.4	-20.9

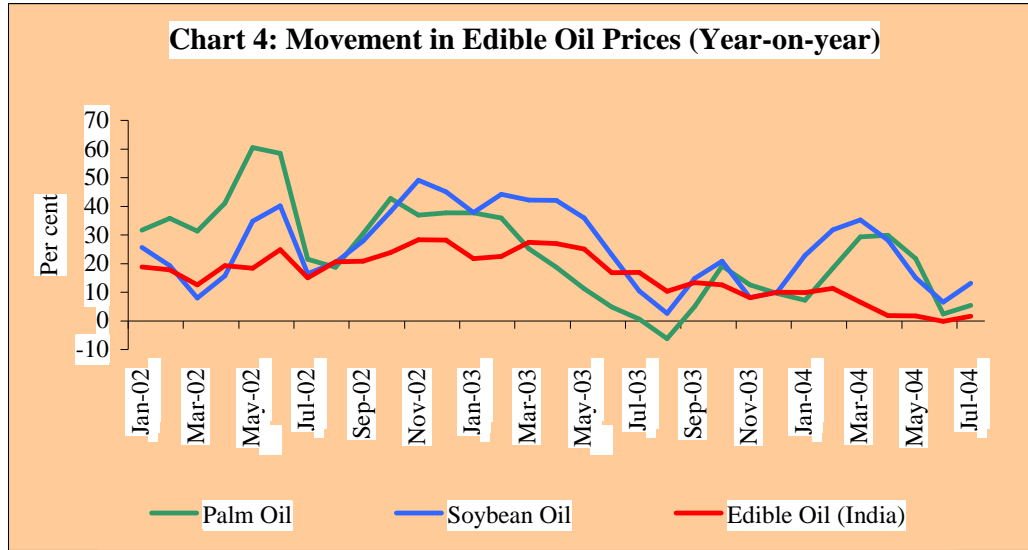
Prices of rice and wheat increased sharply till recently because of weather-driven crop failures in various parts of the world. Expectations of a better output in the coming season by agencies such as the Food and Agricultural Organisation (in its *Food Outlook*) hinge around a bumper crop in the Indian sub-continent. However, sentiment in international markets could turn adverse quickly in the event of a crop failure in India. While it is too early to assess the damage to crop output arising out of the uneven pace and distribution of the South-West monsoon 2004, some hardening of domestic prices cannot be ruled out.

Global cotton prices are expected to soften through 2004 as production is catching up with the rising demand. Global production is projected to rise by 11 per cent, while the mill consumption is likely to abate in the coming months. Domestic cotton prices have been easing in recent months in tandem with international trend. Raw cotton prices have increased by 4.0 per cent on a year-on-year basis as on August 7, 2004 as compared with 19.6 per cent last year, reflecting the bumper crop of the previous year as well as lower international prices. There are, however, reports that the cotton crop may have been affected by the uneven monsoon, which is getting reflected in higher prices since June 2004.



International prices of soyabean and palm oil have been easing from their past peaks in recent months on expectations of a bumper crop. There are, however, some emerging uncertainties. Palm oil futures in Malaysia, which produces about half of the world's palm oil, may rise after meteorologists indicated that El Nino weather conditions could be returning to threaten the palm crop. The Malaysian Palm Oil Board is now forecasting supply to be tight and prices to remain firm in the coming months. There are also reports that the soybean crop in Brazil may not be as good as was originally expected because of adverse weather conditions – although the US is projected to record a higher production.

Domestic prices of edible oils have decelerated to 2.1 per cent as on August 7, 2004 from 13.1 per cent last year in response to a bumper crop of 2003-04 as well as the drop in international prices (Chart 4). However, prices of oilseeds and edible oils have begun to firm up since June 2004. The Solvent Extractors' Association of India expects that the oilseeds crop during 2004-05 would be lower than the previous year because of the uneven spread of the monsoon. Sentiment in international markets could turn adverse if reports of bad harvests in Brazil and India materialise.



The ongoing nation-wide trucker's strike may also impact on the inflation uncertainty, particularly on prices of fruits and vegetables. The trucker's strike during the first two weeks of April 2003 witnessed rising prices of fruits and vegetables by 4.1 per cent over the first three weeks of the same month.

