

Inflation Monitor

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Overview

Consumer price inflation (CPI), on year on year (YoY) basis, surged to 14.1 percent in March 2008, the highest inflation in a month since April, 1995. While the rise in CPI inflation is attributed to both increases in food and non-food inflation, the impact of a jump in the former is more pronounced. The food inflation recorded at 20.6 percent during March 2008, the highest rise seen since February, 1995, mainly due to increases in the prices of essential food items including ghee, cooking oil, and vegetables. Apart from the food group, the *house rent index (HRI)*, *fuel & lighting*, *transport & communication*, and *cleaning & laundry* sub-groups witnessed higher YoY inflation during March 2008 compared to the same month last year. The increase in inflation in *fuel & lighting* as well as *transport & communication* sub-groups is mainly a result of an upward adjustment in the domestic prices of key fuels amid soaring international oil prices and deteriorating fiscal position of the government. Similarly, a continued acceleration in HRI is largely a consequence of rising international metal prices. Inflation measured by the two other measures, wholesale price index (WPI) and sensitive price indicator (SPI) also witnessed a sharp jump in March 2008 compared with the same month last year (see **Table 1.1**).

	percent						
	CPI			Core Inflation		WPI	SPI**
	General	Food	Non-food	NFNE *	Trimmed		
Mar-07	7.7	10.7	5.5	5.9	6.7	6.1	8.9
Apr-07	6.9	9.4	5.2	5.6	6.6	6.0	7.7
May-07	7.4	11.3	4.7	5.2	6.2	6.8	8.3
Jun-07	7.0	9.7	5.1	5.7	6.5	7.3	8.0
Jul-07	6.4	8.5	4.9	6.0	6.6	7.6	7.5
Aug-07	6.5	8.6	4.9	6.0	6.7	8.0	7.6
Sep-07	8.4	13.0	5.0	6.1	8.0	9.3	9.8
Oct-07	9.3	14.7	5.4	6.5	8.3	11.8	10.7
Nov-07	8.7	12.5	5.9	6.9	8.6	12.6	9.0
Dec-07	8.8	12.2	6.3	7.2	8.7	12.2	9.2
Jan-08	11.9	18.2	7.3	7.8	9.6	15.5	13.1
Feb-08	11.3	16.0	7.8	8.1	9.6	16.4	12.3
Mar-08	14.1	20.6	9.4	9.3	11.3	19.8	16.2

* NFNE is Non-food non-energy inflation; **SPI for all income groups combined.

The significant increase in CPI inflation reflected in annualized trend of inflation measured by 12-month moving average (12-mma). The 12-mma CPI inflation increased to 8.9 percent during March 2008 compared to 7.8 percent in the same month last year, principally driven by double digit annualized food inflation since May 2007. A continuously rising YoY CPI food inflation pushed up the 12-mma food inflation to 13.0 percent in March 2008, compared to 9.2 percent during the

same period last year. On the other hand, 12-mma non-food inflation showed a decline of 0.7 percentage points (6.0 percent in March 2008 compared to 6.7 percent in March 2007).

CPI on monthly basis in March 2008, increased to 3.1 percent compared to 0.5 percent in February 2008. Monthly food inflation also showed a significant increase and was recorded at 4.9 percent in March 2008, primarily due to increase in the prices of vegetable ghee, cooking oil rice etc. Non-food inflation also increased to 1.7 percent on MoM basis in the month under review (see **Table 1.2**). This rise in non-food inflation is attributed to a rise in *fuel & lighting* sub-group prices on account of record high crude oil prices in the international market.

Following the trend in headline CPI inflation, both measures of core inflation (non-food non-energy and 20 percent trimmed mean) continued to show uptrend since June 2007, reflecting continued strength of inflationary pressures. NFNE based core inflation (YoY) increased to 9.3 percent in March 2008 from 5.9 percent in corresponding month of last year. Similarly core inflation based on 20 percent trimmed-mean, accelerated to 11.3 percent (YoY) in March 2008 compared to 6.7 percent during the same month last year.

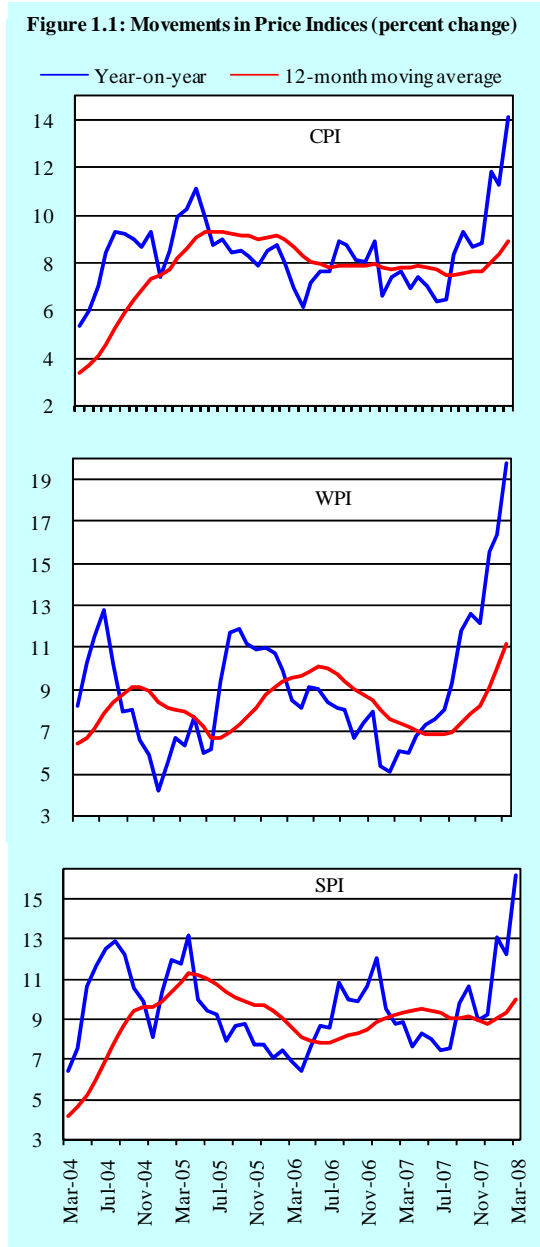
Table 1.2: Different Dimensions of Inflation (percent)

	Mar-06	Mar-07	Mar-08	5-year average
Year-on-year (Mar over Mar)				
Overall CPI	6.9	7.7	14.1	8.9
Food group	5.4	10.7	20.6	11.5
Non-food group	8.0	5.5	9.4	7.0
Core Inflation				
NFNE*	7.1	5.9	9.3	6.8
Trimmed	6.4	6.7	11.3	7.5
Period average (July-Mar over July-Mar)				
Overall CPI	8.2	8.0	9.5	7.3
Food group	7.4	10.3	13.8	8.7
Non-food group	8.9	6.4	6.3	6.3
Core Inflation				
NFNE*	7.8	6.1	7.1	6.2
Trimmed	7.4	6.7	8.7	7.0
12-month moving average				
Overall CPI	8.6	7.8	8.9	7.5
Food group	8.6	9.2	13.0	9.3
Non-food group	8.7	6.7	6.0	6.2
Core Inflation				
NFNE*	7.8	6.2	6.7	6.1
Trimmed	7.8	6.8	8.4	6.9
Monthly (Mar over Feb)				
Overall CPI	0.2	0.5	3.1	0.7
Food group	0.2	0.9	4.9	1.2
Non-food group	0.3	0.2	1.7	0.4
Core Inflation				
NFNE*	0.4	0.2	1.3	0.6
Trimmed	0.4	0.4	2.1	0.9

* NFNE is Non-food non-energy inflation

The inflationary pressures seen in headline CPI inflation also visible in WPI during March 2008. WPI inflation continued its rising momentum during the current fiscal year and reached 19.8 percent in March 2008, significantly higher than the 6.1 percent level in the same month last year. This steep rise was due to high food and non-food groups inflation. WPI food inflation was recorded at 21.0 percent in March 2008, compared to 9.3 percent in March 2007. The non food group of WPI witnessed a YoY inflation of 18.9 percent in March 2008 – the highest level since February 1997 – compared to 3.9 percent during the same month last year. Item wise breakup of WPI basket exhibited that the wholesale prices of vegetable ghee, cooking oil, diesel, kerosene oil, fertilizers, rice, maida, fresh milk, chemicals and cotton witnessed double digit YoY rise in February 2008.

Sensitive Price Indicator (SPI) too, exhibited YoY acceleration in March 2008 and was recorded at 16.2 percent compared to 8.9 percent in the corresponding month last year (see **Figure 1.1**).



