Prices and Monetary Management

4

CHAPTER

Inflation, as measured by the Wholesale Price Index (WPI), has remained above 7 per cent since December 2009. Food inflation has been particularly elevated over this period, contributing to an average of one third of total inflation. Consumer price inflation, with higher weights on food, have been generally higher than the headline WPI inflation. A moderation in WPI inflation is now clearly visible, but the moderation has largely been due to deceleration in the rate of inflation of non-food manufactured products. Inflation pressures have eased globally. Global consumer prices rose at a 3.7 percent annualized rate at the end of 2012. Inflation for developing countries also moderated to a 5.4 percent annualized rate in the three months through November 2012, from an average 7.2 percent in 2011. Benign inflation in global commodity prices, with inflation for energy and non-energy commodities in base line scenario expected to be around (-) 2.6 per cent and (-) 2.0 per cent respectively in 2013, will check the inflation of tradeable commodities even in India. Apart from monetary policy attempting to control demand, supply side responses will be necessary to bring down inflation in a sustained way, and ongoing policy initiatives need to be pursued.

Inflation-broad trends

4.2 The financial year 2012-13 started with a headline Wholesale Price Index (WPI) inflation of 7.50 per cent. It has remained in the 7.18 to 8.07 per cent range in the nine months up to December 2012. Consumer price inflation for the major indices, which had declined to the range of 4.92 to 7.65 per cent in January 2011, however, started witnessing an increase since then. For most of the current year, inflation measured in terms of Consumer Price Index for industrial workers (CPI-IW) and the new series of CPI has remained in double digits. CPIs for agricultural and rural labourers have also inched up to double digit level in the last two months (Table 4.1).

WPI Inflation-trends at the level of broad commodity groups

4.3 Headline WPI inflation which averaged 9.56 per cent in 2010-11 and 8.94 per cent in 2011-2012 decelerated to 7.55 per cent in the first nine months of 2012-13 (Apr-Dec). Although in December 2012, inflation was at a three year low of 7.18 per cent, it has been in the range of 7-8 per cent in last thirteen months. Relative importance of different commodity groups contributing to this persistent inflation, however, changed over time. The persistently elevated prices for animal products (eggs, meat and fish), the rise in the prices of cereals and vegetables, along with the increase in international prices of fertilizers (non-urea) and the increase in administered prices of diesel have contributed to inflation in differing degrees over time. The build-up

Table 4.1 : Annual Inflation as per Different Price Indices

Month	WPI		CPI-IW		CPI-NS		CPI-AL		CPI-RL	
	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13	2011-12	2012-13
Apr	9.74	7.50	9.41	10.22	-	10.26	9.11	7.84	9.11	8.01
May	9.56	7.55	8.72	10.16	-	10.36	9.63	7.77	9.63	8.11
Jun	9.51	7.58	8.62	10.05	-	9.93	9.32	8.03	9.14	8.54
Jul	9.36	7.52	8.43	9.84	-	9.86	9.03	8.61	9.03	8.94
Aug	9.78	8.01	8.99	10.31	-	10.03	9.52	9.18	9.71	9.34
Sep	10.00	8.07	10.06	9.14	-	9.73	9.43	9.43	9.25	9.93
Oct	9.87	7.32	9.39	9.60	-	9.75	9.36	9.85	9.73	9.84
Nov	9.46	7.24	9.34	9.55	-	9.90	8.95	10.31	9.14	10.47
Dec	7.74	7.18P	6.49	11.17	-	10.56	6.37	11.33	6.72	11.31
Jan	7.23		5.32		7.65		4.92		5.27	
Feb	7.56		7.57		8.83		6.34		6.68	
Mar	7.69		8.65		9.38		6.84		7.19	
Average	**8.94**	**7.55***	**8.39**	**10.00***	**-**	**10.04***	**8.19**	**9.17***	**8.35**	**9.41***

***Source*: Office of the Economic Adviser, Labour Bureau, Central Statistics Office (CSO).**
***: Average (Apr-Dec) P: Provisional CPI : Consumer Price Index; IW : Industrial Workers; AL : Agricultural Labourers; RL : Rural Labourers; NS: New Series.**

in price pressures seems to have tapered off in recent months, as headline WPI has remained steady. Month-over-month price changes in most commodity groups have been small, indicating that the pressure on generalized inflation has fallen, as has the momentum of inflation, as measured by the seasonally adjusted annualized rate of inflation (SAAR) of the WPI index (Figure 4.1).

4.4 The level of inflation and its movement across three major commodity groups varied significantly. Inflation of primary articles having a weight of 20.12 per cent in the WPI, after declining to 6.7 per cent in Q4 of 2011-12, increased in first three quarters of the current year and was 10.6 per cent in December 2012. Inflation for commodities in the group ‘fuel & power’, with a weight of 14.91 per cent in the WPI witnessed some moderation in the current year. Apart from the base effect, deceleration in the inflation of non-administered petroleum products contributed to the moderation. This helped contain the effects of the increase in administered prices of diesel effected in September 2012. Finally, the deceleration in inflation of manufactured products,

Figure 4.1: WPI, Inflation and Seasonally Adjusted Annualized Rate (SAAR)

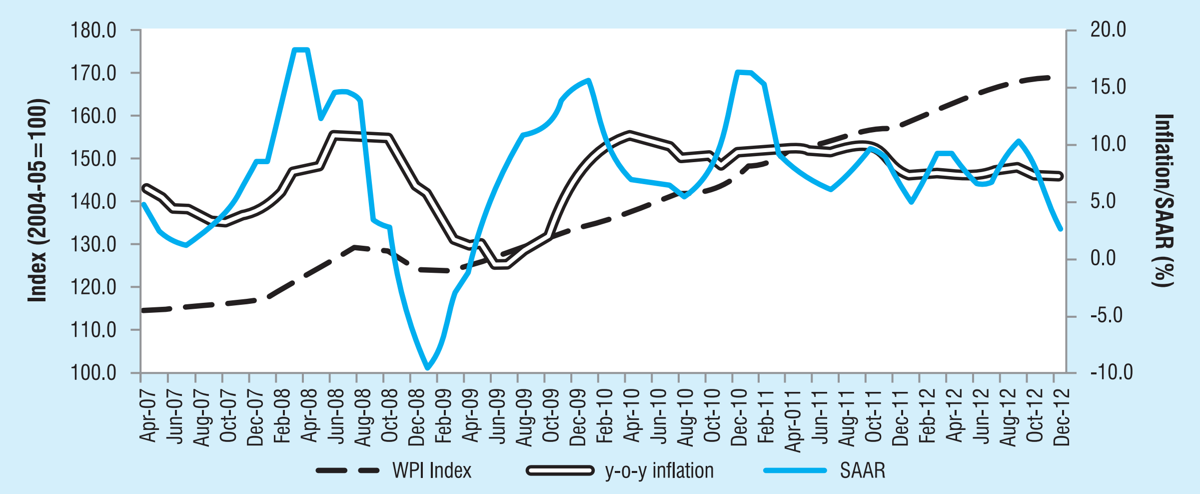


Table 4.2 : Quarterly Inflation in Major Group of the WPI (%)

Major Groups/ Composite groups	Weight (%)	Average (Apr-Mar) 2010-11	2011-12	2011-12 Q1	Q2	Q3	Q4	2012-13 Q1	Q2	Q3P
All Commodities	**100.0**	**9.56**	**8.94**	**9.60**	**9.71**	**9.01**	**7.50**	**7.54**	**7.87**	**7.25**
Primary Articles	20.12	17.75	9.80	13.09	12.05	7.76	6.70	9.87	10.32	9.27
Fuel & Power	14.91	12.28	13.96	12.74	12.99	15.08	14.94	11.90	9.72	10.34
Manufactured Prod.	64.97	5.70	7.26	7.38	7.87	7.95	5.89	5.29	6.23	5.46
Composite groups										
All food	24.31	11.10	7.24	8.36	8.81	6.60	5.30	9.12	9.07	9.05
Non-Food Non-Manufacturing	20.69	15.67	14.51	16.20	14.97	13.72	13.33	10.52	10.79	10.37
Non Food Manufacturing	55.00	6.11	7.29	7.35	7.80	8.13	5.92	5.15	5.71	4.64

Source: Office of the Economic Adviser. P : Provisional

with a weight of 64.97 per cent in WPI, was relatively sharp (Table 4.2).

4.5 A disaggregation of WPI inflation in terms of composite groups indicates that food inflation, comprising primary food articles and manufactured food products (24.31 per cent weight in the WPI) at 9.05 per cent in Q3 of 2012-13 was significantly higher than the 5.30 per cent in Q4 of 2011-12. Food inflation had once in fact declined to 1.45 per cent in January 2012 before inching upward to 10.39 per cent in December 2012. Non-food non-manufacturing inflation did moderate over the current year, but remains high, in the double digits, largely because of higher inflation for oilseeds and the commodities in the group 'fuel and power'. Core inflation which corresponds to inflation for non-food manufactured products, and is a central focus for the Reserve Bank of India (RBI), however, continued to show moderation from its peak in Q3 of 2011-12. The contribution of this composite group to overall inflation also declined from over 43 per cent in Q3 of 2011-12 to around 30 per cent in Q3 of 2012-13 (Figure 4.2). Apart from monetary measures taken by the RBI, softening of international and domestic prices of metals, chemicals and textile products also contributed to the moderation in core inflation.

Distribution of Commodities in terms of Price Range

4.6 The distribution of inflation across commodities included in the WPI indicates that there has been a sharp reduction in the number of commodities experiencing inflation of over 20 per cent. As against 72 commodities with a weight of

Figure 4.2: Weighted contribution to headline WPI inflation (%)

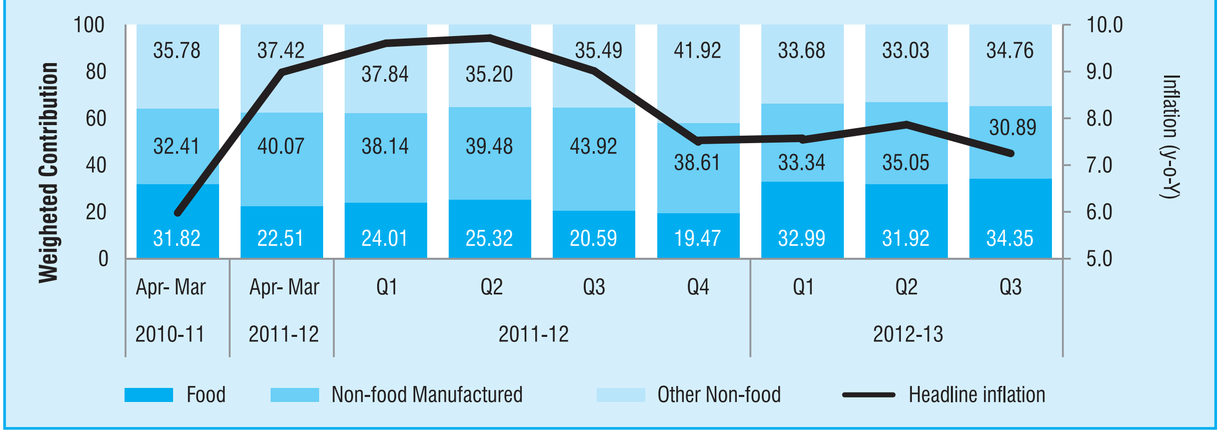


Table 4.3 : Frequency distribution of WPI commodities in terms of inflation range

	2010-11	2011-12	2011-12				2012-13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3P
Headline inflation	**9.56**	**8.94**	**9.60**	**9.71**	**9.01**	**7.50**	**7.54**	**7.87**	**7.25**
Number of Commodities in inflation range Negative	141	126	137	122	133	146	131	94	90
0 to 5 per cent	240	243	222	220	220	276	310	349	352
6 to 20 per cent	235	257	248	262	259	217	202	204	201
Above 20 per cent	60	50	69	72	64	37	33	29	33
Weights of the Commodities in inflation range									
Negative	13.96	13.99	16.69	13.56	15.96	17.13	14.18	10.11	8.55
0 to 5 per cent	29.96	31.39	27.82	25.43	24.53	33.16	31.37	44.01	45.90
6 to 20 per cent	47.82	42.77	41.49	47.19	46.50	40.95	47.44	40.38	38.26
Above 20 per cent	8.26	11.85	13.99	13.81	13.01	8.77	7.01	5.50	7.29

Source **: Office of the Economic Adviser. P : Provisional**

13.8 per cent, which reported above 20 per cent inflation in Q2 of 2011-12, the number of such commodities declined to 29 with a weight of 5.5 per cent in Q2 of 2012-13. Nearly two thirds of the commodities with over half of the weight in WPI now experience inflation of 5 percent or less (Table 4.3). This distributional shift seems to have plateaued in the last three quarters. The small number of commodities in the inflation range of 20 per cent and above suggests that besides economy wide measures like monetary and fiscal policies, strategies focused on specific commodities may also have high payoffs in further containing inflation.