Demand Side Pressures

Even as supply side pressures, mainly "imported" from international sources, are building up and overshadowing the inflation outturn in India, there are indications of incipient demand pressures gathering. However, such demand pulls are difficult to disentangle at the current juncture from the impact of the uneven monsoon. Increase in the prices of primary articles since end-June 2004 for commodities like cereals (1.6 per cent), pulses (3.2 per cent), vegetables (1.4 per cent), oilseeds (3.9 per cent), raw cotton (1.3 per cent) and eggs, fish and meat (2.5 per cent) provide some early indications of underlying demand influences on inflation. In contrast to the experience in the earlier years, the seasonal decline in prices of many commodities like fruits and vegetables have not taken place to that extent this year. A clearer picture would emerge from a fuller assessment of the crop shortfalls on account of the monsoonal effect.

It is important to note that pressures on inflation emanating from aggregate demand co-exist with the abundant liquidity in the system and the availability of some slack in capacity utilisation (which is estimated at about 85 per cent on an aggregate basis). During the financial year so far (up to August 13, 2004, reserve money (RM) declined by 0.3 per cent (Rs.1,103 crore) as against an increase of 3.7 per cent (Rs.13,632 crore) during the corresponding period last year. However, the year-on-year growth in RM at 13.8 per cent as on August 13, 2004 turned out to be the same as in the corresponding period of the previous year. The net foreign exchange assets (NFEA) of RBI also increased by Rs.1,21,896 crore (net of revaluation) as against an increase of Rs.1,04,484 crore in the corresponding period of the previous year. The spill-over effect of the high year-on-year growth in RM as also the increase in NFEA of RBI was contained by way of LAF and MSS as part of the monetary and liquidity management of the economy. The outstanding LAF repo stood at Rs.33,725 crore as on August 19, 2004 while the mobilisation under MSS stood at Rs.52,231 crore. The overhang of liquidity during the current financial year – measured by the outstanding amounts under the LAF and the MSS - has remained, by and large, at the level prevailing at the beginning of the financial year.

Year-on-year money supply growth at 15.7 per cent as on August 6, 2004 was above the indicative trajectory of 14.0 per cent set in the Annual Policy Statement. In contrast, money supply expansion was only of the order of 11.7 per cent on August 8, 2003. Strong commercial credit off-take at 23.8 per cent as on August 6, 2004 (as compared with 15.4 per cent as on August 8, 2003), suggests that industrial activity is gaining momentum and the generalised surge of aggregate demand cannot be lagging far behind. The increase in adjusted non-food bank credit at Rs.1,60,946 crore (20.8 per cent growth on a year-on-year basis), was also much higher than the increase of Rs.94,211 crore (13.8 per cent) in the corresponding period of the previous year. Food credit has turned around dramatically – increasing by Rs.6,481 crore

during 2004-05 (up to August 6) after a decline of Rs.6,228 crore in the corresponding period of the previous year.

In sum, the emerging uncertainties on the supply side along with nascent signs of demand side pressure imply that the balance of risks to inflation is shifting to the upside. The spread of inflation across commodities is increasing. Although there is no strong evidence of demand side pressures as yet, it is necessary to be on guard against the potential incubation of generalised inflation. By current assessment, the inflation rate would rule in the range of 7-8 per cent between August-December 2004 with peaks in August and November-December and even possibly overshooting of the upper bound in some weeks. The rate of inflation is expected to moderate in the last quarter of the year as the base effects come into play but it is not expected to fall below 6.5 per cent by March 2004.

Consumer Price Inflation

Although WPI inflation has increased sharply in recent months, CPI inflation continues to be benign (3.0 per cent in June 2004 as compared with 4.4 per cent in June 2003). This is mainly because food prices, which have a much higher weight of 57 per cent in the CPI as against 27 per cent weight in the WPI basket, have risen moderately so far. On the other hand, the main drivers of WPI inflation such as iron and steel and fuel prices have a low weight in the CPI basket. It has also been observed that on account of increased profitability in the recent past, engendered by declining interest costs, the corporates have been able to absorb a significant part of the rise in input costs in their margins. As a result of all these factors, a wedge has been created between the CPI inflation and the WPI inflation. It may be noted, however, that the leads and lags between inflation rates of CPI and WPI get evened out over time. In the near future, the capacity to absorb price shocks would be limited and there may not be much headroom for saving on interest costs in the evolving interest rate scenario. Therefore, a major part of the input price increase may be passed on to the consumer. Besides, as a result of inadequate

and uneven monsoon, it is possible that food prices may start rising. In such a case, the CPI inflation could also begin to harden in the coming months.