2. Consumer Price Index

CPI inflation (YoY) was recorded at 14.1 percent during March 2008, compared to 7.7 percent in March 2007. Food inflation (YoY) reached 20.6 percent in March 2008 against 10.7 percent in March 2007, the highest since February 1995. Non-food inflation (YoY) was recorded at 9.4 percent for the month under review compared to 5.5 percent in the same month last year (see **Figure 2.1**).

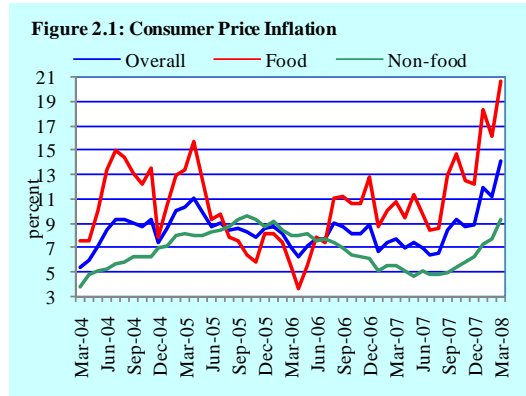
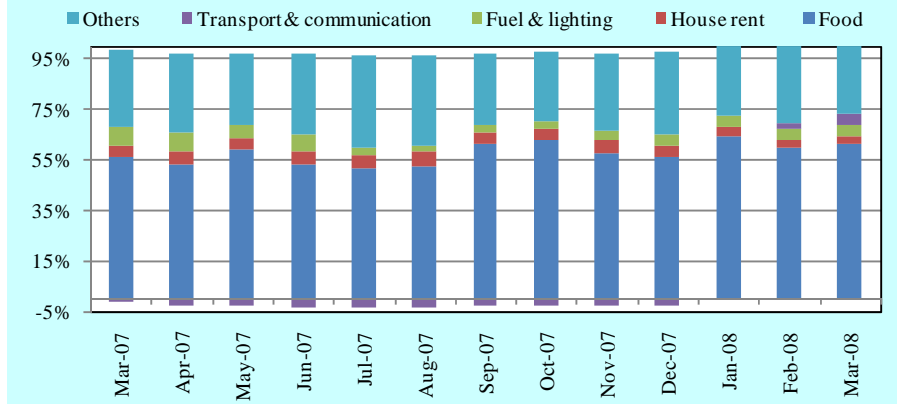


Figure 2.2: Weighted Contribution to CPI Inflation (YoY)

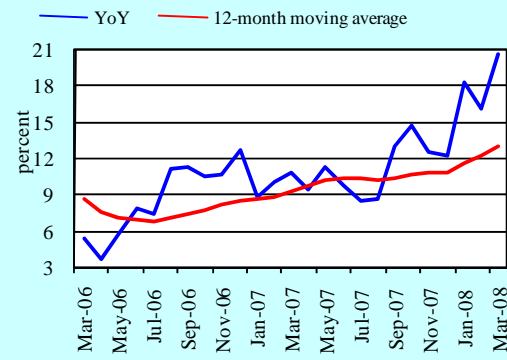


Contribution of food group in overall inflation increased to 61.6 percent in March 2008 from 57.4 percent during March 2007. The contribution of non-food group in overall inflation decreased to 38.4 percent in March 2008 from 42.6 percent in March 2007. This was mainly on account of decrease in the weighted contributions of some of sub-groups of non-food group. The contribution of house rent index (the largest item of the CPI basket) decreased to 17.6 percent in March 2008 from 19.8 percent in March 2007. Whereas a significant increase was recorded in the *transport & communication* sub-group weighted contribution to the overall CPI inflation. The contribution of *transport & communication* sub-group increased to 4.6 percent in March 2008 from -1.5 percent in March 2007. (see **Figure 2.2**).

2.1 Food Inflation

Food inflation (YoY) increased from 10.7 percent in March 2007 to 20.6 percent (YoY) in March 2008 highest since February 1995. This significant increase in food inflation is mainly due to sharp increase of food items both in domestic and international market. The commodities which exhibited sharp rise like cooking oil, vegetable ghee, rice, wheat are directly or indirectly linked with international commodity market. Some vegetables also showed sharp increase due to supply shortage.

Figure 2.3: CPI Food Inflation



A detailed analysis of the CPI food basket shows that out of the total 124 commodities under the food group, 66 commodities including tomatoes, vegetable ghee, mustard oil, rice, wheat, chilli powder and milk fresh etc. exhibited double digit YoY price change in the range of 10 to 80 percent in March 2008. A significant increase of 244.9 percent was recorded in the prices of chillies green during March 2008. The combined weight of food commodities with double digit price change was 62.3 percent of the food group. On the other hand, prices of 13 commodities including key staples such as onion, eggs, potatoes, sugar, pulse moong and garlic etc. either declined or remained unchanged during the month under review. The rest of the commodities, having an aggregate weight of about 18.4 percent in the food group, recorded subdued or moderate price change (see **Table A2** in Annexure A).

On month over month (MoM) basis, increase was witnessed in the average prices of food commodities such as chicken, cooking oil, pulse masoor, carrot, radish and some fruits during March 2008 compared to February 2008. A significant one month increase in average price of chillies green (170.0 percent) was recorded in March 2008. Price of onion, maida, wheat flour, sugar, etc. either declined or showed no change during March 2008 (see **Figure 2.4**).

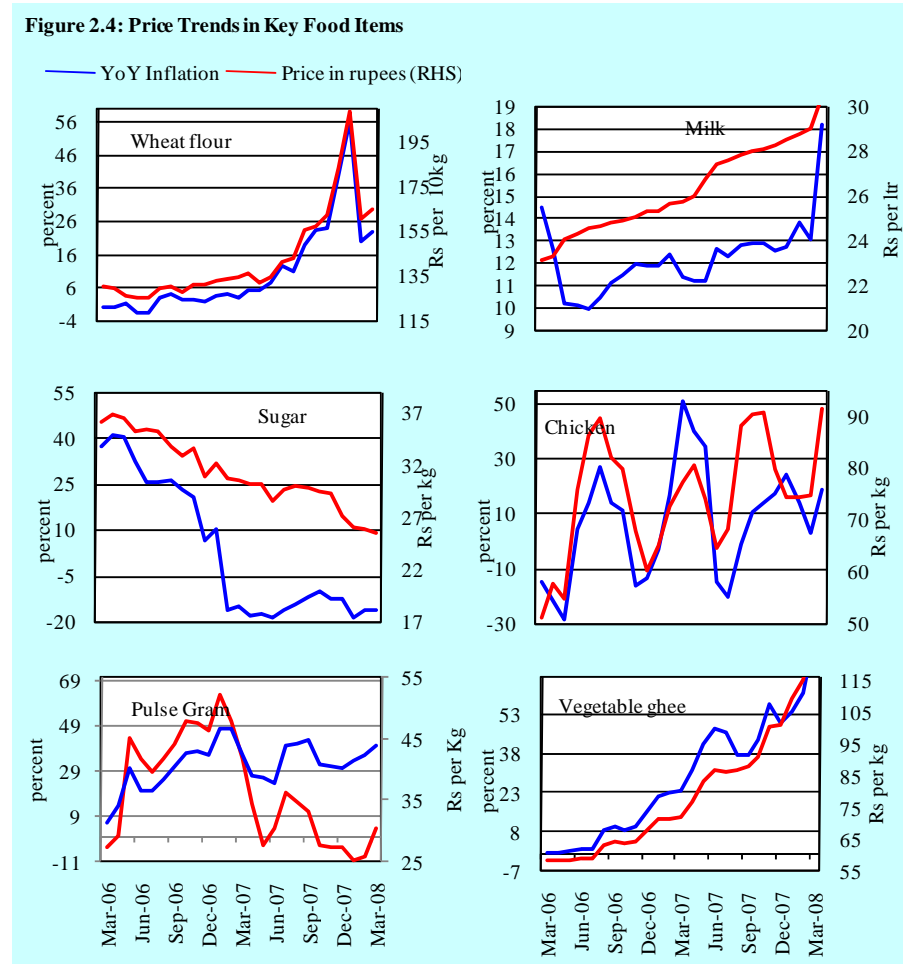


Table A3 shows contribution of top ten items in overall inflation during March 2008. Eight out of top10 items are from the food group. These items include vegetable ghee, wheat flour, fresh milk, vegetables, rice, tomatoes, cooking oil and readymade food. Combined contribution of these food items remained 55.3 percent in the overall inflation during March 2008 (see **Table A3** in the Annexure). Moreover, within food groups, vegetable ghee, wheat flour, milk fresh, vegetables, rice and tomatoes contributed about 81.0 percent to the food inflation during March 2008.

2.2 Non-food Inflation

Acceleration in non-food inflation (YoY) continued for the seventh consecutive month and was recorded at 9.4 percent in March 2008 as compared to 5.5 percent during the same month last year (see **Figure 2.5**). This upward movement in non-food inflation was mainly contributed by increase in *fuel & lighting, transport & communication* and *house rent index* sub-groups inflation during March 2008.