WPI- Food Inflation

4.7 Inflation for both primary food articles and manufactured food products have moved together since 2011-12. Overall food inflation declined to 5.30 per cent in Q4 of 2011-12, its lowest quarterly level in the last seven quarters. Inflation in both primary food articles and manufactured food products was also at its lowest during this quarter (Table 4.4). An increase in inflation has been observed for both these groups in the current year. Within primary food articles, however, inflation in protein foods has moderated, especially so in the case of milk and animal products, where it has been significant and sequential. For pulses too, a sharp decline in inflation in Q3 of 2012-13 is observed. Cereals have, however, emerged as the major contributor to an increase in the inflation in food articles in first three quarters of the current year. Inflation in cereals which had moderated to a level of 2.73 per cent in Q3 of 2011-12 increased to 17.05 per cent in Q3 of 2012-13 mainly contributed by wheat, rice and maize. There has also been an increase in inflation in fruits and vegetables partly because of the increase in inflation in onions and potatoes. While in the case of potatoes, the current increase in prices may be a correction as prices had declined below the base level prices of 2004-05 in January 2012, an upsurge in onion prices and inflation has been observed in the last two months.

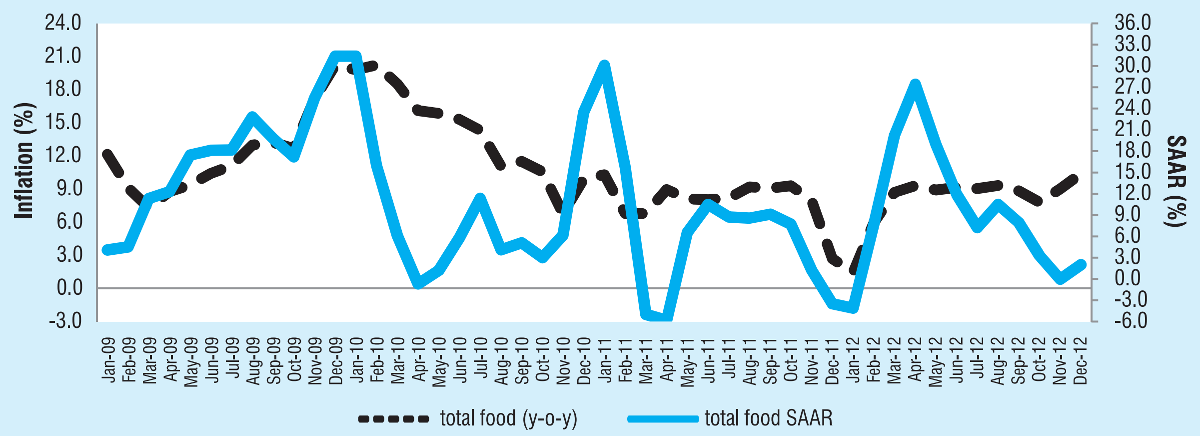
4.8 In the manufactured food products group, a sequential and sharp moderation in inflation has been observed in dairy products from Q4 of 2011-12. This decline in inflation is sharper and more pronounced than the inflation in milk. Grain mill products have witnessed an increase in inflation largely because of an upsurge in wheat prices, the key ingredient for these commodities. Sugar inflation had also shown an upward trend, after having remained at moderate levels in 2010-12. Prices have been particularly buoyant in the second and third quarter of the current year. In last two months, however, there has been some moderation in sugar prices. Futures prices also suggesting a softening trend of a moderate level. While inflation in edible oils has remained stable though elevated, there has also been increase in inflation in oil cakes in the current financial year. Momentum of food inflation as observed from the seasonally adjusted monthly WPI series indicates a mild upward trend (Figure 4.3).

Table 4.4 : Sub components of WPI food inflation (%)

Components / Sub components	Weight (%)	Average (Apr-Mar)		2011-12				2012-13		
		2010-11	2011-12	Q1	Q2	Q3	Q4	Q1	Q2	Q3P
FOOD INFLATION	**24.31**	**11.10**	**7.24**	**8.36**	**8.81**	**6.60**	**5.30**	**9.12**	**9.07**	**9.05**
(A) Food Articles	**14.34**	**15.60**	**7.30**	**8.83**	**9.14**	**6.34**	**5.05**	**10.82**	**9.18**	**8.76**
Non-Protein food	7.97	12.33	4.79	11.50	9.50	1.96	-2.88	8.00	6.23	7.54
Cereals	3.37	5.26	3.87	5.08	4.83	2.73	2.90	6.36	11.06	17.05
Fruits & Vegetables	3.84	16.44	6.45	16.11	14.93	1.71	-5.26	14.40	5.30	3.98
Other Food (Tea & Coffee)	0.18	-7.25	18.97	22.62	20.90	18.43	14.21	10.01	15.25	13.10
Condiments & Spices	0.57	33.56	-2.65	14.47	0.49	-3.83	-18.07	-18.18	-12.48	-15.99
Protein food	**6.37**	**19.78**	**10.32**	**5.78**	**8.72**	**11.75**	**14.85**	**14.28**	**12.66**	**10.13**
Pulses	0.72	3.20	2.52	-8.32	-3.03	12.95	9.65	16.2	30.68	18.84
Milk	3.24	20.13	10.31	6.84	10.15	11.02	13.08	11.56	7.05	6.13
Eggs, Meat & Fish	2.41	25.51	12.73	9.17	10.64	12.32	18.55	17.12	14.63	12.47
(B) Food Products	**9.97**	**3.72**	**7.12**	**7.52**	**8.19**	**7.07**	**5.76**	**6.02**	**8.85**	**9.59**
Dairy Products	0.57	9.56	12.85	6.04	12.11	17.94	15.28	9.38	4.09	-1.13
Processed Food	0.36	5.05	9.72	7.22	8.87	10.55	12.15	8.12	2.47	1.15
Grain Mill Products	1.34	5.67	0.27	2.80	0.81	-0.30	-2.10	-0.55	3.90	9.48
Bakery Products	0.44	8.60	0.75	-0.58	0.40	1.43	1.74	2.12	2.13	3.62
Sugar, Gur & Khandsari	2.09	-0.88	4.50	3.74	5.41	5.49	3.36	5.27	14.50	14.29
Edible Oils	3.04	5.43	12.55	14.92	14.45	12.22	9.00	10.35	10.82	9.59
Oil Cakes	0.49	0.79	3.95	3.91	6.85	1.60	3.63	12.60	25.90	24.41
Processed Tea & Coffee	0.71	3.48	4.55	11.19	4.77	-3.16	6.11	-1.98	-0.71	7.77
Salt	0.05	2.67	0.84	-6.70	1.47	3.73	5.42	5.51	5.51	1.72
Other Food Products	0.88	4.72	11.54	9.22	13.92	14.48	8.69	6.15	1.89	3.57

Source **: Office of the Economic Adviser.** **P : Provisional**

Figure 4.3: Momentum of WPI Food inflation



WPI- Non-food non-manufacturing inflation

4.9 The composite non-food non-manufacturing group is a heterogeneous mix of commodities and comprises non-food primary articles including minerals as well as commodities in the broad group of 'fuel and power'. Inflation in this composite group at aggregate level has shown some moderation from its peak in Q1 of 2011-12, though it has remained in double digits overall. Within this composite group, inflation differed widely across commodity groups. In case of non-food primary articles, inflation witnessed a sharp downturn and a nearly 'V' shaped rebound. The drivers for the downturn and the rebound, however, were different. Fibres led by cotton witnessed inflation of 62.7 per cent in Q1 of 2011-12, but this turned negative by Q4 of the same year. A sharp increase in cotton production in 2010-12 and recessionary global conditions affected prices. In other non-food primary articles, inflation surged in 2010-11 largely because of increase in prices of sugarcane and rubber. In 2011-12, guar seed, used in variety of industrial application, became the main driver of inflation in this group with an average inflation of 155 per cent. Oilseeds also witnessed a sustained increase in prices. Inflation in minerals followed the prices of crude petroleum. For commodities in the 'fuel and power' group an increase in the price of electricity across states pushed up the inflation in Q2 and Q3 of the current year. The prices of non-administered petroleum products tracked international prices and witnessed moderation in inflation from its peak in Q3 of 2011-12. The increase in inflation of administered petroleum products in Q3 of 2012-13 was due to increase in the prices of diesel (Table 4.5). Diesel prices have been revised again in January and inflationary impact of this revision would be reflected in the WPI for January 2013. While this will add to inflation, it will also reduce suppressed inflation, and through its contribution to fiscal consolidation, have a moderating effect in the long run.

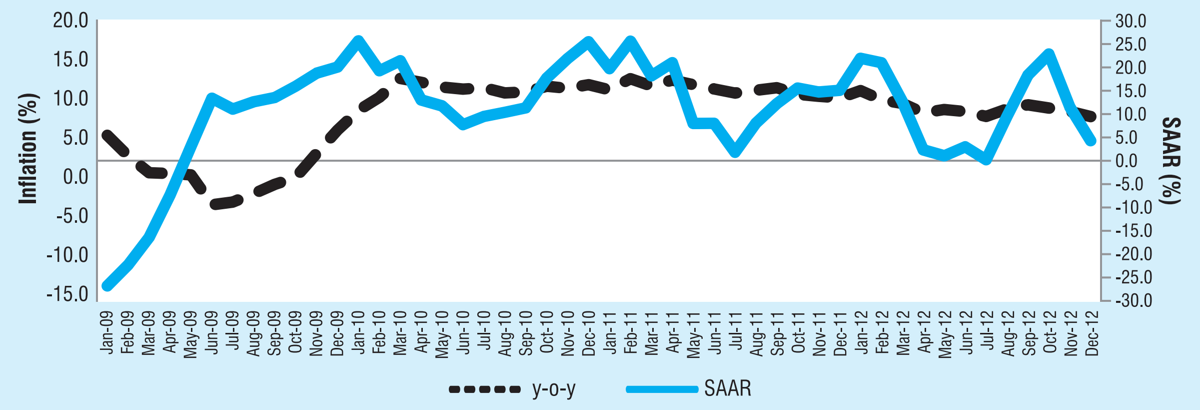
4.10 Momentum of inflation in this heterogeneous group based on SAAR indicates a downward trajectory. Stable or moderately rising crude oil prices and a benign inflationary outlook for other products suggests grounds for some optimism (Figure 4.4)

Table 4.5 : Sub components of WPI Non-food inflation (%)

Components / Sub components	Weight (%)	Average (Apr-Mar)		2011-12				2012-13		
		2010-11	2011-12	Q1	Q2	Q3	Q4	Q1	Q2	Q3P
Non-Food Non-Manufacturing	20.69	15.67	14.51	16.20	14.97	13.72	13.33	10.52	10.79	10.37
(A) Non-Food Articles	4.26	22.33	9.65	22.23	16.16	4.15	-0.89	5.64	12.60	12.88
Fibres	0.88	41.69	10.09	62.69	29.78	1.39	-26.05	-20.84	1.04	-1.77
Oil Seeds	1.78	4.71	12.33	11.64	15.08	10.79	11.86	18.11	27.84	29.18
Other Non-Food Articles	1.39	37.26	10.52	14.72	12.20	7.93	7.77	16.07	6.82	6.19
(B) Minerals	1.52	24.82	26.60	25.48	24.48	23.67	32.52	11.66	13.51	6.61
Metallic Minerals	0.49	44.70	10.10	11.70	7.00	4.91	16.74	9.70	12.51	6.33
Crude Petroleum	0.90	11.82	45.19	40.60	43.76	44.93	51.02	12.85	13.44	5.23
(C) Fuel & Power	14.91	12.28	13.96	12.74	12.99	15.08	14.94	11.90	9.72	10.34
Coal	2.09	5.68	15.52	13.25	13.25	13.25	21.97	13.92	13.92	13.92
Mineral Oils	9.36	16.00	16.85	16.05	16.49	18.84	16.02	12.23	7.20	8.93
Administered POL	*6.32*	15.12	10.43	*8.99*	*10.94*	*10.87*	*10.85*	*10.00*	*2.67*	*11.73*
Non-administered POL	*3.04*	17.47	27.43	*27.62*	*26.18*	*32.36*	*23.89*	*15.35*	*14.17*	*4.95*
Electricity	3.45	5.38	1.64	0.27	-0.32	2.63	4.00	8.56	16.52	13.16

Source **: Office of the Economic Adviser. P : Provisional.**

Figure 4.4: Momentum of Non-Food Non Manufactured inflation



WPI- Non-Food Manufacturing Inflation

4.11 Non-food manufacturing (NFM) inflation, defined as core inflation by the RBI, has declined from 8.35 per cent in November 2011 to 4.24 per cent in December, 2012. Within the non-food manufacturing group, beverages and tobacco products, wood and wood products, chemical and chemical products witnessed inflation of over 6 per cent in Q3 of 2012-13. Deceleration in inflation was witnessed across all major segments of manufacturing. However, inflation in machinery and transport equipment has generally remained low (Table 4.6).

4.12 SAAR of non-food manufacturing (Figure 4.5) also shows a downward momentum. Non-food manufactured products, except urea, are fully tradeable and as such are significantly influenced by global price trends. With global commodity prices witnessing a decline in 2013 and a near stability in 2014 (Box 4.3), non-food manufacturing inflation may see some further moderation.