III. Policy Options

With the domestic price situation turning complicated by global uncertainties and inflation concerns becoming increasingly evident, there is clearly a need for synchronized response in terms of fine tuning both monetary and fiscal policies so that current trend does not translate into a generalised inflation. In recognition of the supply side influences on inflation, the Government has recently announced that it would cut customs duty on crude oil (5.0 per cent from 10 per cent), petrol and diesel (to 15 per cent from 20 per cent) and kerosene (to 5 per cent from 10 per cent). Excise duties on petrol (23 per cent from 26 per cent) and diesel (8 per cent from 11 per cent) are also to be reduced. The Government has also proposed to cut import duties on a range of non-alloy steel products by 5 per cent and on ships for breaking by 10 per cent. Melting scrap of iron and steel would be fully exempt from customs duty.

Notwithstanding the recent fiscal measures it is imperative now to make a judgement regarding:

- the strength of demand pressures, however feeble they may appear at this juncture and
- the lags in their pass-through into the general level of prices.

The challenge is thus to deploy forward-looking monetary policy to head off a more generalised inflation in the months ahead. Undoubtedly, caution has to be exercised in view of the adverse output effects of monetary policy action, especially in the context of the impact of the monsoon. The Reserve Bank has taken steps to manage liquidity in such a manner that it does not engender undue expansionary effects while being supportive of the export and investment demand. The re-introduction of the one-day fixed repo under the LAF has assuaged market sentiment and has led to higher absorption of liquidity relative to the seven-day repo.

Monetary Policy Options

An overall assessment of the scenario shows that inflation appears to be supply induced, largely reflecting the pass through of international prices. In such a scenario, the monetary authorities have to well balance the pros and cons of using monetary policy instruments as a means of stabilising inflationary expectations. It is important to recognize that monetary policy has been in an accommodative mode since 1997 with key policy rates at 30-year lows. The financial markets are flush with liquidity. Accordingly, instantaneous reversals of the monetary policy stance would not be possible and markets must be sensitised to interpret the first policy responses as exit strategies from a prolonged accommodative stance. The issue is really is to stabilize inflationary expectations rather than change monetary conditions. The monetary policy options for dampening inflationary expectations as analysed below include primarily three sets of measures: (i) liquidity operations, (ii) hike in key policy rates, and (iii) sale of US dollars.

1. Liquidity Operations

The monetary policy response should first focus on reducing the level of outstanding LAF repo, which is the visible liquidity in the system that banks may have recourse to. This could help in stabilizing the inflationary expectations. This could be achieved in two ways: (a) increasing the quantum of MSS and (b) accelerating the combined government borrowing programme including debt swaps. These measures could be supplemented/combined with sale of foreign currency in the market within the overall objectives of managing volatility.

Increasing the quantum of MSS to accommodate transfer of LAF funds runs the risk of giving confusing signals to the market since the MSS has been offered as a transparent instrument of sterilization in the context of capital flows. Moreover, expanding the issuances of MSS when capital outflows are taking place could erode credibility of monetary policy. The proposal sent to the GOI for enhancement of MSS ceiling to Rs.80,000 crore from the current

Rs.60,000 crore, if approved and announced, is likely to have a marginal effect on yields. Out of Rs.60,000 crore to be absorbed under MSS, Rs.52,231 crore has been raised during the financial year (up to August 21, 2004).

During 2004-05 (up to August 21, 2004), 36.5 per cent of the Centre's gross borrowing programme (net of MSS) has been completed as compared with 59.8 per cent during the corresponding period of the previous year. Similarly, the State Government has so far raised 53.0 per cent of the gross allocated market borrowing programme (including borrowings under the Debt Swap Scheme). This provides an opportunity to accelerate the combined market borrowing of the Centre and States for mopping up excess liquidity in the system.

Another option to suck in excess liquidity could be attempted by increasing the CRR. The impact on G-Sec yields of a CRR hike will at best be a gradual upward movement in yields, insofar as it will signal RBI's tight stance. In an environment of excess liquidity, since CRR is compensated at the Bank Rate, it is likely to be a more favourable alternative to deploying cash in LAF or MSS. A CRR hike is thereby likely to reduce response to the MSS programme.