Increase in prices of bricks, iron bars & sheets, pipe fittings and timber contributed in rising trend in *house rent index* has continued since June 2007 and recorded 10.6 percent (YoY) inflation in March 2008 compared to 6.4 percent in the same month last year (see **Figure 2.6**).

Transport & communication sub-group witnessed a significant increase and was recorded at 8.7 percent in March 2008 compare to -1.4 percent in the corresponding month last year. The rise in this sub-group is mainly due to rise in the prices of petrol, high speed diesel and CNG.

Apparel, textile & footwear sub-group witnessed a decrease and was recorded at 6.9 percent in March 2008 compared to 7.3 percent in March 2007. Comparing to February 2008 this sub-group showed slight increase of 0.2 percentage points.

Fuel & lighting sub-group inflation witnessed a significant increase of 1.5 percentage points and was recorded at 8.5 percent in March 2008, compared to 7.0 percent in corresponding month last year. The *cleaning, laundry & personal appearance* sub-group continued its uptrend for the 10th consecutive month and further accelerated to 15.9 percent in March 2008 compared to 4.8 percent during the corresponding month last year. Main reasons for double digit inflation (YoY)

Figure 2.5: CPI Non-food Inflation

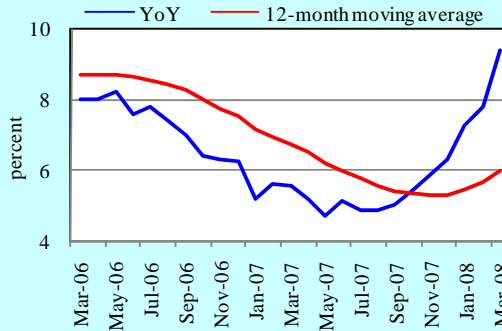
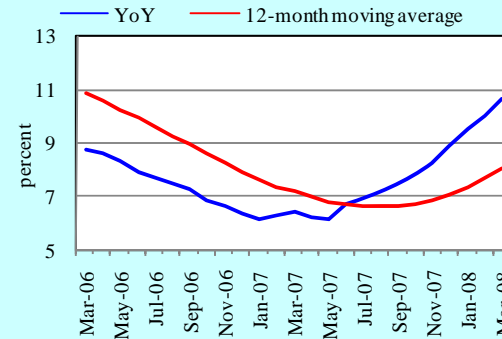


Figure 2.6: House Rent Inflation



in this sub-group was the significant increase in prices of soaps, silver, gold and detergents.

The YoY inflation in *medicare* sub-group showed a decline and was recorded at 6.5 percent during March 2008, compared to 10.8 percent in corresponding month last year. Inflation (YoY) in *household furniture & equipment* sub-group showed deceleration in March 2008 and was recorded at 7.0 percent as compared to 7.4 percent in the same month last year.

Inflation in *recreation & entertainment* sub-group showed increase and was recorded at 0.9 percent in March 2008, compared to -0.2 percent in February 2008. YoY inflation in the *education* sub-group declined and was recorded at 3.5 percent in March 2008 compared to that of 7.9 percent during the corresponding month last year (see **Figure A1** in Annexure).

Detailed item-wise analysis of non-food group inflation (YoY) during March 2008 exhibits that out of the 250 non-food commodities included in the CPI basket, 59 commodities witnessed double digit inflation. That includes items such as gold and silver tezabi, gas cylinder, kerosene oil and doctors clinic fee, etc. Seventy five commodities showed moderate inflation in the range of 5 to 10 percent; all other commodities witnessed either YoY deflation or inflation of less than 5 percent (see **Table A2** in the Annexure). Commodities that showed deflation or no change included Urdu and English books, telephone charges, a number of durable goods like computer CD rom, etc (see **Table A4** in the Annexure).

2.3 City-wise Inflation

City-wise data reveals that the inflationary pressures remained strong in all major cities during March 2008. City-wise inflation of provincial capitals Lahore, Karachi, Quetta and Peshawar was recorded at 12.0, 13.3, 13.8 and 15.8 percent respectively in March 2008 as compared to 7.9, 7.2, 7.5 and 5.9 percent in the corresponding month last year. The inflation (YoY) also remained strong in capital city Islamabad and was recorded at 11.6 percent in the month under review compared to 9.0 percent in March 2007. It is worth mentioning that inflation (YoY) in capital city and three provincial capitals was lower than overall CPI inflation except provincial capital Peshawar (see **Table 2.1**).

Table 2.1: City wise Inflation of Selected Cities						percent
	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
Mar-07	7.7	9.0	7.9	7.2	7.5	5.9
Apr-07	6.9	8.1	7.2	6.5	7.9	5.8
May-07	7.4	8.2	7.5	7.6	8.7	7.1
Jun-07	7.0	7.8	6.9	7.4	7.6	7.7
Jul-07	6.4	7.3	6.1	6.9	6.4	5.9
Aug-07	6.5	7.8	6.5	7.7	7.1	5.7
Sep-07	8.4	7.6	7.9	8.1	7.8	8.6
Oct-07	9.3	8.6	7.8	10.0	10.1	9.5
Nov-07	8.7	8.0	7.0	8.7	9.8	9.8
Dec-07	8.8	7.7	7.5	8.1	9.0	9.2
Jan-08	11.9	9.1	10.1	10.7	12.3	12.2
Feb-08	11.3	9.8	10.4	9.8	11.1	11.4
Mar-08	14.1	11.6	12.0	13.3	13.8	15.8

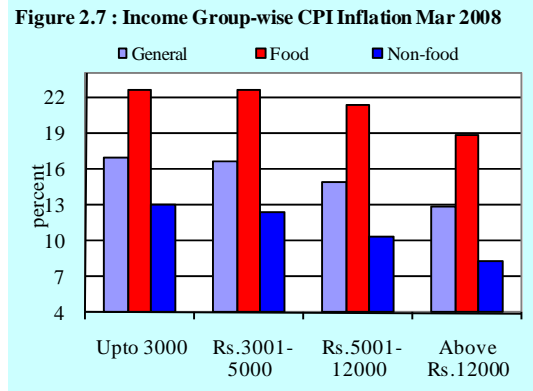
The inflation data of 35 cities exhibited that inflation in 21 cities was above average and below national average in the remaining 14 cities. **Table 2.2** exhibited that the highest level of YoY inflation was recorded in Nawabshah (19.1 percent) followed by Shahdadpur (18.4 percent) and Samundari (18.1 percent) during March 2008. The lowest YoY inflation was recorded in Okara (10.4 percent) during the month under review.

Table 2.2: City wise CPI Inflation (YoY), March 2008							
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Nawabshah	19.1	26.7	14.0	Attock	14.1	21.0	9.3
Shahdadpur	18.4	24.8	14.0	Bahawalpur	13.9	21.8	8.0
Samundari	18.1	24.2	13.7	Jhelum	13.8	18.5	10.3
Loralai	17.9	22.6	14.6	Quetta	13.8	18.6	10.2
Hyderabad	17.7	24.7	12.6	Multan	13.4	21.7	7.3
Mardan	17.6	24.9	12.4	Karachi	13.3	20.2	8.5
Sukkur	16.9	23.9	12.1	Turbat	13.2	14.0	12.6
Gujranwala	16.9	23.6	12.0	Sialkot	13.0	18.9	8.4
Mianwali	16.7	22.9	12.1	D.I.Khan	12.6	18.0	8.7
Bahawalnagar	16.4	19.4	14.2	Sargodha	12.6	15.4	10.4
Peshawar	15.8	25.5	8.9	Rawalpindi	12.4	17.9	8.4
Bannu	15.6	21.9	11.3	Lahore	12.0	19.7	6.3
Kunri	15.6	22.7	10.4	Islamabad	11.6	17.0	7.8
Khuzdar	15.5	17.0	14.3	Okara	10.4	13.0	8.5
Mirpur Khas	15.2	20.4	11.5				
Larkana	15.1	20.4	11.2				
Faisalabad	15.1	23.6	8.8				
Vehari	15.1	21.2	10.6				
Jhang	14.7	19.6	11.2				
D.G. Khan	14.5	18.1	11.7				
Abbotabad	14.4	20.5	9.9				

Note: High inflation refers to above average inflation, and low inflation refers to below average inflation

2.4 Income Group-wise Inflation

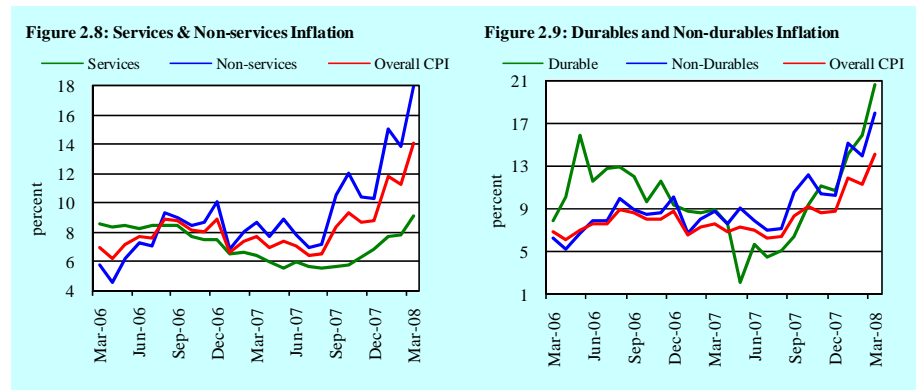
Income group-wise inflation (YoY) significantly increased in all categories in March 2008, compared to corresponding month last year. The inflation in three categories out of four was higher than the overall CPI inflation in March 2008. The only category that experienced lower inflation than the overall CPI inflation was the income group of above Rs. 12000 (see **Figure 2.7**).