4.13 Within core inflation, inflation in capital goods continued to remain muted. Inflation in consumer durables, though generally above core inflation, has started showing signs of moderation from Q3 of 2011-12 and has since been gradually converging to the

Table 4.6 : Sub components of WPI Non-food Manufacturing inflation (%)

Components / Sub components(%)	Weight	Average (Apr-Mar)		2011-12				2012-13		
		2010-11	2011-12	Q1	Q2	Q3	Q4	Q1	Q2	Q3P
Non-Food Manuf. (Core)	55.00	6.11	7.29	7.35	7.80	8.13	5.92	5.15	5.71	4.64
Beverages & Tobacco Prod.	1.76	7.36	11.67	10.01	13.23	13.32	10.21	7.79	6.76	7.89
Textiles	7.33	12.08	7.46	15.78	9.69	6.14	-0.78	-2.78	2.86	4.49
Wood & Wood Products	0.59	3.97	8.09	5.87	8.88	8.91	8.70	6.67	5.92	6.03
Paper & Paper Products	2.03	5.33	5.39	7.51	5.53	5.30	3.30	2.21	2.86	3.35
Leather & Leather Products	0.84	-0.99	2.32	0.16	0.91	2.71	5.61	3.73	3.98	2.18
Rubber & Plastic Products	2.99	6.68	5.97	8.56	7.70	5.67	2.23	1.88	2.85	3.24
Chemicals & Products	12.02	5.34	8.61	7.45	8.71	9.93	8.36	7.24	7.63	6.09
Non-Metallic Mineral Prod.	2.56	2.68	5.73	3.91	4.12	7.65	7.23	7.13	9.22	5.44
Basic Metals, Alloys & Prod.	10.75	8.67	11.06	8.46	11.58	13.19	10.97	10.62	8.39	4.68
Machinery & its Tools	8.93	2.82	3.11	2.96	3.20	3.41	2.88	2.50	2.91	2.52
Transport, Equipment	5.21	3.02	3.52	2.16	4.07	4.54	3.34	3.83	3.80	4.34

Source **: Office of the Economic Adviser.** **P : Provisional**

Figure 4.5: Momentum of Non-Food Manufactured inflation

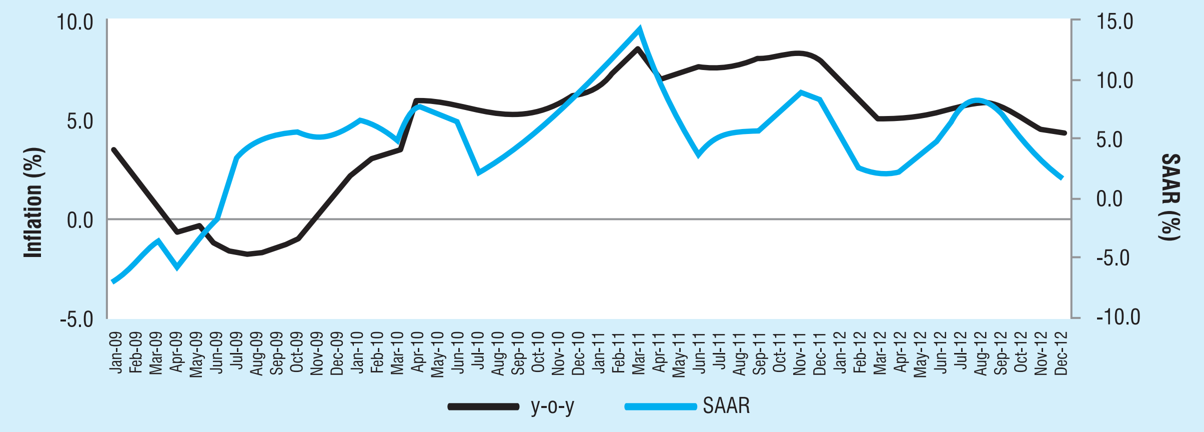
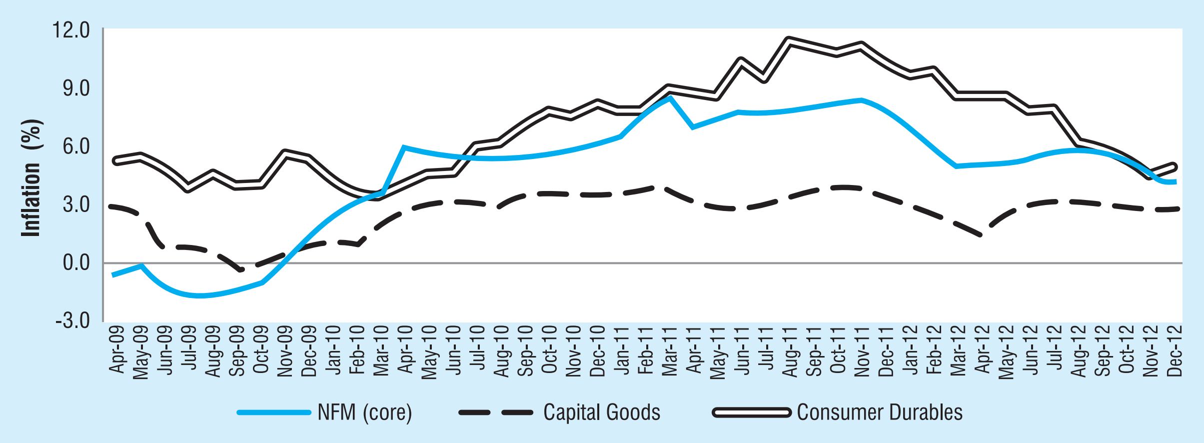


Figure 4.6: WPI inflation for core, consumer durables and capital goods



levels of core inflation (Figure 4.6). Moderation in inflation in consumer durables, where demand is interest sensitive, probably reflects the impact of monetary policy.

Consumer Price Indices (CPIs)

CPI-IW-Inflation

4.14 In India, most attention, including from policymakers, is devoted to headline WPI inflation. WPI series have a wider commodity basket, with commodity weights derived from the National Accounts, reflect the underlying economy-wide inflation better. Some economists, however, would prefer the central bank to target consumer price inflation rather than the NFM WPI inflation (or WPI headline), because the former is what each consumer experiences. Moreover, generalized and persistent CPI inflation could generate high inflationary expectations amongst the public.

4.15 There have been 3 consumer price indices, before the Central Statistics Office launched the new CPI series in January 2011, each for a specific class of consumers. The CPI for industrial workers (CPI-IW), which is primarily used for wage indexation, however, has been the CPI index preferred by many economists. Inflation during August 2010 to March 2012 appears to follow a more or less similar trend irrespective of whether it is measured in terms of the WPI or CPI-IW. However, a nearly 2-percentage point gap has emerged in recent months between these two measures. The momentum of the CPI-IW, as measured by its deseasonalized series, in recent months is consistent with WPI-food inflation (Figure 4.7).

4.16 Turning to components of CPI-IW, inflation for the food group, after declining to 4.52 per cent in Q4 of 2011-12, started showing an increase thereafter and has been in double digits in last three quarters of 2012-13. Inflation in the fuel and light and broad group pan supari and tobacco has also remained in double digit in the last seven quarters.

Figure 4.7: Inflation and SAAR of CPI-IW vs WPI

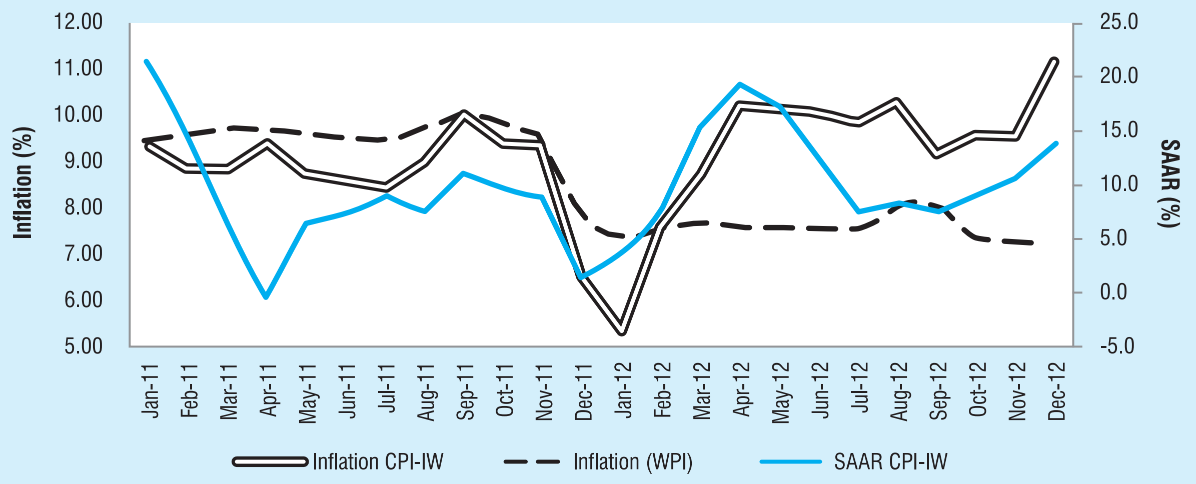


Table 4.7 : Inflation in Consumer Price Index for Industrial Workers (CPI-IW)

Major groups	Weights	2010-11	2011-12				2012-13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
General	100	10.45	8.91	9.16	8.39	7.17	10.14	9.76	10.1
Food group	46.2	9.89	7.58	7.29	6.05	4.52	10.57	11.49	11.41
Pan, supari, tobacco & intoxicants	2.27	12.42	13.91	15.23	16.87	15.21	14.9	15.13	14.94
Fuel & light	6.43	9.81	13.73	14.17	15.37	17.82	18.97	12.06	12.8
Housing	15.27	21.12	12.17	10.95	10.95	8.96	8.96	6.73	6.73
Clothing, bedding & footwear	6.57	6.73	12.94	14.43	15.61	13.11	10.79	9.35	8.44
Miscellaneous group	23.26	5.26	6.75	7.73	8.03	7.05	7.35	7.57	8.61
Non-food	53.8	11	10.23	11.01	10.75	9.77	9.73	8.11	8.84

Source **: Labour Bureau.**

Inflation in housing has declined since Q1 of 2011-12 (Table 4.7).

4.17 The Central Statistics Office in the Ministry of Statistics and Programme Implementation started

Table 4.8 : Quarterly inflation in Consumer Price Index for New series (CPI-NS) (2010=100)

Areas	Groups	Weights (%)	2011-12	2012-13		
			Q4	Q1	Q2	Q3
Rural	**General**	**100.00**	**8.11**	**9.63**	**9.82**	**10.20**
	Food	56.59	6.01	10.10	11.62	12.27
	Non-food	43.41	10.86	9.03	7.53	7.59
Urban	**General**	**100.00**	**9.33**	**11.02**	**10.00**	**9.86**
	Food	35.81	6.76	11.13	12.16	11.74
	Non-food	64.19	10.81	10.95	8.79	8.81
Combined	**General**	**100.00**	**8.62**	**10.18**	**9.87**	**10.07**
	Food	47.57	6.25	10.47	11.81	12.10
	Non-food	52.43	10.8	9.92	8.13	8.26

Source **: CSO.**

a new series of CPI in January 2011. The new series has a wide geographical spread and covers 310 towns and 1181 villages. With a weighting scheme derived from the Consumer Expenditure Survey Data (2004-05), the new series has an all India character. Since the series is fairly new, inflation numbers are available only for 12 months so far. Broad food and non-food weights of the new CPI series more or less match those on CPI-IW. Though the points of inflection are common, the new series shows higher overall food inflation than the CPI-IW (Table 4.8).

Why has inflation persisted?

4.18 Inflation in protein foods, particularly eggs, meat and fish, and in fruits & vegetables has persisted because of changes in dietary habits and supply constraints. Long time series data from National Accounts on private final consumption expenditure (PFCE) indicate a structural shift in per capita consumption (Table 4.9). The share of food consumption in total consumption has declined over time, from an average of 51.34 per cent during 1950-60 to an average of 27.17 per cent during 2007-2012. Average annual growth in per capita food consumption at 0.94 per cent during 1950-2012 has been significantly lower than the overall growth in consumption averaging 1.84 per cent. The consumption of protein foods, though increasing more slowly than the increase in PFCE, had a growth of 1.50 per cent during 1950-2012, higher than the growth of overall expenditure on food. Therefore, the share of protein foods within overall food expenditure increased from 26.28 per cent during 1950-60 to 33.71 per cent during 2007-2012 (Figure 4.8).