2. Hike in Policy Rates

The yield on 10 year G-Sec has already increased by 138 basis points to 6.53 per cent as on August 19, 2004 from end-March 2004 level. While the correction in domestic yields was primarily initiated by change in the Fed stance with regards to US interest rates, the global uncertainty over high oil prices and their impact on domestic inflation as well as the rise in domestic commodity prices are the current drivers of domestic yields. The recent rise in the near term interest rate swap rates and the government security yields suggest market expectations of monetary tightening either through a repo rate hike or through increased liquidity absorption under the MSS which therefore seem to have been priced in by and large.

The near term outlook of bonds appears to be within a trading zone (20-25 basis points in the 10 year sector), therefore reasonably stable but with an undertone of some nervousness. Under the current uncertain conditions the market will be highly sensitive to any market related information, particularly monetary action. In particular, market will be keen to know RBI's monetary stance to contain the yield volatility induced by uncertainty. The likely impact of hike in key policy rates – Repo Rate, Reverse Repo Rate and Bank Rate – is discussed below.

a) Hike in Repo Rate

The 3-month Rupee swap rates (5.00 per cent) and the 91-day T-Bill rates (4.90-5.00 per cent) are pricing in a 25-50 basis points hike in repo rates within the next three months. While this would normally imply that a 25-50 basis points hike is by and large factored into current yields, reaction of yields to an actual hike would depend on expectations regarding RBI's monetary stance. If the market expects RBI to follow up with further rate hikes in response to inflation, the yield curve is likely to shift upwards to price in expected hikes. Expectations will be stronger if the initial hike is larger. Thus, while a 25 bps initial hike will lead to a gradual rise in yields, a 50 bps hike will give rise to expectations of more aggressive tightening to follow and yields may adjust sharply upwards, involving an initial spike of 25-50 bps. The extent of the yield curve shift, and how it will evolve over a period of time, will depend on expectations at that point in time, which will be a function of expected inflation and international (particularly the US) rates.

In case a repo rate hike is accompanied by an enhanced MSS offering, the pace of adjustment particularly in the short end will be quicker as the supply in the short end will be enhanced and the rest of the curve will align only with a lag. A 25 bps Repo Rate hike could lead to a gradual correction of longer yields upwards, but an aggressive 50 bps hike, by inducing expectations of more hikes to follow, is likely to lead to a sharp initial adjustment upwards by 25-50 bps, and then a gradual pricing in of expected hikes. Unless liquidity

pressures warrant, the use of repo rate, which is acting as the short-term reference rate, may not be appropriate.

b) Hike in Reverse Repo Rate

With regard to the possibility of a hike in the corridor between the repo/reverse repo rates, it may be pointed out that as of now, there is not much of a demand for funds at the reverse repo rate. Hence, this instrument will not be of much use excepting for rendering the access to funds costly. As a consequence, an increase in the corridor may also not be effective.

c) Hike in Bank Rate

A hike in Bank Rate, which reflects the medium-term perspective of the Bank could reinforce inflationary expectations. On the other hand, the impact of a Bank Rate hike on G-Sec yields is likely to be less pronounced. Unlike the repo rate which is closely linked to short term rates in the market, the Bank Rate, at which only the refinance is availed, does not directly impact the cost of short term funds, particularly since there is still a large overhang of liquidity in the system and refinance is resorted to very rarely. However, a hike in the Bank Rate could spark off a prompt increase in lending rates of banks, which could dampen the revived investment climate.

All the above measures carry attendant costs in terms of the financial implications for the Government and the banking sector. A sharp increase in G-Sec yields would impact the Government's market borrowing programme in the form of higher costs as also the treasury income of banks, given their excess SLR holding of Government securities.

3. Sale of US Dollars

Another option for absorption of excess liquidity in the banking system is by way of sale of US dollars that would contract reserve money. The sale may be in the following three forms:

- (i) Spot sale
- (ii) Outright forward sale
- (iii) Spot sale combined with buy-sell swaps.