The highest YoY CPI inflation was recorded for the income group of upto Rs. 3000 that recorded double digit inflation for the sixth consecutive month (17.0 percent). It was followed by income group of Rs. 3001 to 5000 (16.6 percent) and income group Rs. 5001 to 12000 (14.9 percent) while the highest income group of above Rs. 12000 experienced the lowest inflation in all categories (12.8 percent). City-wise data of income groups exhibit that the lowest YoY inflation was recorded in Rawalpindi for two out of four income groups, while Islamabad and Multan recorded the lowest inflation for the income groups of Rs. 5001 to 12000 and above Rs. 12000 per month earnings. The highest YoY inflation was recorded in Khuzdar for first two income groups and the last income group. Hyderabad recorded the highest inflation in income group Rs. 5001 to 12000 per month earnings (see **Table A5** in annexure A).

2.5 Services and Non-services Inflation

Acceleration in inflation (YoY) of services¹ sector was also recorded in March 2008 compared to the same month last year. Services sector witnessed 9.1 percent inflation during March 2008, compared to 6.3 percent during the same month last year. Similar to the trend of services sector, inflation in the non-services sector moved up and was recorded at 18.0 percent during March 2008 as compared to 8.7 percent in March 2007 (see **Figure 2.8**).



Disaggregation of the non-services sector data reveals that YoY inflation in durable² and non-durable goods accelerated in March 2008 compared to the same month last year. YoY inflation in the durable goods was recorded at 20.6 percent in March 2008 compared to 8.8 percent for the same month last year mainly due to a rise in the prices of jewelry and furniture. The non-durable goods' inflation was recorded at 17.9 percent in March 2008 compared to 8.7 percent in the same month last year. Main contributors in this rise were higher prices of petrol, diesel, kerosene oil, some vegetable like tomatoes etc. (see **Figure 2.9**).

¹ Services group of the CPI basket includes items like house rent index, electricity charges, marriage hall, household servant, transport fare, communication, recreation, tuition fees, laundry charges, hair cut & beauty parlor charges, doctor's fee, tailoring charges etc.

² Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewelry, etc.

3. Wholesale Price Index

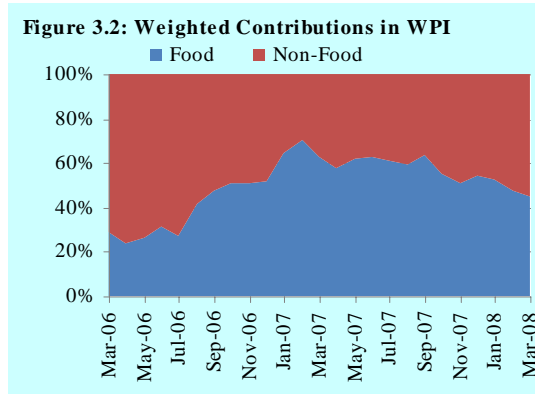
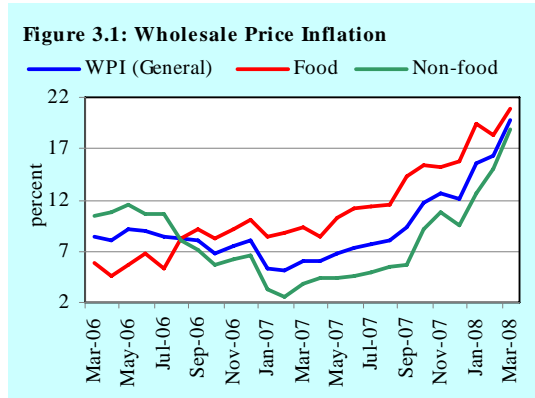
WPI inflation (YoY) remained stubbornly high during March 2008 and exhibited double digit rise for the sixth consecutive month. WPI inflation stood at 19.8 percent in March 2008 – the highest level since January 1995 – compared to 6.1 percent in the same month last year.

This steep rise in WPI inflation (YoY) can be attributed to both food as well as non-food

components. The WPI food inflation was recorded at 21.0 percent in the month under review compared to 9.3 percent in March 2007. Similarly, non-food group of WPI witnessed a YoY increase of 18.9 percent in March 2008 compared to 3.9 percent during the same month last year (see **Figure 3.1**).

The weighted contribution of WPI non-food inflation in overall WPI inflation continued its rising trend since October 2007. The non-food group contribution rose to 55.3 percent in March 2008 compared to 37.3 percent in March 2007. Consequently, the weighted contribution of food group in overall WPI inflation came down to 44.7 percent in March 2008, compared to 62.7

percent in the same month last year (see **Figure 3.2**). Within non-food group of WPI, the *fuel, lighting & lubricant* sub-group showed a significant rise in its contribution. Similarly *building material* and *manufactures* sub-groups witnessed a significant rise in their wholesale prices whereas the *raw material* sub-group showed YoY deceleration in March 2008, compared to the same month last year.



The weighted contribution of *fuel, lighting & lubricant* sub-group within the non-food group increased to 63.9 percent in March 2008, compared to 34.9 percent in June 2007 reflecting the impact of continuously rising international crude oil prices (see **Table 3.1**).

Table 3.1: Contribution of Sub-Indices to WPI Non-food Inflation

	Mar 07	Jun 07	Feb 08	Mar 08
Raw materials	48.3	31.4	8.1	8.3
Fuel, lighting & lubricants	2.9	34.9	64.0	63.9
Manufactures	25.8	21.4	21.9	18.7
Building materials	23.1	12.1	6.4	9.0

A further disaggregated analysis of WPI basket reveals that items showing more than 10 percent increase in their prices were dominant in WPI basket. The price distribution of YoY changes show that 46 items exhibited more than double digit YoY growth in their prices, ranging between 11 to 199.6 percent.

Table 3.2: WPI Price Distribution of YoY Changes (March 2008)

Groups	No. of Items				Total
	Decrease or no change	Up to 5%	5%-10%	More than 10%	
A. Food	9	5	6	23	43
B. Non-Food	10	19	11	23	63
Raw material	1	2	4	2	9
Fuel, lighting & lubricant			2	9	11
Manufactures	6	14	3	9	32
Building material	3	3	2	3	11
Total	19	24	17	46	106

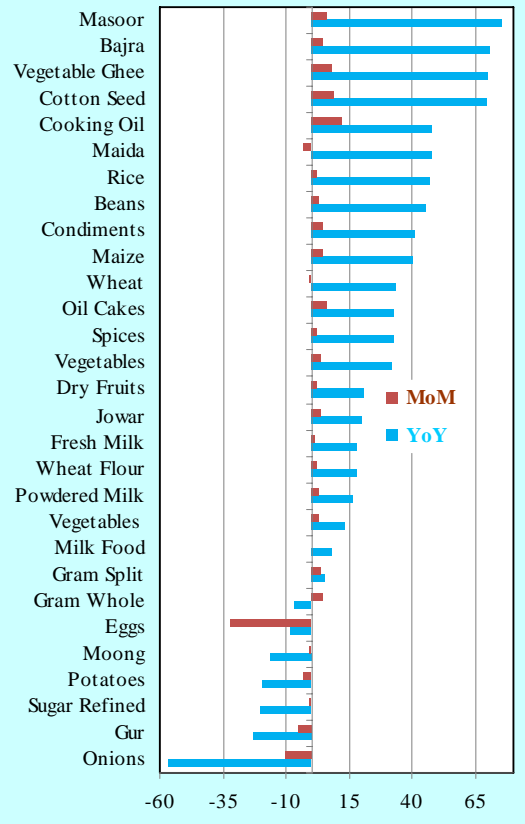
The prices of major items that displayed double digit rise of above 10 percent include tomatoes, coke, furnace oil, fertilizers, rice, vegetable ghee, cooking oil, wheat, maida, chemicals, cotton etc. Prices of 17 items exhibited growth between 5 to 10 percent in their wholesale prices whereas 24 items showed subdued increase while prices of other 19 items showed either decline or no change during the month under review (see **Table 3.2**).