4.19 A secular decline in expenditure on food relative to that in other commodities and services as expected has been associated with rising income levels (Figure 4.9). Average annual growth of per capita expenditure during 1950-2011 was 2.40 per cent for non-food group. Within non-food commodities and services, average annual growth

Table 4.9 : Change in consumption pattern

	Average Annual Consumption per capita at 2004-05 prices (Rupees)					Trend Growth Rates		
	1950-91	1992-97	1997-02	2002-07	2007-12	1950-2012	1950-1991	1991-2012
Food	4550	5803	6123	6066	6700	0.94	0.83	0.88
Protein Food (Pulses; Milk; Eggs, Meat & Fish)	1090	1654	1881	1962	2258	1.50	0.65	2.09
Cereals	1560	1705	1634	1578	1586	0.22	0.46	-0.55
Others	1900	2444	2608	2525	2856	1.10	1.25	0.92
Non-Food	4623	7206	9192	12015	17957	2.48	1.36	5.79
clothing & footwear	555	951	1083	1312	2062	3.05	3.13	4.61
medical care & health services	255	404	620	879	1172	3.64	3.46	7.09
transport & communication	523	1703	2402	3396	4796	5.57	4.41	7.09
Other Non-food	3290	4147	5087	6428	9927	1.64	0.49	5.35
Private Final Consumption Expenditure (PFCE) in domestic market	9174	13009	15315	18081	24657	1.84	1.10	3.99
Share of Food in PFCE (%)	49.6	44.61	39.98	33.55	27.17			
Share of Food Groups in total Food Consumption (%) Protein foods	23.96	28.51	30.72	32.35	33.71			
Cereals	34.29	29.39	26.68	26.01	23.67			
Others	41.75	42.11	42.60	41.63	42.63			

Source **: National Accounts Statistics (NAS) various issues.**

Note **: Last 4 periods correspond to Plan Periods.**

Figure 4.8: Private Final Consumption Expenditure (PFCE) & percentage Share of Food

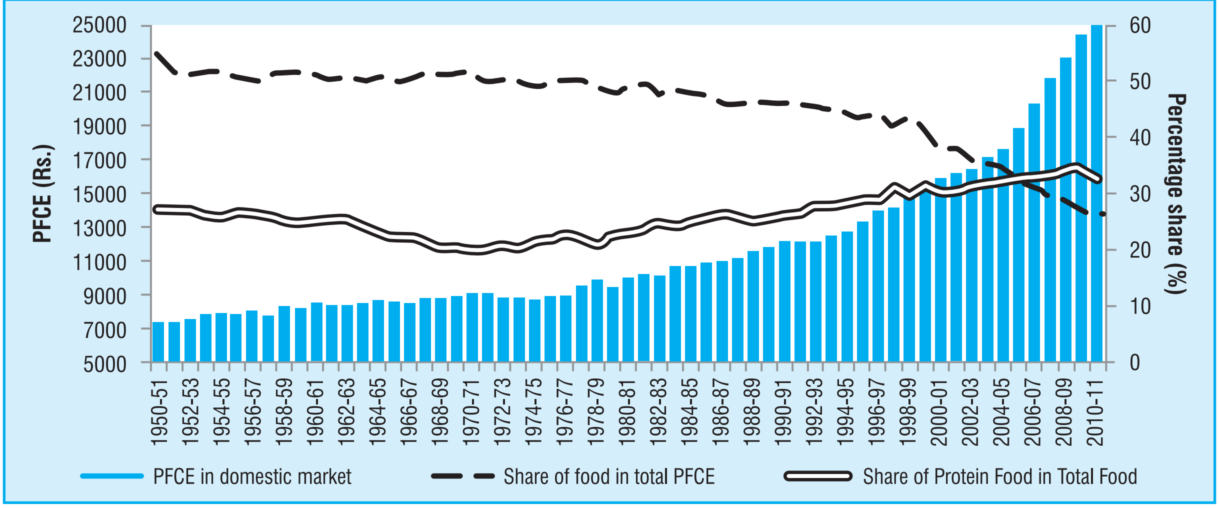
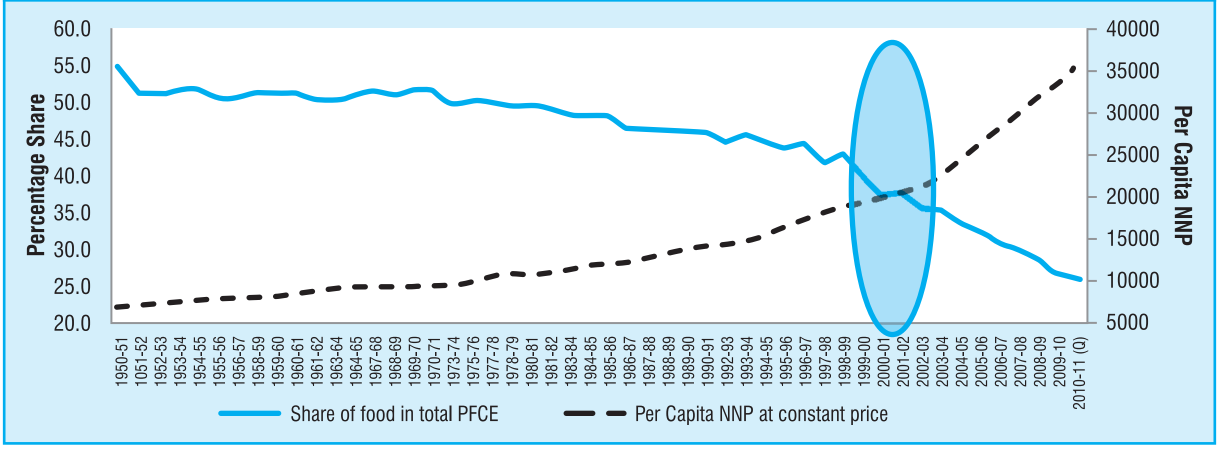
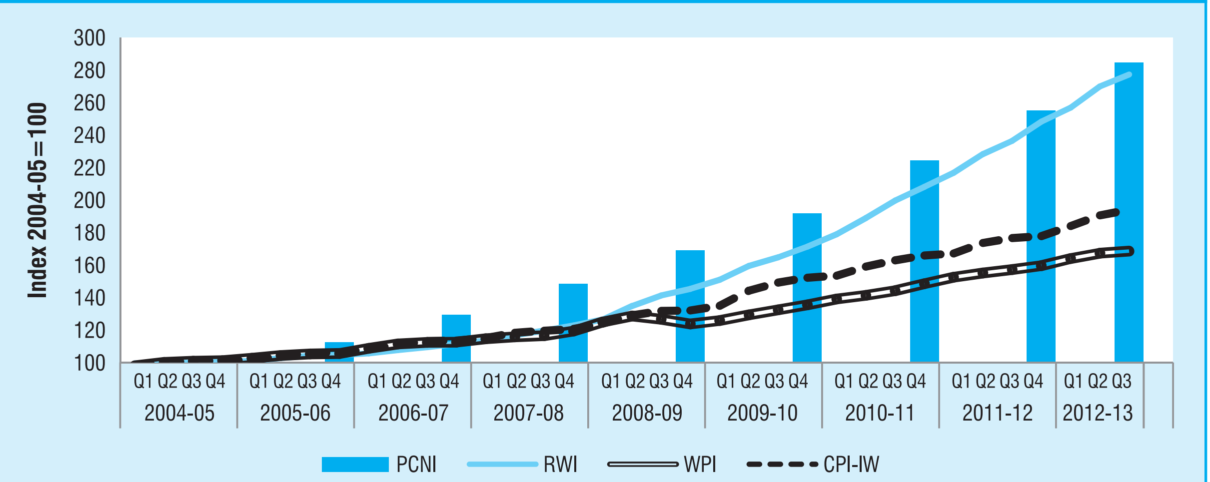


Figure 4.9: Share of Food in total PFCE Vs per capita NNP



was 5.53 per cent, 3.97 per cent, 3.60 per cent and 3.42 per cent for transport and communication; recreation and education; medical and health care; and miscellaneous goods and services, respectively. Growth in expenditure for these sub sectors significantly exceeded the growth in expenditure on

Figure 4.10: Index of per capita net national Income (PCNI), rural wages (RWI), WPI & CPI-IW



Note: Q3 (12-13) figures for RWI is average of Oct & Nov, 2012 food. Post reform period (1992-93 to 2010-11) has shown a faster shift in consumption expenditure.

4.20 An increase in income made this desirable shift in consumption feasible. At national level, per capita income, adjusted for inflation continued to rise. There was also a significant increase in rural wages. Rural wages in nominal terms went up by an average of over 18 per cent from 2008-09. Inflation-adjusted rural wages also went up by 7.5 per cent during this period. (Figure 4.10)

4.21 The input costs for producers in both the food and non-food segments, as reflected in the prices of feed, fodder and other inputs also increased. An increase in Minimum Support Price (MSP), while necessary to ensure remunerative returns to farmers, raised the floor prices and also contributed to the rise in input prices.

Commodities under price pressure and policy initiatives

4.22 As indicated earlier, a few commodities have contributed disproportionately to inflation. In Q2 of 2012-13, 19 commodities (commodity groups) with a 28.68 per cent weight in WPI contributed 64.38 per cent to total inflation (Table 4.10). The contribution of each of these commodities to inflation in Q2 or Q3 of 2012-13 exceeded their weight by 1.5 times.

4.23 Inflation in India, as in other countries stems from a traditional mismatch between demand and supply. The relative magnitude of the imbalance, which varies across sectors, leads to relatively high or low inflation. Also, a change in controlled prices, as with diesel, can lead to inflation.

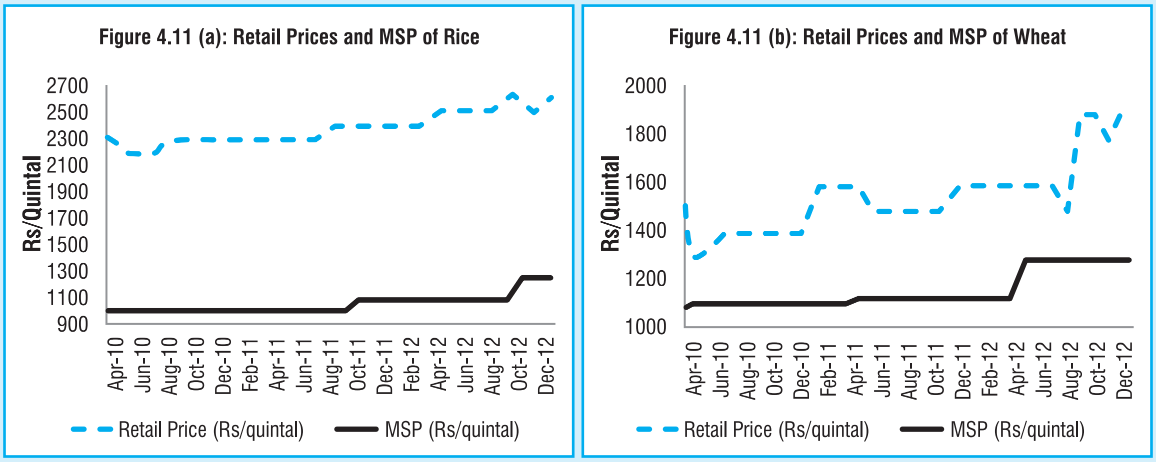
4.24 Two factors contributed to an increase in inflation in cereals. Besides an increase in the MSP for wheat and rice, there has been a mismatch between open market availability and demand, particularly for wheat. A sharp increase in procurement of wheat in particular, reduced its open market availability pushing prices upwards. While in normal circumstances, higher procurement raises the ratio of stock to use and may lead to price stabilization, a higher procurement which reduced

Table 4.10 : Weighted Contribution to Headline WPI Inflation: Items to be watched

Major groups	Weights	2010-11	2011-12				2012-13		
		FY	Q1	Q2	Q3	Q4	Q1	Q2	Q3P
Food Products	13.03	9.44	12.91	14.79	11.03	14.02	22.99	30.24	35.37
Rice	1.79	1.33	0.66	0.84	0.68	0.68	1.61	2.77	4.02
Wheat	1.12	0.44	-0.01	-0.14	-0.52	-0.47	1.06	1.96	3.57
Maize	0.22	0.27	0.84	0.59	0.44	0.62	0.29	0.41	0.75
Gram	0.33	-0.06	0.25	0.82	1.77	1.89	2.44	2.96	1.95
Potatoes	0.20	-1.2	0.00	0.25	-0.38	-0.08	1.50	1.64	1.63
Onions	0.18	0.79	0.20	0.76	-2.09	-3.40	-0.24	-0.65	0.74
Fish (inland+ marine)	1.30	5.47	2.29	2.96	4.12	6.79	5.64	4.70	4.20
Black Pepper	0.03	0.14	0.33	0.31	0.41	0.41	0.36	0.37	0.24
Tea (primary+ manufacturing)	0.80	0.04	0.94	0.31	-0.39	0.48	0.17	0.37	0.93
Oil seeds+ edible oils+ oilcake	5.32	2.47	6.27	6.89	5.64	6.26	8.84	11.96	13.22
Sugar	1.74	-0.25	1.14	1.20	1.35	0.84	1.32	3.75	4.12
Manufactured Products	1.45	3.67	3.97	4.74	6.69	7.55	6.91	6.71	4.33
Non-Urea Fertilizer	1.08	0.83	1.01	1.39	2.90	3.41	3.33	4.00	2.81
Gold, Sliver & gold ornaments	0.37	2.84	2.96	3.35	3.79	4.14	3.58	2.71	1.52
Other products	14.2	18.3	23.01	24.37	30.23	38.8	28.65	23.65	24.68
Crude Petroleum	0.90	1.54	5.39	5.61	6.43	8.74	2.79	2.79	1.24
Coal	2.09	1.49	3.38	3.29	3.48	7.12	4.68	4.41	4.72
Non Administered Mineral Oil	3.04	6.63	10.92	10.20	13.73	13.18	9.01	7.84	3.17
Electricity	3.45	1.59	0.08	-0.09	0.80	1.40	2.89	5.31	4.66
Gaur Seed	0.05	0.04	0.25	0.50	0.68	2.40	3.99	1.28	0.85
High Speed Diesel	4.67	7.01	2.99	4.86	5.11	5.96	5.29	2.02	10.04

Source: **Office of the Economic Adviser.** **P : Provisional**

Figure 4.11: MSP and Retail Prices of Rice and Wheat



non-PDS availability in a significant manner created inflationary pressures. Higher international prices and reduced global availability also pushed international prices upwards. This created space for exports of wheat and again reduced private availability of wheat. While the FCI has undertaken open market sales for domestic use and exports, these operations have so far had limited impact on domestic prices. Perhaps more aggressive open market sales may be necessary to cool down the market, though with MSP providing a high floor to market prices, there is limited room. An increase in MSPs of wheat and rice also partly contributed to higher domestic prices. The difference between retail prices of wheat and its MSP widened from July, 2012. In case of rice also, difference widened during March-October, 2012 and again in December, 2012 (Figure 4.11(a) and 4.11(b)). In pulses too an upsurge in prices has largely been due to persistent mismatch in demand and domestic availability. In the long run, containment of inflation in pulses would require an increase in the supply of pulses through improved productivity.