The rupee which exhibited a continuous appreciating trend *vis-a-vis* the US dollar throughout 2003-04 and reached a high of 43.39 toward the end of March 2004 began depreciating since the fourth week of April, 2004 on account of a variety of reasons, including a rebound in the strength of US dollar in the international market. In the following months, the weakening trend of the rupee continued, mainly because of a sharp fall in FII and other inflows. Since April 1, 2004, the rupee fell by around 6.4 per cent against the US dollar till August 19, 2004. In the coming few months, given the outlook on receding capital flows, the rupee is expected to be under some pressure. The market intervention undertaken by the RBI over the last couple of months has been on the same lines as hitherto *i.e.*, to allow the market to determine the exchange rate of the rupee in an orderly manner without exhibiting sharp day-to-day movements. The REER of the rupee (1993-94 base) is now close to 100, signifying fair value. Movements in the REER over time as published in the *Reserve Bank Bulletin* are presented in Annex 1.

The following table shows the net purchases from/sales to Authorised Dealers since April, 2004:

(In US \$ million)	
Month	Net purchase(+)/Sale(-)
April, 2004	(+) 7426.5
May, 2004	(-) 220.0
June, 2004	(-) 413.4
July, 2004	(-) 1179.5

As mentioned before, we do not expect capital inflows to revive in a significant way. Hence, if we are to sell US dollars either to stabilise the exchange rate of the rupee at the current level or to strengthen it so as to cause a discernible impact on the rupee cost of imports, which, going forward, would dampen inflationary expectations, then large quantities of reserves will have

to be committed for this purpose. Also, there will be implications for the REER of the rupee. The following table gives a set of different estimates of US dollar sales required as also the likely REER level of the rupee for achieving different US \$/Rupee exchange rates:

US\$/Rupee	Estimated sale of US dollars per month	REER
46.40	US \$ 1 billion	100
46.00	US \$ 1.5 billion	100.5
45.00	US \$ 2 billion	102.7
44.00	US \$ 2.5 billion	105.0

These estimates are based on the assumptions of no change in the exchange rate of the US dollar *vis-a-vis* other major currencies and inflation in India at around 6.5 per cent, which is the expected average WPI during 2004-05. The assumption regarding inflation is based on the expectation that current uptrend in WPI will be reined in as a result of various policy measures, including sale of US dollars.

Sale of US dollars in the forward market by way of outright sale or by way of spot sale plus buy-sell swaps have the potential of distorting the forward premia in a very significant manner. A large-scale spot sale may even raise the forward premia in the short-run through its immediate impact on the rupee liquidity.

The sale of US dollars aimed at absorbing excess liquidity could also cause a rise in interest rates. This, combined with the expectations of an appreciation of the rupee could attract capital inflows. To a large extent, this would, however, depend on the evolving interest rate scenario in the international markets and the portfolio reallocations by foreign institutional investors (FIIs).

Any large-scale sale of US dollars would signal a major change in the intervention policy. This, together with the likely rise in the forward premia would send a clear signal about the implicit monetary tightening.

IV. Further Work

Some steps are proposed to enable a better understanding of the dynamics of inflation:

- **Multiple Measures of Inflation:** At present, inflation in India is measured mainly in terms of point-to-point variations in the wholesale price index (WPI). However, WPI does not capture the fuller impact felt by the consumers because of differentials in weights attached to various commodities. Similarly, point-to-point inflation does not give clear indications of inflation due to its sensitivity to the base effect and temporary factors. Average measures of inflation are also unable to capture sudden decisive turns in prices. Finally, aggregative measures of inflation are sometimes unable to capture the “demand” component of inflation to which central banks should react. It is, therefore, proposed to highlight the following five measures of inflation which could effectively capture the inflationary dynamics in the economy:
 - Year-on-year Wholesale Price Index Inflation Rate (point-to-point basis)
 - Year-on-year Wholesale Price Index Inflation Rate (average basis)
 - Year-on-year Consumer Price Index for Industrial Workers Inflation Rate (point-to-point basis)
 - Year-on-year Consumer Price Index for Industrial Workers Inflation Rate (average basis)
 - Contextual Core Inflation, in which the commodities to be excluded would depend on the evolving circumstances, although exclusion should not exceed 20 per cent of the total weight in the representative basket.

- **Possible refinements in CPI:** In view of the limitations in the existing measures of inflation, weights could be derived for commodity groups from the standard of living indices available

in the National Sample Survey and they could be used to modify the weights in the Consumer Price Index in order to capture the fuller impact of inflation on the common man.

- **Inflation Report:** A longer-term exercise of preparing an Inflation Report with a view to publishing it and communicating the stance on inflation could be undertaken.