It is further evident from **Table 3.2** that the prices of 23 items of the total 43 food items included in the WPI basket witnessed a significant rise of over 10 percent in March 2008. There were six food items that exhibited growth between 5 to 10 percent in their wholesale prices, while five items recorded subdued inflation of up to 5 percent. The wholesale prices of the remaining nine food items either declined or remained stable.

WPI food inflation continued to show strength in March 2008 and remained in the double digits for the eleventh consecutive month. Food group showed a significant growth of 21 percent in wholesale prices during March 2008 compared to 9.3 percent in March 2007. Major food items that contributed in this steep rise include tomatoes, pulse masoor, vegetable ghee, rice, maida, wheat. Like previous month a high upsurge was recorded in the wholesale price of tomatoes that showed an increase of 199.6 percent during the month under review. However, few commodities showed YoY deflation of different magnitudes in their wholesale prices including onions (-56 percent), gur (-22.7 percent), sugar (-19.5 percent), potatoes (-19.3 percent) and pulse moong (-16 percent) etc. (see **Table A7 & Figure 3.3**).

Similar to WPI food group, the wholesale prices of non-food group of WPI witnessed a sharp uptrend and increased to 18.9 percent in March 2008 – highest since January 1995, compared to 3.9 percent for the same month last year. The *fuel, lighting & lubricant, building material and manufactures* sub groups witnessed a significant rise in their wholesale prices whereas the *raw material* sub-group showed YoY deceleration in their wholesale prices in March 2008, compared to the same month last year (see **Figure 3.4**).

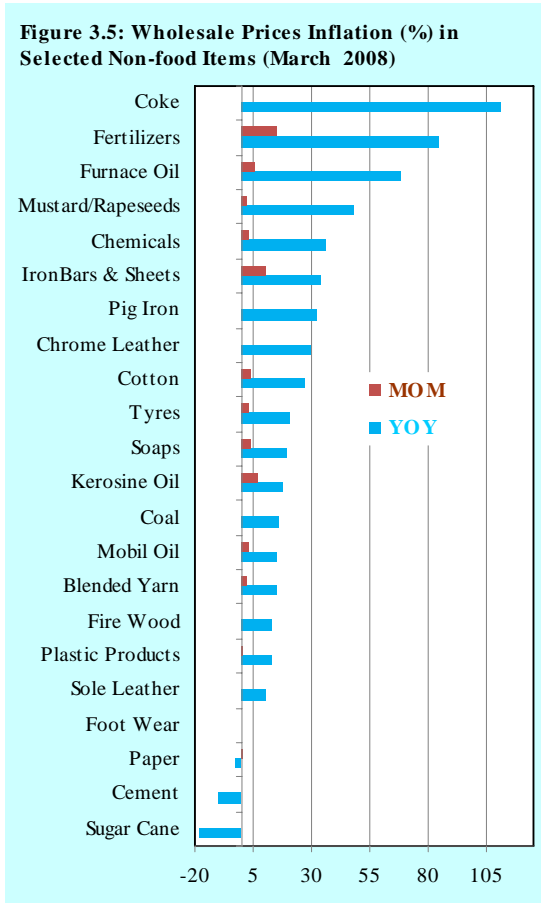
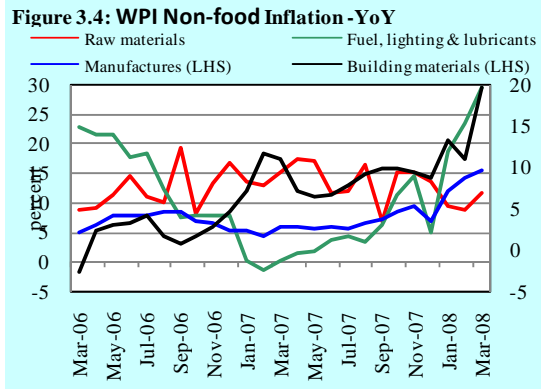
Figure 3.3: Wholesale Price Inflation (%) in Selected Food Items (March 2008)



The significant rise in non-food WPI YoY inflation can be attributed to a significant increase in the wholesale prices of coke, furnace oil, fertilizers, rapeseeds, chemicals, iron bars & sheets etc. in March 2008. In particular, the wholesale price of coke witnessed a YoY rise of 111.1 percent in March 2008 on account of rising international energy prices. On the other hand, prices of 10 items declined or showed no change in March 2008; these included sugarcane, cement, paper etc. (see **Figure 3.5**).

Further analysis of YoY inflation of various sub-indices of non-food group exhibited, that the *raw material* sub-group showed an increase in inflation in March 2008, after decelerating for three consecutive months since December 2007, and was recorded at 11.7 percent compared to 8.9 percent during the previous month. In this sub-group, the wholesale prices of sugarcane declined while the wholesale prices of mustard/rapeseed, pig iron and cotton seed registered subdued increase in March 2008.

The *fuel, lightning & lubricants* sub-group continued to show strong upward movement for the third consecutive month and



recorded a YoY inflation of 29.5 percent during March 2008, compared to 0.3 percent inflation during the same month last year. This steep rise is largely reflecting the impact of high crude oil prices in the international markets that directly affected the wholesale prices of coke, furnace oil and mobil oil in domestic market. Within this sub-group, more than 80 percent of the items recorded double digit YoY increase including coke, furnace oil, diesel oil, mobil oil, fire wood, and coal during the month under review (see **Table A7** in Annexure A).

The *manufactures* sub-index of WPI non-food group also witnessed a higher YoY inflation of 9.6 percent in March 2008 compared to 2.7 percent in March 2007. This was mainly because of double-digit YoY rise in the wholesale prices of items such as fertilizers, chemicals, soaps, tyres, plastic products and sole leather. An alarming upward movement was witnessed in the wholesale prices of fertilizers that registered 64.9 percent YoY growth due to the rising DAP³ prices in the international market. On the other hand, YoY deflation was recorded in the prices of paper and cotton yarn. The *building material* sub-index accelerated and witnessed a higher YoY inflation of 19.5 percent in March 2008, compared to 10.9 percent for the same month last year. This upsurge can be attributed to double digit YoY inflation recorded by items such as iron bars & sheets, wires & cables and pipe fitting during the month under review (see **Table A7** in Annexure A).

³ DAP: Diammonium Phosphate

4. Global Commodity Prices

Prices remained high in the international commodity markets during March 2008. Strong upward movement in fuel, food, metals and fertilizers prices have pushed up global inflation in March 2008. In fuel group, average crude oil prices reached US\$ 101.8 per barrel compared to the US\$ 60.6 per barrel during the same month last year. The IMF and World Bank energy indices showed strong upward movements in March 2008 compared to the same month last year. In food group, prices of rice, wheat, soybean oil and palm oil moved up further in international market during March 2008 compared with March 2007. Metal prices were also on the rising trend as reflected in the World Bank steel products index. DAP⁴ and urea prices have also surged up to put upward pressure on global inflation (see **Table 4.1**).

Table 4.1: International Commodity Prices/Indices

	Mar-07	Jun-07	Feb-08	Mar-08
Energy				
Crude Oil (US\$ per barrel)	60.6	68.2	93.7	101.8
IMF Energy Index (2005 =100)	113.9	126.5	176.3	190.9
WB Energy Index (1990=100)	264.9	298.0	408.2	445.1
Coal	59.3	66.0	140.6	132.1
Food (\$/MT)				
Rice	326.2	326.3	481.1	580.0
Wheat	199.1	223.0	425.0	440.0
Sugar	10.4	9.3	13.6	12.9
Palm Oil	566.4	748.4	1109.5	1147.0
Soybean Oil	679.5	782.9	1307.7	1321.0
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	128.7	133.6	160.5	180.1
WB Steel Products Index (1990=100)	132.5	133.5	169.7	179.3
DAP (\$/MT)	420.5	434.5	828.1	1045.0
Urea (\$/MT)	318.0	289.0	325.3	377.8

\$/MT = US\$ per metric tonne.