4.25 Prices of vegetables have remained volatile in the recent past. Apart from a demand and supply mismatch, inefficient intermediation and the loss in the value of vegetables at different stages of their movement from farm to mouth have contributed to an increase in prices, high volatility, and significant dispersion across locations. All these could be reduced considerably with improvements in the supply chain. The existence of a large number of intermediaries between the farmer and the consumers and time delays due to their activities leads to intermediation costs and value losses. Organised marketing and greater private sector participation is critical for improving this state of affairs but it requires reforming the APMC legislation. The Inter Ministerial Group on Inflation (IMG)(see box 4.1) had suggested exempting perishables from the purview of APMC Act, providing farmers the freedom to make direct sales to aggregators and processors, introducing electronic auction platforms for all mandis and replacing licenses of the APMC market with open registration backed by bank guarantees. Electronic display of prices for short duration vegetable crops could reduce the asymmetry in information flow and provide appropriate marketing signals to producers. A committee set up by Planning Commission to encourage investment in supply chains has also suggested exempting perishables from the purview of APMC.

4.26 There have been some developments along these recommended lines. To develop integrated value chains, the government has emphasized the need for exempting vegetables from the levy of market fees. The States of Madhya Pradesh and West Bengal have recently waived the market fee on fruits and vegetables. Such waivers are expected to promote investment in development of backend infrastructure by private sector. The Ministry of Agriculture in collaboration with Forward Markets Commission is facilitating display of spot and futures prices on price ticker boards in around 1700 mandis in different states. Recently, the government has permitted Foreign Direct Investment (FDI) in multi-brand retail trading. This will help consumers and farmers by improving the logistical facilities connecting the two.

Box 4.1 : Inter-Ministerial Group (IMG) on Inflation

An Inter-Ministerial Group (IMG) on inflation was set up on 2 February, 2011, on the recommendation of the Prime Minister, under the chairmanship of Chief Economic Adviser, Ministry of Finance to review the overall inflation situation, with particular reference to primary food articles. The IMG has so far had eight meetings between 15 February, 2011 and 31 January, 2012 covering various aspects, including information system on all aspects of price monitoring, Foreign Direct Investment (FDI) in multi-brand retail, reform in APMC Act, policy options for diesel pricing and inflation in protein rich products among others.

In the sixth and seventh meetings of IMG held on 28 May, 2012 and 14 September, 2012, IMG had discussed policy options to reduce the distortions in the prices between diesel and other petroleum product. It was suggested that in a gradual manner subsidy on diesel may be shifted to fixed per litre basis and price adjustment could be more frequent, and with regular intervals, may be on a monthly basis. It was also mentioned that any revision in diesel prices would have a direct and indirect impact on inflation, which continues to be at elevated levels. The revision, therefore, needs to be calibrated.

IMG further recommended a long term credible policy intervention for augmenting supplies of primary products. MSP based incentives without a breakthrough in productivity level, may not be sufficient. Productivity of pulses could be increased with the use of genetic seeds and a proper regulatory environment.

4.27 The persistence of high inflation in animal products has partly been due to the regional concentration of production centres, rising input costs which raised the floor price and lower productivity. While in some cases, there has been an increase in availability, typically it has been at a higher cost. Further, due to limited organized marketing (even in case of milk it is around 15 per cent of total milk produced) back end infrastructure such as a seamless cold chain has not been established, reducing quality and increasing wastage.

4.28 There was an upsurge in sugar prices in first half of the current year with domestic and global prices showing a divergent trend. An increase in prices in July 2012 has partly been due to the imposition of import duty. While there are no price controls per se (90 per cent of sugar production is for free sale), a regulated release mechanism restricts availability and may often distort prices. The quantum of non-levy sugar to be released every quarter for domestic consumption is decided by the Central Government taking into consideration the production, stock, requirement and prices of sugar in the country. Though this mechanism is meant to ensure price stability, sugar prices on the contrary, have demonstrated a high degree of volatility. The Rangarajan Committee, after studying the problems of the sugar industry, has recommended deregulation of the sugar industry and dismantling of the regulated release mechanism together with the levy obligations. These recommendations are under consideration of the Department of Food and Public Distribution.

4.29 Except some of the primary food articles, urea and administered petroleum products, the rest of the components in WPI are fully tradeable and none of these products are under an administered price regime. Domestic prices for these products are governed both by global commodity prices and their domestic availability. A stable rupee and moderate global prices, both relatively exogenous factors, may be important in keeping the prices of these products stable.

4.30 The inflation picture is further complicated in India because of a shifting consumption basket to which the supply of proteins and micro-nutrients like fruits and vegetables has not responded quickly. Interest rates are probably an inappropriate tool to shift people's preferences. This is why it may be reasonable for the RBI to look through the rise in food prices (which is what it does by focusing on NFM "core" inflation, which puts lower emphasis on food prices), while trying to ensure that food inflation does not feed into wages and generalized inflation. However, food is a large part of a worker's consumption basket, and higher food prices do feed into higher wage demands. What can be done? Government's efforts to create the conditions for greater protein supply (some of which are described earlier) are important. Tempering government interventions that raise wage increases above productivity increases may also be worth exploring.

Measures to contain inflation

4.31 Inflation has been a major cause of concern for both the government and the RBI. They have taken a number of measures to contain it as

Box 4.2 : Measures Taken and Proposed by the Government to Contain Price Rise

1. Fiscal measures

- Import duties for wheat, onions, pulses, and crude palmolein were reduced to zero and 7.5 per cent for refined vegetable & hydrogenated oils.
- Duty-free import of white/raw sugar was extended up to 30 June 2012; presently the import duty has been fixed at 10 per cent.

2. Administrative measures

- Ban on exports of onions was imposed for short periods of time whenever required. Exports of onions were calibrated through the mechanism of minimum export prices (MEP).
- Futures trading in rice, *urad, tur,* guar gum and guar seed was suspended.
- Exports of edible oils (except coconut oil and forest-based oil) and edible oils in blended consumer packs up to 5 kg with a capacity of 20,000 tons per annum and pulses (except *Kabuli chana* and organic pulses and lentils up to a maximum of 10,000 tonnes per annum) were banned.
- I Stock limits were imposed from time to time in the case of select essential commodities such as pulses, edible oil, and edible oilseeds and in respect of paddy and rice up to 30 November 2013.

3. The government has undertaken various measures to insulate the vulnerable sections of society from price rise.

- The central issue prices (CIP) for rice (at Rs 5.65 per kg for below poverty line [BPL] and Rs 3 per kg for Antodaya Anna Yojana [AAY] families) and wheat (at Rs 4.15 per kg for BPL and Rs 2 per kg for AAY families) have been maintained since 2002.
- Under the targeted PDS (TPDS) allocation of foodgrains is being made to 6.52 crore AAY and BPL families at 35 kg per family per month at a highly CIP.
- The government has allocated rice and wheat under the Open Market Sales Scheme (OMSS).
- The scheme for imports of pulses which envisaged imports for distribution to BPL households through the PDS with a subsidy of Rs 10 per kg operated from November 2008 to June 2012. The government has decided to implement a varied form with a subsidy element of Rs 20 per kg per month for BPL cardholders for the residual part of the current year. The targeted BPL cardholders will be as estimated by the Department of Food and Public Distribution.
- The Scheme for Distribution of Subsidized Imported Edible Oils has been implemented since 2008-9 through state/union territory (UT) governments for distribution of 1 litre per ration card per month with a central subsidy of Rs 15 per kg. The scheme has been extended up to 30 September 2013.

4. Budgetary and other measures

- A number of measures were announced in Union Budget 2012-13 to augment supply and improve storage and warehousing facilities. The government launched a National Mission for Protein supplements in 2011-12 with an allocation of Rs 300 crore. To broaden the scope of production of fish to coastal aquaculture, apart from fresh water aquaculture, the outlay in 2012-13 was stepped up to Rs 500 crore. Recently the government permitted FDI in multi-brand retail trading. This will help consumers and farmers as it will improve the selling and purchasing facilities.

5. Monetary measures

- The RBI had also taken suitable steps to contain inflation with 13 consecutive increases by 375 basis points (bps) in policy rates from March 2010 to October 2011.

indicated in Box 4.2. The measures could be classified as those that contain demand (such as higher interest rates), those that improve supply (such as incentives for producers), those that shield vulnerable consumers (such as targeted subsidies for below poverty line (BPL) families), those that protect all against a price rise (such as subsidizing diesel prices), and those that shut down markets so as to suppress price signals (such as shutting down commodity futures markets) or to quell price increases (such as export bans).

4.32 Given that inflation has been persistent, it suggests a significant mismatch between demand and supply. In the short run, curbing demand moderately so as to allow supply to catch up can be an effective tool, while in the long run, measures to increase supply are the only way to have non-inflationary growth. For some articles such as food, where demand is hard and probably unwise to curb, supply increases have to be the primary solution. The government can curb demand through fiscal consolidation, while the RBI does so through high policy rates and tight liquidity. These measures may have an adverse effect on growth, but that is precisely how they curb inflation. Given that India faces a number of constraints on supply, such as low agricultural productivity, poor infrastructure, and a limited skill base, the growth-friendly way to deal with inflation is to focus on boosting the supply side, as a number of government initiatives attempt. And because the vulnerable segments of society may be adversely affected before supply side measures kick in, some targeted support is reasonable. However, broader support (such as a diesel subsidy) tends to suppress price signals, boosts demand excessively, expands the fiscal deficit, and makes the fight against inflation harder. Such short term palliatives need to be avoided. Equally counter-productive are periodic bans of exports, imposition and removal of tariffs, and repeated closure of futures markets. These tend to make it harder for producers to plan, reduces their incentives to produce by limiting their remuneration, and inhibits the production increases that are needed to bring prices under more sustained control.

Trends in Global Commodity Prices

4.33 Global commodity prices peaked in Q3 of 2008-9. Prices started decelerating thereafter and this trend continued until January 2009, since then prices have firmed up. The increase was particularly sharp in 2010 and Q1 of 2011, both for energy and non-energy commodities. While non-energy prices began to moderate from Q2 of 2011-12 and inflation began to turn negative for most of the commodity groups, the moderation in energy prices began a little later (Table 4.11 and Figure 4.12). In the first three quarters of the current year, both energy and non-energy prices registered a decline. This was partly because of the base effect and partly because of a decline in prices, particularly for beverages and basic metals.

4.34 Global supply shortages in food grains in 2012-13, particularly in wheat and coarse grains resulted in sharp increase in prices in wheat and maize, pushing up the commodity index for the broad group of grains. In Q2 of 2012-13, fats and oils also witnessed an increase in prices because of the food, feed and fuel leakages. Prices for fats and oils moderated thereafter and remained range bound in Q3.

4.35 The benign inflationary trend is expected to continue and the World Bank in its Global Economic

Table 4.11 : Inflation in Global Commodity Groups

Major groups	2010-11	2011-12	2011-12				2012-13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
Index (2005=100)									
Energy	154.5	193.0	197.6	187.2	186.6	200.8	183.7	183.2	182.1
Non-energy	188.4	202.8	217.2	212.3	188.8	192.9	189.3	191.0	186.9
Beverages	194.1	196.2	218.7	210.7	183.7	171.7	162.7	169.7	160.8
Grains	189.7	236.8	245.8	245.4	229.3	226.8	227.1	263.9	258.9
Fats & Oils	202.2	216.7	227.1	220.4	202.5	216.9	231.1	250.2	221.9
Base Metals	181.0	185.1	203.8	194.4	164.1	178.2	166.2	162.1	167.7
Precious Metals	294.2	385.7	370.2	404.5	382.0	386.1	363.6	372.7	390.7
Inflation YOY (%)									
Energy	21.10	24.94	38.35	35.12	20.02	10.80	-7.05	-2.14	-2.41
Non-energy	24.82	7.63	32.70	24.52	-4.62	-12.93	-12.83	-10.02	-1.01
Beverages	17.47	1.08	24.33	12.61	-5.09	-21.91	-25.61	-19.43	-12.46
Grains	14.14	24.87	65.93	45.07	10.31	-2.87	-7.63	7.53	12.87
Fats & Oils	18.22	7.20	36.78	20.96	-7.78	-9.93	1.76	13.54	9.57
Base Metals	30.08	2.27	27.41	19.35	-13.90	-15.40	-18.44	-16.59	2.16
Precious Metals	31.02	31.12	41.02	50.20	21.75	16.61	-1.77	-7.85	2.27

Source **: World Bank Pink Sheet.**

Box 4.3 : Global Commodity Prices : Forecast

Table : Nominal Price Indices- actual and forecasts (2005=100)

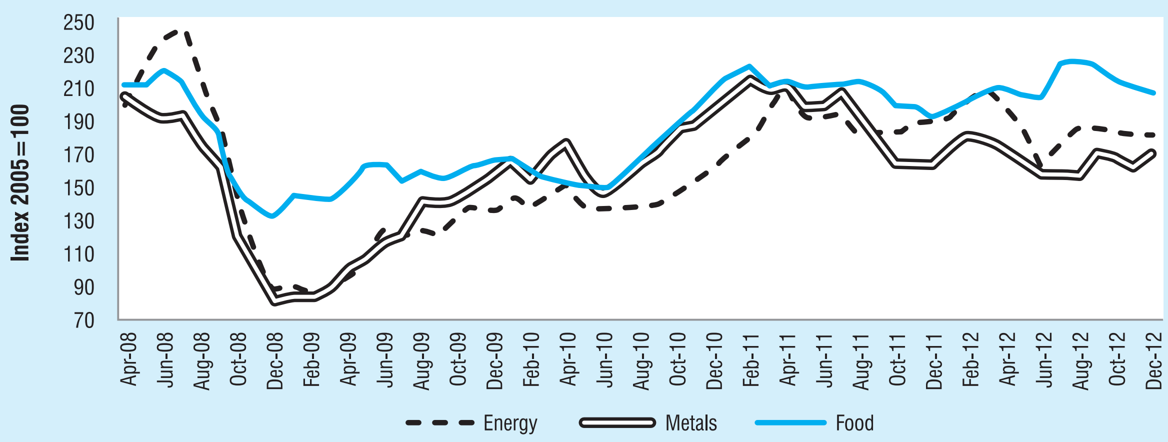
	2008	2009	2010	2011	2012	2013	2014	Forecast 2012-13	Rate of change (%) 2013-14
Energy	183	115	145	188	187	183	183	-2.6	0.1
Non-Energy	182	142	174	210	190	186	180	-2.0	-3.2
Metals	180	120	180	205	174	176	176	1.3	0.1
Agriculture	171	149	170	209	194	188	180	-3.2	-4.4
Food	186	156	170	210	212	205	192	-3.2	-6.4
Grains	223	169	172	239	244	239	225	-2.1	-6.0
Fats and oils	209	165	184	223	230	220	206	-4.2	-6.5
Other food	124	131	148	168	158	153	143	-3.1	-6.6
Beverages	152	157	182	208	166	158	155	-4.7	-2.0
Raw Materials	143	129	166	207	165	162	162	-2.2	0.4
Fertilizers	399	204	187	267	259	245	232	-5.6	-5.3
Precious Metals	158	175	272	372	378	378	353	0.0	-6.7
Crude oil ($/bbl)	97	62	79	104	105	102	102	-2.9	0.2
Gold ($/toz)	872	973	1225	1569	1670	1600	1550	-4.2	-3.1

Source **: World Bank**

The broad assessment of inflation for commodity groups by the World Bank is as under:

- Nominal oil prices are expected to average US $102/bbl in 2013 and 2014 as supplies accommodate moderate demand growth. Over the longer term, oil prices are projected to fall in real terms, due to growing supply, efficiency gains, and a substitution away from oil. While OPEC may continue to limit production, it probably will not let prices rise too high, for fear of inducing a search for alternative oil supplies or energy sources that alters the long-term price of oil.
- Overall metal prices, except copper are expected to increase. Aluminum prices may increase by 3 percent in 2013 and remain at that level in the two subsequent years due to rising power costs, and the fact that current prices have pushed some producers at or below production costs. Copper prices may decline mostly due to substitution pressures, and slowing demand. Although there are no physical constraints in metal markets, declining ore grades, environmental issues, and rising energy costs may force prices higher.
- Assuming that there are no major shifts for biofuels, agricultural prices are projected to decline in 2013. Specifically, wheat and maize prices are expected to be lower than their 2012 levels. Soybean and palm oil prices are also expected to be lower because of adequate availability.

Figure 4.12: Global Commodity Price Index



Prospects in January, 2013 has projected non-energy prices to continue to disinflate, with moderate inflation expected for energy products (Box 4.3). The impact of benign inflationary expectations internationally will have a moderating influence on commodity prices in India. Domestic prices of industrial raw materials and metals usually follow the international trend and in case of crude oil and edible oils, international prices directly impact the domestic prices because of a high import dependency.

RESIDEX

4.36 Rural urban migration is an inevitable part of economic growth. Resources are reallocated from low productivity rural sectors to high productivity urban centric activities. This, coupled with a faster productivity growth through externalities, generates economic dynamism and accelerated growth. But the migration of population from rural to urban areas exerts pressure on civic amenities and housing. Though the cost of delivering basic services is cheaper in densely populated urban centres relative to sparsely populated rural areas, investment needs to be made in civic amenities and housing. The rising share of urban population from around 17 per cent in 1951 to 30 per cent in 2011 and to an expected 50 per cent by 2040, therefore, generates both opportunities and challenges for raising resources.

4.37 Inadequate housing activities and the paucity of innovative financing schemes for housing have also created the problems of urban slums. Until recently, we did not have an index to capture the prices of residential buildings in urban areas which could be used to assess collateral values for financing housing. In an initiative which begun in 2005-6, the National Housing Bank undertook a pilot scheme for examining the feasibility of preparing a Residex, an index to capture changes in the prices of residential buildings at the national level. Residex, launched in July 2007, covers 20 cities and has been released with a quarterly frequency from 2011-12.

4.38 The pace of change of prices of residential properties varies considerably across the cities (Table 4.12). While in case of Hyderabad, Jaipur and Bangalore, there has been a decline in prices in July-September 2012 compared to the prices in 2007, Pune, Bhopal and Chennai have witnessed an increase of over 100 per cent in residential prices. Increase in prices in the other three metro cities, that is, Delhi, Mumbai and Calcutta, have also been in the range of 75 per cent to 100 per cent.

GDP Deflators

4.39 The CPI and WPI are proxy measures for inflation. But for the economy as a whole, GDP deflators whether at market prices or factor costs are more appropriate measures of the inflation in

Table 4.12 : Quarterly Movement of Housing Price Index in Major Cities (2007=100)

Cities	2011-12				2012-13		Change in prices since 2007 (%)
	Apr-Jun	Jul-Sept	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sept	
Hyderabad	91	84	79	86	85	84	-15.7
Jaipur	64	65	64	80	78	85	-14.7
Bengaluru	92	93	100	92	100	98	-1.7
Patna	146	141	140	129	140	138	37.6
Lucknow	160	154	165	164	171	175	75.0
Delhi	147	154	167	168	172	178	78.5
Ahmedabad	169	163	167	164	174	180	79.7
Kolkata	194	191	190	191	196	191	90.9
Mumbai	181	194	193	190	197	198	98.0
Pune	150	169	184	181	200	201	101.1
Bhopal	224	208	211	204	207	206	106.1
Chennai	248	271	296	304	309	312	212.0

Source **: National Housing Bank**

goods and services produced. These alternate measures match WPI but diverge somewhat from CPI-IW. In the case of CPI-IW, moderation in inflation in Q2 of 2009-10 is insignificant, largely because food inflation remained elevated during this period.

Monetary Management

Monetary Developments During 2011-12

4.40 The RBI's monetary policy stance has continued to focus on the twin objectives of containing inflation and facilitating growth (a flow chart depicting the transmission of monetary policy is at Box 4.4). Mounting inflationary pressures during January 2010 to October 2011 required adoption of a tight monetary policy by the Reserve Bank of India (RBI). During this period, RBI raised policy rates (repo rates) by 375 basis points, from 4.75 per cent to 8.5 per cent. There was a moderation in inflation from its peak of 10.9 per cent in April 2010, to an average of 7.6 per cent during April-December 2012. However, increasing risks to growth from external as well as domestic sources and tight monetary policy in face of persistent inflationary pressures has contributed to a sharper slowdown of the economy than anticipated. There has been a shift in the policy stance of RBI since October 2011 wherein it has attempted to balance growth and inflation dynamics. It reduced repo rates by 50 basis points in April, 2012 and again in January 2013 by 25 basis points and reduced the Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) to improve liquidity conditions (Table 4.13).

4.41 As per the assessment of RBI, global economic and financial conditions have continued

Table 4.13 : Revision in Policy Rates (per cent)

Effective date	Repo rate	Reverse repo rate	CRR	SLR	MSF rate*
2010-11					
20 Apr. 2010	5.25	3.75	5.75	25.00	
24 Apr. 2010	5.25	3.75	6.00	25.00	
2 Jul. 2010	5.50	4.00	6.00	25.00	
27 Jul. 2010	5.75	4.50	6.00	25.00	
16 Sep. 2010	6.00	5.00	6.00	25.00	
2 Nov. 2010	6.25	5.25	6.00	25.00	
18 Dec. 2010	6.25	5.25	6.00	24.00	
25 Jan. 2011	6.50	5.50	6.00	24.00	
17 Mar. 2011	6.75	5.75	6.00	24.00	
2011-12					
3-May-11	7.25	6.25	6.00	24.00	
9-May-11	7.25	6.25	6.00	24.00	8.25
16 Jun. 2011	7.50	6.50	6.00	24.00	8.50
26 Jul. 2011	8.00	7.00	6.00	24.00	9.00
16 Sep. 2011	8.25	7.25	6.00	24.00	9.25
25 Oct. 2011	8.50	7.50	6.00	24.00	9.50
28 Jan. 2012	8.50	7.50	5.50	24.00	9.50
10 Mar. 2012	8.50	7.50	4.75	24.00	9.50
2012-13					
17 Apr. 2012	8.00	7.00	4.75	24.00	9.00
18 Jun. 2012	8.00	7.00	4.75	24.00	9.00
11 Aug. 2012	8.00	7.00	4.75	23.00	9.00
22 Sep. 2012	8.00	7.00	4.50	23.00	9.00
03 Nov. 2012	8.00	7.00	4.25	23.00	9.00
18 Dec. 2012	8.00	7.00	4.25	23.00	9.00
29 Jan. 2013	7.75	6.75	4.25	23.00	8.75
09 Feb 2013	7.75	6.75	4.00	23.00	8.75

Source **: Reserve Bank of India (RBI).** *** *Note:* The MSF commenced from 9 May 2011.**

Box 4.4 : Transmission of Monetary Policy

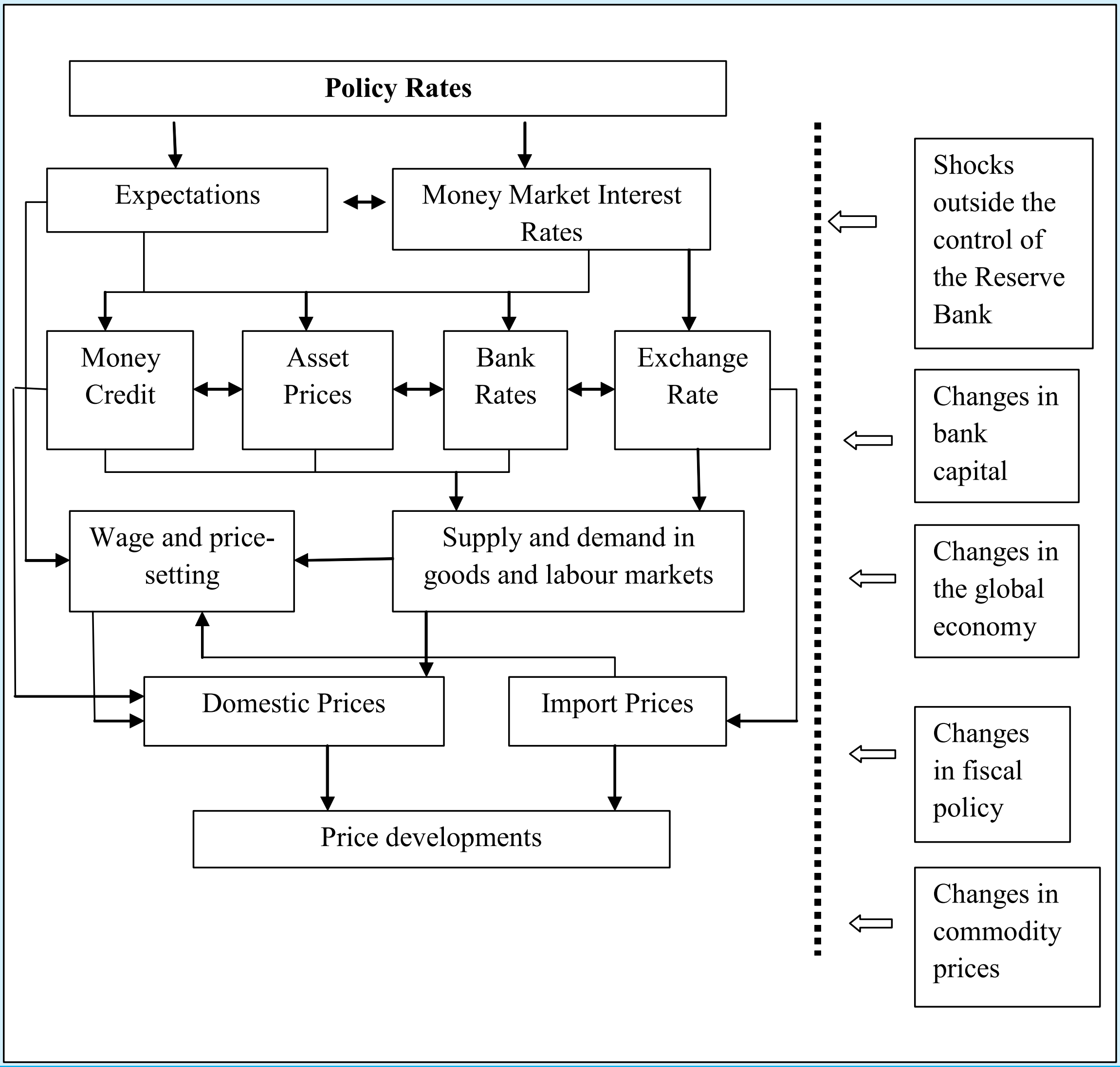
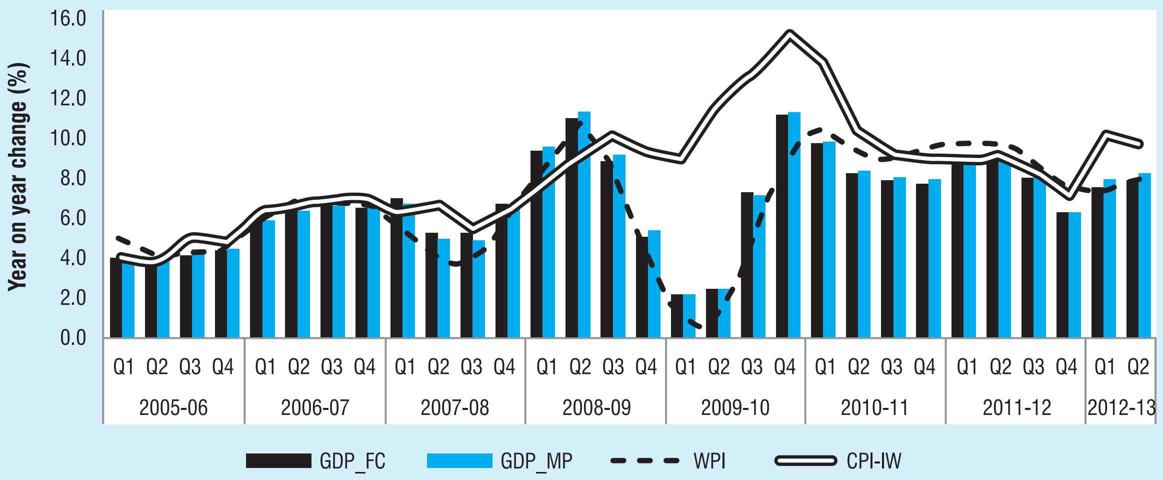