Middling 1-3/32 inch staple, Liverpool Index "A", average of the cheapest Cts/lb five of fourteen styles, CIF Liverpool (Cotton Outlook, Liverpool). From January 1968 to May 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16. 2/

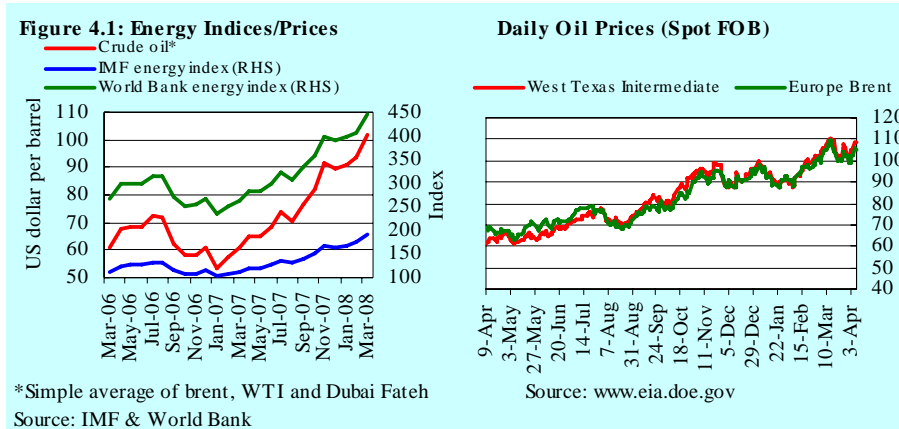
Source: IMF and World Bank.

The average crude oil prices⁵ in the US market were recorded above US\$ 109 per barrel on March 13, 2008 and remained well above US\$ 100 per barrel mark throughout March 2008 except for one day. Continuously falling US dollar against euro, fighting in Basra in which a major Iraqi export pipeline was blown up, weaker than expected crude oil inventories and OPEC's decision of maintaining the oil output were among the reasons of strong crude oil prices⁶. The spot crude oil price in the international market fluctuated in the range of US\$ 99.2– US\$ 109.7 per barrel during March 2008 compared to US\$ 87.9 – US\$ 101.3 per barrel during the previous month.

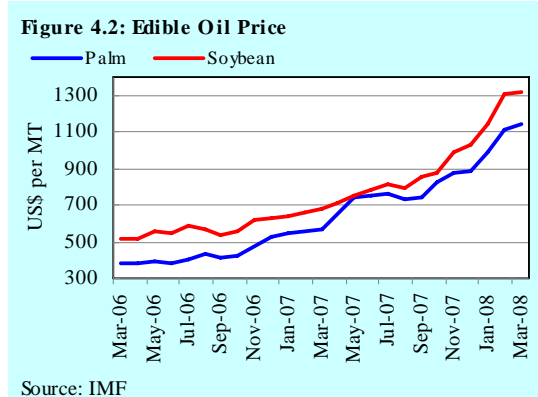
⁴ DAP: Diammonium Phosphate

⁵ Average of WTI and Europe Brent

⁶ Reuters: www.reuters.com



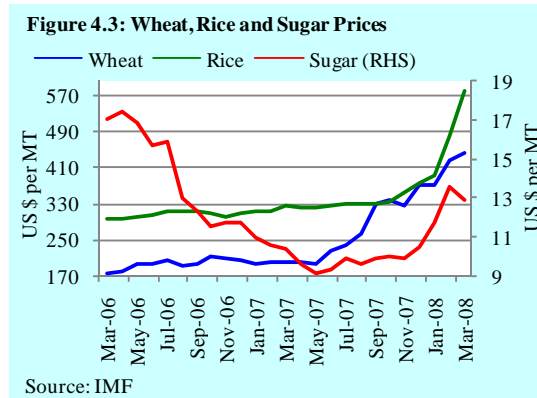
Edible oil (palm and soybean) prices remained at historically high levels and still continued to reflect strong upward movements. This uptrend in edible oil prices is the result of its increased use in biofuel production and its rising demand in the world. Palm and soybean oil prices registered YoY growth of above 90 percent in March 2008 (see **Figure 4.2**). The



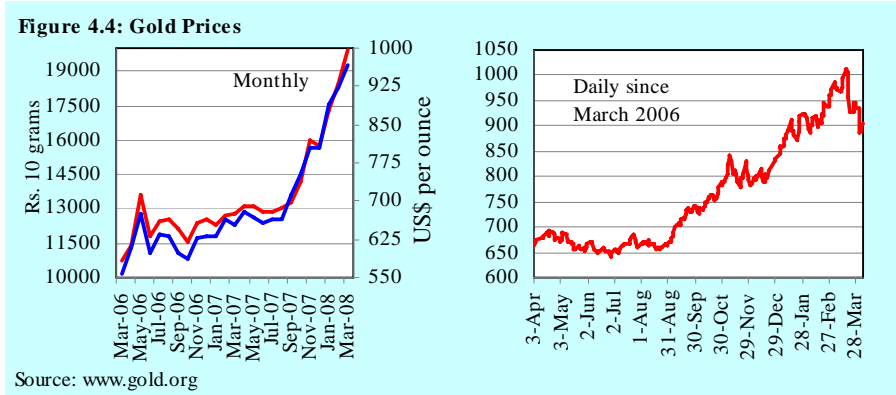
current rise in palm and soybean oil prices is attributed to Indian government decision to cut palm oil import duties, rising investor's interest in the vegetable oil and tight global stocks.

Similarly the prices of wheat and rice witnessed an uptrend on YoY basis in March 2008. Wheat prices witnessed triple digit YoY rise for the second consecutive month and was recorded at 121.0 percent mainly due to record low stocks and ban on grain exports by Kazakhstan to ensure domestic supply security. Rice prices are also at historically high levels and many countries in the world are facing rice crisis. A combination of factors are responsible for this rise including : (a) two major rice exporting countries, Vietnam (the world's second largest rice exporter) and India have extended a rice export ban that has tightened global demand and (b) slowdown in the production growth of the staple due to water

shortages in Southeast Asia, Central America and West Africa. Sugar prices registered YoY growth of 24.4 percent in March 2008 (see **Figure 4.3**). Rise in sugar prices was attributed to: (a) the surge in fuel cost due to its increased demand for ethanol; and (b) output declines in India and China.



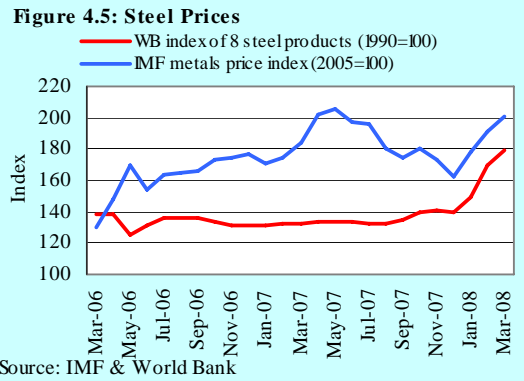
Gold prices continued to remain strong and further increased to new record level of US\$ 968.4 per ounce in March 2008. Gold prices exhibited a YoY growth of 47.9 percent in March 2008 compared to 17.6 percent in the same month last year. The increase in gold price in international market is attributed to investors' interest in the precious metal as a result of weak dollar. On a daily basis, gold price remained higher and fluctuated in a wider range of US\$ 925.8 – US\$ 1011.3 per ounce during March 2008 (see **Figure 4.4**).



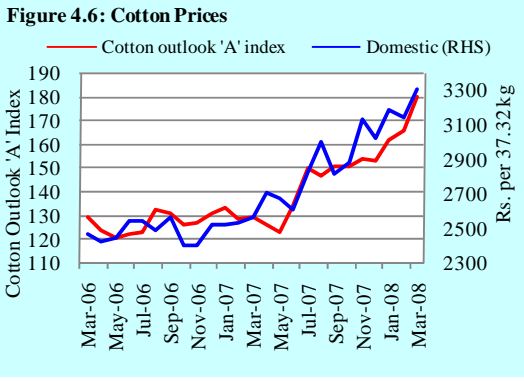
Metal and steel prices have witnessed a rise during the last few months. The World Bank index of 8-steel products and the IMF metals price index displayed increasing trends in March 2008⁷. The increase in metal prices was more profound in the steel items as compared to other metals. This is evident from the World

⁷ IMF Commodity Metals Price Index includes Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead, and Uranium Price Indices whereas World Bank index consists of ebar (concrete reinforcing bars), merch bar (merchant bars), wire rod, section (H-shape), plate (medium), hot rolled coil/sheet, cold rolled coil/sheet, and galvanized iron sheet.

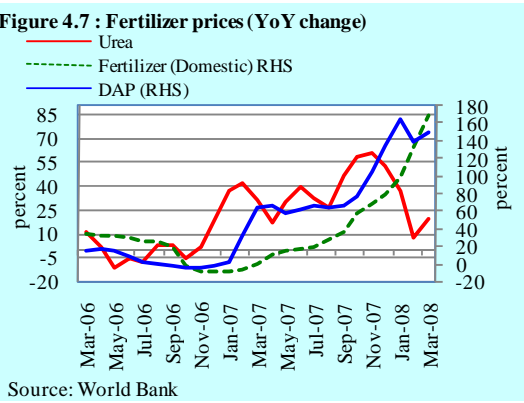
Bank index of 8-steel products that showed double digit YoY growth of 35.3 percent in March 2008, compared to decline of 4.4 percent in the same month last year. The IMF metals price index showed a YoY increase of 9.4 percent during the month under review (see **Figure 4.5**). All major items included in the metals & minerals group i.e. tin, lead, iron ore, gold, silver, aluminum and copper registered an increase in their prices. The rise in the copper prices was supported by investor interest, supply concerns and falling US dollar. The price of tin went up due to worries about supplies from top producers China and Indonesia.