Figure 4.13: GDP growth rates Vs WPI and CPI-IW Inflation



to remain too fragile to provide any external growth stimulus to the economy. On the other hand, inflationary pressures originating from within the country and outside, particularly the depreciating rupee exerting its pressure on tradables, may make any reduction in policy rates counterproductive. Furthermore, tight liquidity conditions emerged as a risk to adequate flow of credit to productive sectors. Monetary policy therefore has continued to follow a cautious stand, which, while keeping liquidity comfortable to support growth, had to pause in its policy rate reduction during April-December 2012 due to persistent inflation risks. This cautious monetary policy stance was also considered necessary by RBI in view of mounting subsidies and deteriorating fiscal situation. Government in September 2012, however, announced a road map of fiscal consolidation with a clearly defined midterm fiscal target. It also attempted to improve the investor perception and create a favourable environment for investment. In January 2013, the Government also announced an increase in diesel prices to indicate its resolve to reduce fiscal deficit consistent with the medium term fiscal target announced earlier in September, 2012. There has been some moderation in inflation in the Q3 of 2012-13 and with the expected fiscal consolidation, the current macroeconomic situation creates room for a somewhat accommodative monetary policy.

4.42 The monetary policy stance of Reserve Bank of India in the current year was based on its projection of macroeconomic parameters for 2012-13. In its Monetary Policy Statement 2012-13 released on April 17, 2012, RBI expected GDP growth at 7.3 per cent and WPI inflation to gradually moderate to 6.5 per cent by March 2013. In its First Quarter Review of July 31, 2012 while the growth projection was revised downwards to 6.5 per cent, the WPI inflation projection was revised upwards to 7.0 per cent. Consistent with this growth and inflation expectation, it set a target of M3 and non-food credit growth of 15 per cent and 17 per cent, respectively. In its Second Quarter Review on October 30, 2012, RBI reduced its projection of GDP growth further to 5.8 per cent and revised its inflation projection upwards to 7.5 per cent. The indicative targets of M3 and credit growth, therefore, were revised downwards to 14 per cent and 16 per cent, respectively. RBI in its Third Quarter Review of monetary policy on January 29, 2013 reduced its GDP projection to 5.5 per cent with expected inflation also moderating to 6.8 per cent by March 2013. Further, M3 growth projections were lowered to 13.0 per cent even though credit growth was retained at 16.0 per cent. Movement of the monetary aggregates, however, indicate that the growth of broad money and credit have been below the indicative levels set by RBI.

4.43 The moderation in growth and nearly flat inflation at around 7-8 per cent in the current year also affected the growth of aggregate deposits, from an average of 17.4 per cent in Q1 of 2011-12 to 12.9 per cent in Q3 of 2012-13. The rate of growth of bank credit also moderated from its peak of 21.7% in Q1 of 2011-12 to around 16-17% in the last 2 quarters. A lower deposit growth, notwithstanding the moderation in credit growth has given rise to an asset-liability gap, which is also indicated by the increase in the credit-deposit ratio (Table 4.14) Moderating growth and deceleration in capital

Table 4.14 : Movement of Key Monetary Aggregates (y-o-y growth rates in per cent)

	2010-11	2011-12	2011-12				2012-13		
			Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP (at current market prices)	18.8	15.4	18.9	16.6	14.8	12.2	12.2	11.3	-
Reserve Money (Mo)	21.5	14.1	17.6	15.9	14.7	8.7	7.3	6.5	4.3
Broad Money (M3)	16.2	15.8	17.3	16.8	15.4	13.8	14.2	13.6	12.6
Aggregate Deposits	15.7	16.2	17.4	17.2	16.0	14.3	14.7	14.0	12.9
Bank Credit	21.3	18.7	21.7	19.6	17.6	16.4	18.1	16.8	16.5
Investments	9.4	14.3	10.3	15.5	15.5	15.7	16.1	14.4	15.2
Velocity of Money (M3/GDP)	1.28	1.27	1.22	1.20	1.31	1.35	1.20	1.17	-
Money Multiplier (M3/M0)	5.0	5.0	4.92	5.03	5.07	5.12	5.24	5.37	5.44
CD Ratio (per cent)	73.3	74.7	74.3	73.5	74.3	76.4	76.5	75.4	76.7

Source **: RBI**

Table 4.15 : Component and Sources of Reserve Money (y-o-y growth rates in per cent)

			2011-12				2012-13		
	2010-11	2010-12	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Reserve Money	21.5	14.1	17.6	15.9	14.7	8.7	7.3	6.5	4.3
Components of Reserve Money									
Currency in circulation	19.2	14.1	17.1	14.6	12.8	12.3	12.3	13.3	11.7
Bankers' Deposits with RBI	29.1	14.8	19.5	20.0	20.9	0.9	-6.4	-11.0	-15.5
Currency as % of Mo	73.1	73.2	73.4	72.1	72.6	74.5	76.9	76.7	77.8
Sources of Reserve Money									
Net foreign exchange assets of RBI	0.9	11.9	9.1	11.1	19.1	8.2	14.4	9.0	1.6
Currency Liabilities to the Public	13.0	6.4	10.2	4.7	5.3	5.5	8.3	14.3	13.6
Net Non-Monetary liabilities of RBI	-8.7	45.7	25.0	32.2	71.4	51.8	74.1	49.9	19.0
FE assets as % to Mo	107	105	100	106	111	102	106	108	108

Source **: RBI**

formation, however, increased the flow of banking sector funds to investment in government and other securities.

Reserve Money (M_0)

4.44 The rate of growth of reserve money comprising currency in circulation and deposits with RBI (bankers and others) decelerated from an average of 17.6% in Q1 of 2011-12 to 4.3% in Q3 of 2012-13. Almost the entire increase in the reserve money of ₹ 2381 billion between Q3 of 2011-12 and Q3 of 2012-13 consisted of increase in currency in circulation. As sources of reserve money, net RBI credit to Government and increase in net financial assets of RBI contributed to the growth of base money. The rate of growth of base money was muted largely because of an increase in non-monetary liabilities of RBI which increased from ₹ 1572 billion in 2011-12 to ₹ 3596 billion between Q3 of the current year to Q3 of 2011-12. Though net foreign exchange assets constituted more than 100% of the base money, rate of growth of acquisition of NFA has moderated considerably, and was 1.6% in Q3 of 2012-13. Increase in net monetary liabilities of RBI was particularly sharp in 2011-12 and first 2 quarters of the current year. Currency constituted nearly 3/4th of the base money.

Broad money (M_3)

4.45 The rate of growth of broad money (M3) was not only lower than the indicative growth set by the Reserve Bank of India but also it witnessed continuous and sequential deceleration in the last 7 quarters. Overall M3 growth moderated to 11.2% in December, 2012. Aggregate deposits with the banks were the major component of broad money counting for over 85% of total M3 and this share has almost remained stable. The sources of broad money are net bank credit to the Government and to the commercial sector. These two together

Figure 4.14: Rate of growth of Reserve Money and Share of currency and FE assets in M_0

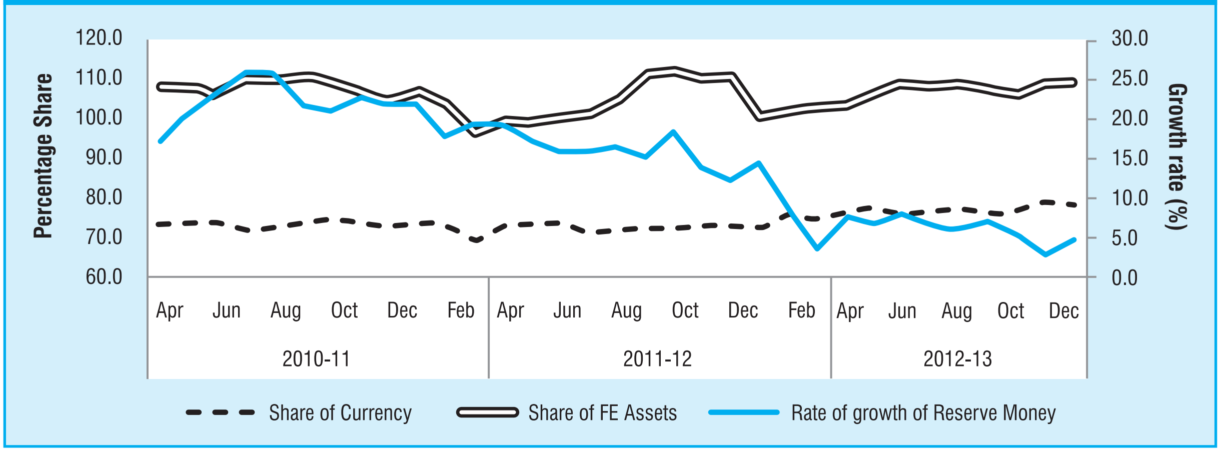
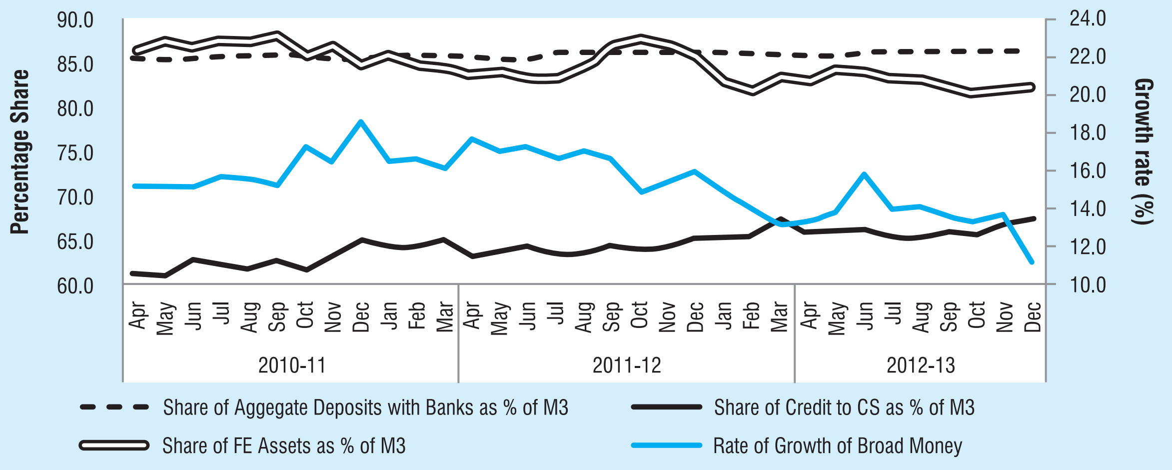


Table 4.16 : Components and Sources of Broad Money

Rs Billion	2010-11	2011-12	2011-12 Q1	Q2	Q3	Q4	2012-13 Q1	Q2	Q3
Broad Money	16.2	15.8	17.3	16.8	15.5	14.0	14.3	13.9	12.7
Components of Money Stock									
Currency with the public	19.2	14.0	16.9	14.4	12.6	12.2	12.1	13.1	11.7
Aggregate deposits with banks	15.7	16.2	17.4	17.2	16.0	14.3	14.7	14.0	12.9
Aggregate deposits with banks as % to M3	85.8	86.1	85.6	86.3	86.3	86.0	85.9	86.4	86.4
Sources of M3									
Bank Credit to Government	21.5	21.8	18.9	22.1	23.1	23.1	22.1	20.2	17.7
Bank credit to Commercial Sector	20.6	18.7	21.6	19.6	17.7	16.6	18.2	17.0	16.4
Net FEA of the banking sector	0.9	11.4	9.6	10.2	17.5	8.3	14.4	9.1	1.4
Net Currency Liability to the public	13.0	6.4	10.2	4.7	5.3	5.5	8.3	14.3	13.6
FE Assets as % to M3	22.3	21.5	21.1	21.6	22.5	20.6	21.1	20.7	20.3
Credit to Commercial Sector as % to M3	63.0	64.6	63.9	63.8	64.5	66.1	66.1	65.5	66.6

Source **: RBI**

Figure 4.15: Broad Money-Key Parameters



accounted for nearly 100% of the broad money in 2012-13 compared to 89% in 2009-10. The rate of growth of the bank credit to the commercial sector, however, declined from an average of 21.6% in Q1 of 2011-12 to 16.4% in Q3 of 2012-13. The rate of growth of bank credit to Government continued to be sticky at over 20% until Q2 of 2012-13 before moderating to 17.7% in Q3. Though the rate of growth of foreign exchange assets of the banking sector witnessed a decelerating trend, their share in overall broad money continued to remain at around 20%.

4.46 At end March 2012, the money multiplier (ratio of M_3 to M_0) was 5.2, higher than end-March 2011, aided by the cumulative 125 basis point reduction in CRR cut effected in Q4 of 2011-12. During the current financial year 2012-13, the money multiplier has generally stayed high reflecting the CRR cuts. As on December 28, 2012, the money multiplier was 5.5 compared with 5.2 on the corresponding date of the previous year.

Liquidity Management

4.47 One of the objectives of the monetary policy is to provide adequate liquidity to the economy. A liquidity deficit, however, is considered necessary for quicker and correct signaling of the monetary policy stance. The medium term trend indicates a widening liquidity deficit, requiring liquidity injection often exceeding the 1 per cent level of net demand and time liabilities considered comfortable by RBI (Figure 4.15). During 2011-12, liquidity conditions had remained benign until mid-November, but pressures intensified in the subsequent part of the year, with average net borrowing under the liquidity adjustment facility (LAF) reaching as high as ₹ 1,570 billion in March 2012, with an all-time high of ₹ 2,028 billion on March 30, 2012. Both structural and frictional factors – such as foreign exchange market interventions by the RBI, divergence between credit and deposit growth and build-up of government cash balances with RBI– contributed to the liquidity pressures. Responding to the tight liquidity conditions, the RBI had conducted open market operations (OMOs) aggregating ₹ 1.3 trillion between November 2011 and March 2012, besides sequentially reducing CRR, injecting thereby primary liquidity of around ₹ 0.8 trillion into the banking system.

4.48 Liquidity conditions eased gradually during the first half of 2012-13. The turnaround in liquidity conditions was due to a decline in government's cash balances, injection of liquidity of about ₹ 860 billion by way of OMOs purchases of securities and increased use of the export credit refinance facility by banks. Reduction in SLR by one percentage point also improved the access of banks to potential liquidity. In September and October 2012 liquidity conditions, however, tightened taking the average net LAF borrowing to ₹ 904 billion since October 15, 2012, which was well above the (+/-) one per cent of net demand and time liabilities (NDTL) comfort level for liquidity. On the basis of prevailing macroeconomic situation, the Reserve Bank (in the Second Quarter Review of Monetary Policy 2012-13, announced on October 30, 2012) reduced the cash reserve ratio (CRR) of scheduled banks by 25 basis points from 4.50 per cent to 4.25 per cent of their net demand and time liabilities (NDTL) effective from the fortnight beginning November 3, 2012. Consequently, an estimated amount of around Rs.175 billion of primary liquidity was injected into the banking system. The average daily net liquidity injection under the LAF increased to around Rs.670 billion in October 2012 from around Rs.520 billion in September 2012. The liquidity stress continued in November 2012 with average daily net liquidity injection under the LAF increasing to Rs.940 billion. The liquidity conditions tightened further in the second-half of December 2012 on account of quarterly advance tax outflows, and the average daily net liquidity injection under the LAF increased significantly to around Rs.1230 billion during the month.

4.49 The liquidity conditions remained above the Reserve Bank's comfort zone during most of the third quarter of 2012-13. Consistent with the stance of monetary policy and based on the current assessment of prevailing and evolving liquidity conditions, the Reserve Bank resumed Open Market Operations (purchase of government securities) on December 4, 2012 after a gap of nearly five months. Total purchase under OMO auctions stood at around Rs.1060 billion during 2012-13 so far (till January 7, 2013), while total purchases through the anonymous trading platform (NDS-OM) stood at around Rs.228.7 billion during this period. Although the Reserve Bank

Figure 4.16: Net Injection/Absorption of Liquidity

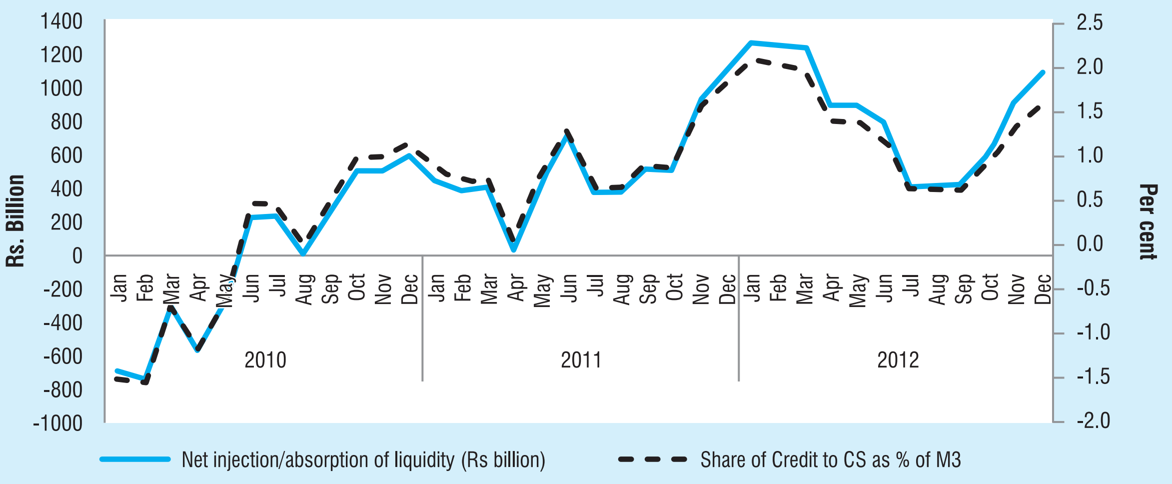
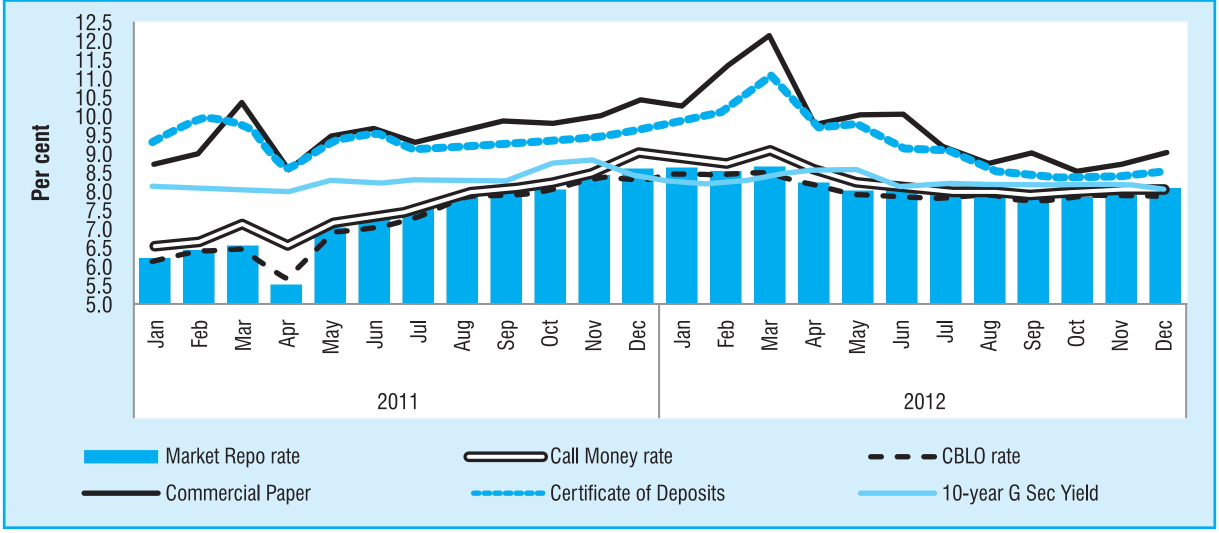


Figure 4.17: Interest Rates for various Money Market Instruments



lowered the cash reserve ratio, CRR, successively in September and October 2012, and carried out open market operations (OMO) injecting systemic liquidity of '470 billion during December and January to augment liquidity, the average net LAF borrowings at '929 billion in January were above the Reserve Bank's comfort level. This tightness could potentially hurt credit flow to productive sectors of the economy. The structural deficit in the system provided a strong case for injecting permanent primary liquidity into the system. Accordingly, the RBI lowered the CRR from 4.25 per cent to 4.0 per cent in its third quarter review of Monetary Policy, effective from February 9, 2013. By the end of first week of February, LAF borrowings had declined to the RBI's comfort level.

Money Market

4.50 Money markets have remained orderly during 2012-13 so far. As a result of the reduction in the policy (repo) rate in the Annual monetary policy statement 2012-13 (released on April 17, 2012) and improvement in liquidity conditions, the average daily call money rate declined to 7.92 per cent in September 2012 from 8.14 per cent in June 2012 (9.17 per cent in March 2012). Call money rates in latter months have moved in a narrow range (Fig 4. 16). Interest rates on commercial paper and certificate of deposits also peaked in March 2012 and decelerated thereafter in line with the moderation in interest rates for other instruments.

4.51 Banks and primary dealers remained the major groups of borrowers in the collateralized segments, while mutual funds (MFs) remained the major group of lenders in the collateralized borrowing and lending obligation (CBLO) segment. But, recently, the share of MFs in total lending has declined in the market repo segment, and nationalized banks have emerged as the major group of lenders in this segment. The collateralized segment continued to remain the predominant segment of the overnight money market; its share was around 78 per cent during the financial year (till December 2012).

4.52 *Certificates of Deposit (CD)* - The amount of outstanding CD declined from around Rs.4195 billion at end-March 2012 to around Rs.3030 billion at mid-December 2012, which indicates decline in net issuances. The weighted average effective interest rate (WAEIR) of CDs declined to 8.6 per cent at mid-December 2012 from 11.1 per cent at end-March 2012.

4.53 *Commercial paper (CP)*- During 2012-13 so far, the commercial paper (CP) market also picked up and the average size of fortnightly issuance increased significantly to ₹ 317 billion (till end December 2012). The weighted average discount rate decreased to 9.04 per cent in December 2012 from 12.2 per cent in March 2012.

Challenges and Outlook

4.54 The headline WPI inflation has remained muted in the current financial year and declined to a three year low of 6.62 per cent in January 2013

Table 4.17 : Volume in Money market

(in ₹ billion)

Month	LAF Average of the month		Call money		Market Repo		CBLO		CP Out-standing (as on last day of the month)		CP Out-standing (as on last reporting friday)	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
January	-929	-1292	78	173	115	89	448	280	1018	1499	3776	3909
February	-786	-1405	104	142	132	122	423	331	1013	1618	4185	4029
March	-810	-1574	113	175	151	112	432	380	803	912	4247	4195
April	-188	-1029	134	250	144	143	562	377	1250	1310	4474	4448
May	-546	-986	110	185	159	151	409	339	1212	1498	4333	4394
June	-741	-913	116	152	167	180	413	376	1047	1258	4238	4252
July	-438	-481	115	146	117	173	410	382	1337	1732	4122	4155
August	-407	-462	113	129	148	183	391	459	1488	1879	4057	4030
September	-559	-517	138	143	139	185	451	502	1446	1706	3835	3572
October	-541	-671	129	150	132	218	416	436	1688	1941	3859	3531
November	-916	-941	110	141	133	207	329	368	1735	1994	3784	3066
December	-1167	-1231	149	142	99	147	265	398	1341	1818	4030	3031

Source **: RBI**

backed by moderation in the non food manufacturing sector. However, CPI inflation has shown a rising trend in the past couple of months mainly on account of higher food inflation leading to a higher gap between WPI and CPI. Unlike last year when the food price inflation was mainly driven by higher protein food items, this year the pressure has been mounting in cereals. On the other hand milk and other protein items have shown a welcome decline. The recent increase in onion prices in January 2012 and revision in diesel prices may put some pressure on headline inflation. However, with moderation in non food manufacturing sector and global commodity prices, the headline WPI inflation may decline to 6.2 to 6.6 per cent in March 2013.

4.55 Inflation has eased in almost all major advanced and emerging market economies in the current year. The positive effect of continuous policy easing by the major advanced and developing countries could pose a higher risk to inflation expectations and may be considered as an upside risk to inflation forecast. However, in the short run, given weak growth sentiments, the impact of policy easing may not lead to a surge in inflation and inflation expectations may remain anchored around current target inflation rates.

4.56 As per the World Bank's global economic prospects, January 2013, except for metals, most global commodity prices are expected to decline further in 2013 and 2014. The impact of benign inflationary expectations internationally will have a moderating impact on domestic prices. Given that India faces a number of constraints on the supply side, in the short run, curbing demand moderately to catch up with supply may be an effective tool. However, in the long run, measures to improve supply are the only way to have non-inflationary growth.

4.57 The RBI's monetary policy stance has continued to focus on the twin objectives of containing inflation and facilitating growth. Increasing risks to growth from external as well as domestic sources and tight monetary policy in face of persistent inflationary pressures have contributed to a sharper slowdown of the economy than anticipated. There has been some moderation in inflation in Q3 of 2012-13 and with the expected fiscal consolidation the current macroeconomic situation creates room for a more accommodative monetary policy. Further, with a significant part of inflation getting generated because of poor supply responses, a further shift in the policy stance of RBI, coupled with improving access to credit with moderation in its cost, would be desirable.