Cotton prices continued to accelerate sharply as the cotton outlook 'A' index increased by 39.9 percent on YoY basis in March 2008, in the international markets. Current rise in global cotton prices is the result of reduced U.S. cotton plantings and rising Asian purchases, including Bangladesh, Taiwan and China⁸. Following the trend in international market, cotton prices in the domestic market registered an increase of 28.7 percent during the month under review (see **Figure 4.6**).



Fertilizer prices soared due to (a) rising input cost, (b) increased demand for spring crop plantings in the northern

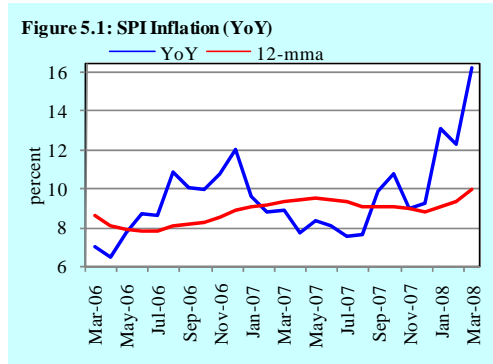


⁸ World Bank Commodity Markets Review, A

hemisphere, (c) capacity constraints and (d) new export taxes by Russia and China to ensure adequate supplies for domestic use according to the World Bank commodity markets review. The price of DAP maintained triple digit growth for the fifth consecutive month and exhibited YoY increase of 148.5 percent in March 2008. Urea prices witnessed double digit rise of 18.8 percent during the month under review (see **Figure 4.7**). Fertilizer prices in the domestic market reached to new highs as a result of unprecedented strong international prices of the commodity.

5. Sensitive Price Indicator

Sensitive price indicator (SPI) showed significant rise in inflation (YoY) and reached 16.2 percent in March 2008 compared to 8.9 percent in the same month last year. Double digit rise in SPI during last three months is also reflected in inflation measured by 12 month moving average (see **Figure 5.1**). Highly volatile item (measured by standard deviation) in SPI basket during March 2006 to March 2008 was LPG (with standard deviation of 95.7).

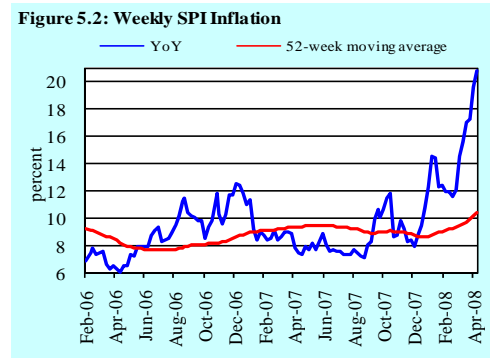


Item wise analysis of SPI indicates that out of 53 items, prices of 28 items showed more than 10 percent rise, 7 showed change between 5 to 10 percent, 8 showed increase between 0 to 5 percent and 10 showed no change in March 2008 compared to March 2007 (see **Table 5.1**). The items which showed the significant change are tomatoes (194.3 percent), vegetable ghee loose (77.6 percent), pulse masur (74.0 percent), cooking oil (59.2 percent) and rice broken (51.2 percent).

Table 5.1: Distribution of Price Changes of SPI Basket (YoY)

Change in percent	Number of items			
	Mar-07	Jun-07	Feb-08	Mar-08
0 or less	6	13	14	10
0 to 5	9	8	5	8
5 to 10	11	12	6	7
10 or above	27	20	28	28
Minimum	-51.6	-29.2	-57.1	-44.5
Maximum	90.0	67.1	211.7	194.3

On month over month (MoM) basis, SPI showed a significant rise of 4.2 percent in March 2008 over to February 2008. This rise in SPI was the result of an acceleration in the prices of chicken (25.9 percent), cooking oil (14.1 percent), petrol (13.2 percent), diesel (13.1 percent), kerosene (11.0 percent) and vegetable ghee tin (12.8 percent) (see **Table A8** in Annexure A). Weekly SPI inflation (YoY)



remained in double digits in March 2008 and fluctuated within the range of 14.5 percent to 17.4 percent. Weekly SPI inflation (YoY) was recorded at 17.4 percent in the last week of March 2008 the highest ever since July 2002. Weekly SPI inflation (YoY) is on the rising long-run trend since the first week of January 2008 as indicated by 52-week moving average that increased to 10.4 percent in the second week of April 2008 compared to 9.1 percent during the last week of January 2008 (see **Figure 5.2**).

Income group-wise SPI inflation (YoY) recorded increase for all income groups, the incidence of inflation is remained the highest on the lowest income group in March 2008. The obvious reason being majority of the commodities in SPI basket are essential use of that particular income group. Data further supports that all income groups except for the highest income group, showed higher SPI inflation than the average SPI inflation during the month under review (see **Table 5.2**).

Income Groups	percent				
	Mar-07	Jun-07	Dec-07	Feb-08	Mar-08
Up to Rs. 3000	9.7	9.7	11.8	14.6	18.6
Rs. 3001-5000	9.5	9.6	11.5	14.3	17.9
Rs. 5000-12000	9.4	8.9	10.4	13.2	16.9
Above Rs. 12000	8.0	6.2	7.1	10.4	14.6
All income groups	8.9	8.0	9.2	12.3	16.2

Annexure A

Table A1: CPI Inflation (YoY) by Groups

	Weights	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
I. Food Group	40.3	7.6	13.3	5.4	10.7	20.6
II. Non-Food Group	59.7	3.9	8.2	8.0	5.5	9.4
Apparel, textile, etc.	6.1	2.0	3.4	4.2	7.3	6.9
House rent	23.4	6.2	12.3	8.7	6.4	10.6
Fuel & lighting	7.3	3.0	6.0	9.5	7.0	8.5
Household furniture & equipment	3.3	4.3	5.7	4.6	7.4	7.0
Transport & com.	7.3	1.4	10.6	14.3	-1.4	8.7
Recreation & entertainment	0.8	-1.5	0.1	-0.2	-0.2	0.9
Education	3.5	3.9	2.5	7.0	7.9	3.5
Cleaning, laundry, etc.	5.9	2.7	4.8	2.9	4.8	15.9
Medicare	2.1	1.4	1.0	3.1	10.8	6.5
Headline	100	5.3	10.2	6.9	7.7	14.1

Table A2: Distribution of Price Changes of CPI Basket, March 2008 (YoY)

Groups	% Changes	Total Number of Items	No. of Items in each Inflation Range			
			Decrease or no change (0 % or less)	Subdued increase (0 to 5%)	Moderate increase (5 to 10%)	Double digit increase (over 10%)
I. Food Group	20.6	107	13	14	14	66
II. Non-Food Group	9.4	250	66	50	76	58
Apparel, textile, etc.	6.9	42	6	9	20	7
House rent	10.6	1			1	
Fuel & lighting	8.5	15	2		8	5
Household furniture & equipment	7.0	44		8	19	17
Transport & com.	8.7	43	20	4	8	11
Recreation & entertainment	0.9	16	8	6		2
Education	3.5	24	9	9	2	4
Cleaning, laundry, etc.	15.9	36	3	7	18	8
Medicines	6.5	29	18	7		4
Overall	14.1	357				

Note: Prices of 17 seasonal items were not reported during the month.

Table A3: Top Ten Contribution to YoY CPI Inflation in March 2008					
Items	weights	YoY change		Weighted Contribution	
		Mar-07	Mar-08		
A. Ranked by Weighted Contribution					
1	House Rent Index	23.43	6.42	10.60	17.56
2	Vegetable Ghee	2.67	18.13	71.69	14.55
3	Wheat Flour	5.11	2.87	27.17	9.60
4	Milk Fresh	6.66	11.36	18.10	9.15
5	Rice	1.92	-1.09	58.62	7.91
6	Vegetables	1.34	27.23	50.16	5.24
7	Tomatoes	0.46	-45.16	168.24	3.43
8	Readymade Food	0.69	12.53	61.51	3.01
9	Natural Gas	1.73	-4.57	17.04	2.55
10	Cooking Oil	1.68	8.10	18.43	2.37
Total		45.68			75.38
B. Ranked by Percentage Change					
1	Tomatoes	0.46	-45.16	168.24	3.43
2	Mustard Oil	0.05	23.29	73.32	0.24
3	Rice	2.67	18.13	71.69	14.55
4	Eggs	0.22	4.80	70.82	0.99
5	Vegetable Ghee	0.69	12.53	61.51	3.01
6	Maida	1.92	-1.09	58.62	7.91
7	Pulse Masoor	0.11	0.00	50.40	0.35
8	Condiments	1.34	27.23	50.16	5.24
9	Wheat	0.39	17.78	43.57	1.67
10	Cooking Oil	0.34	3.94	40.63	0.78
Total		8.17			38.17
C. Ranked by Weights					
1	House Rent Index	23.43	6.42	10.60	17.56
2	Milk Fresh	6.66	11.36	18.10	9.15
3	Wheat Flour	5.11	2.87	27.17	9.60
4	Electricity	4.37	10.07	6.44	1.66
5	Bakery & Confectionary	2.98	2.67	8.75	1.52
6	Meat	2.70	8.62	5.94	1.70
7	Vegetable Ghee	2.67	18.13	71.69	14.55
8	Tuition Fees	2.36	9.84	3.30	0.54
9	Transport Fare/Charges	2.12	2.74	4.26	0.77
10	Natural Gas	2.05	2.84	7.06	1.48
Total		54.45			58.55
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in CPI, which is 14.1 percent in March 2008.					

Table A4: Distribution of Price Changes - Selected CPI Items, March 2008

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
Food Group	Sugar Refined	Tea Loose Kenya Av.Qlty	Beef With Bone Av.Qlty.	Milk Fresh (Unboiled)
	Onion	250G, Pulse Gram	Mutton Av.Qlty.	Wheat Flour Bag
	Potatoes	Bananas	Apple	Vegetable Ghee (Loose)
	Eggs Farm	Tea(L/R) Brookbond	Cigarettes Gold Leaf 20'S	Wheat Flour
	Kinnu	Supreme 250Gm.	Cigarettes Morven Gold	Fine/Superior.
	Pulse Moong (Washed)	Pulse Mash (Washed)	20'S	Vegetable Ghee Tin
	Malta/Mosambi	Fish-Rahu Medium Size	Betel Leaves	Chicken Farm Broiler
	Garlic	Gram Whole Yellow	Biscuits-Packed	(Live), Cooking Oil
	Ice Cream Walls	Av.Qlty	Jam Ahmed/Mitchelles	(Dalda), Chillies Green
		Guava	Squash-Mitchelles	Tomatoes
Apparel & Textile	Ladies Sandal Bata			
	Child Shoe Power Lite Bata	Tailoring Coat-Pant Suit	Lawn Av.Qlty.	Long Cloth Av.Qlty.
	Gents Shoes Paul Bata	School Uni. Pant,Shirt Boys	Shirting Av.Qlty.	Tailoring Suit Female
	Dopatta Georgette Av.Qlty.	Tailoring Shirt	Nylon Jogger 27 Size 2-5	
House Rent Index			House rent index	
Fuel & Lighting	Match Box Small		Elect.Charges Above 1000	
	Elect.Charges Upto 50 Units		Uni, Gas Chrg 6.7438 - 10.1157Mmb, Gas	Elect.Charges 101 - 300 Unit
H/hold Furniture		Household Servant Female P/T	Quilt (Lihaf) 3 Kg. Cotton	Bucket(Balti) Plastic
	Sewing Machine(Singer)	Blanket (90" X 54")	Tea Set Pak. Chinaware 21 Med.Si	Table Spoon S.Steel
	Carpet Plain Av. Qlty	Sewing Thread/Reel(Asli Pari)	Pc	Sup.Qlty
			Sup.Qlty	D-Freezer Waves 8 Cft.
Transport & Comm.	Telephone Charges	A/C Bus Fare Outside City,	Car Service Charges, Tyre	Petrol Super
	Local Call, Tel Charges	Minibus Fare Max With In	Car With Tube General,	High Speed Diesel Hsd
	Out Side City, Bus Fare	Cit, Minibus Fare Min.With	Car Suzuki 800 Cc (W/O.	Auto Rickshaw Fares
	Outside City, Car Tax	In Cit, Bus Fare Min (Within	A/C), Bus Fare Max	Cng Filling Charges
	For 800Cc To 1300Cc	City)	(Within Cit	
Recreation & Entertainment		Daily "Dawn"		
	Tv.Licence Feedomestic	Cinema A/C. Highest Class		Weekly "Akhbar-E-Jahan"
	Daily "Jang"	Radio With C.Player		Dry Cell 1.5 Volt(Local)
	Daily "Nawa-E-Waqt"	National		
Education	Govt. College Fee Ist.	School Fee 2Nd-Ry		Exercise.Book Lined
	Year, Govt. College Fee	Eng.Med., School Fee	Maths Book Class Ix Or X	80/100 P, Paper
	4Th. Year, Urdu Book	Primary Eng.Med., Eng.	Maths Book Ist.Year	Foolscape (27"X17")
Ist.Year/Inter	Book Ist.Yr Complete Se	(T.B.B)	Urdu Book Class	Ix/X(T.B.B)
Cleaning & Laundry		Perfume Med.Size	Haircut Charges For Men,	Silver Tezabi 24 Ct
	Robin Blue (35 Grams)	Medora/Broa, Talc Powder	Shampoo Plain Medora	Gold Tezabi 24 Ct
	Toothpaste Macklines	Vice Roay.B.Cat	200 Ml.	Toilet Soap Lifebouy
	70 Grm, Lipstick	Finis 500 Ml	Surf (Medium) 160 Grm,	140 Grm
S.Miss/Medora	Nail Polish S.Miss/Medora	Hair-Oil Amla/Chambeli	Washing Soap Nyl(135-160Gms)	
Medicare	Gripe-Water			Doctor (Mbbs) Clinic
	Woodwards	O.R.S. (Nimcol)		Fee
	Dettol (Medium)	Cotton Bandage 2" - 4"		Galxos-D (450 Grms)
	Jouhar Joshanda	Daonil Tab. 5 Mg.		Disprin Tab.

Table A5: City-wise Inflation (YoY) by Income Groups, March 2008							
		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	13.8	20.0	9.6	14.0	20.8	9.5
2	Faisalabad	16.2	23.9	10.9	17.5	24.3	12.9
3	Rawalpindi	12.8	16.8	10.2	13.6	19.1	9.9
4	Multan	15.5	23.2	10.4	16.0	24.0	10.5
5	Gujranwala	18.3	25.0	13.7	19.1	26.1	14.3
6	Islamabad	13.3	18.5	9.8	13.6	18.1	10.5
7	Sargodha	15.4	18.3	13.5	14.4	17.3	12.5
8	Sialkot	14.1	19.5	10.4	14.2	19.7	10.5
9	Bahawalpur	16.6	23.7	11.7	16.3	23.7	11.2
10	Karachi	15.2	22.3	10.5	14.5	21.1	10.0
11	Hyderabad	18.6	24.0	14.9	18.9	25.6	14.4
12	Sukkur	17.9	25.5	12.8	17.9	24.3	13.5
13	Larkana	16.9	22.4	13.2	17.6	23.2	13.8
14	Peshawar	17.1	23.9	12.6	19.5	27.9	13.8
15	Bannu	17.7	23.2	14.0	16.8	22.7	12.9
16	Quetta	17.3	22.9	13.5	14.9	20.1	11.5
17	Khuzdar	20.3	24.1	17.6	19.9	24.2	17.0
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	12.9	20.5	7.7	11.0	18.5	5.9
2	Faisalabad	16.4	24.5	10.9	13.8	22.6	7.9
3	Rawalpindi	12.8	18.5	9.0	11.9	17.1	8.3
4	Multan	14.2	22.7	8.5	10.9	18.4	5.9
5	Gujranwala	17.2	24.2	12.5	14.5	20.0	10.8
6	Islamabad	12.7	19.2	8.3	11.4	16.5	7.9
7	Sargodha	12.8	15.7	10.9	11.0	13.5	9.3
8	Sialkot	13.5	19.6	9.3	12.6	18.3	8.7
9	Bahawalpur	14.2	22.1	8.8	11.6	19.3	6.4
10	Karachi	14.0	20.3	9.7	12.6	20.0	7.6
11	Hyderabad	18.1	25.5	13.2	16.1	22.2	12.0
12	Sukkur	17.0	24.1	12.1	15.8	22.5	11.2
13	Larkana	15.3	20.8	11.7	12.7	17.0	9.7
14	Peshawar	16.8	26.8	10.1	14.1	23.3	7.8
15	Bannu	15.7	22.6	11.1	14.3	19.9	10.5
16	Quetta	13.9	18.9	10.4	13.4	17.9	10.4
17	Khuzdar	17.7	22.9	14.2	16.9	20.6	14.4

Table A6 : Income Group-wise Inflation (YoY)								percent
	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08
<u>Up to Rs. 3000</u>								
General	7.3	9.9	11.2	10.1	10.4	14.7	13.4	17.0
Food	8.4	13.0	14.9	12.2	12.4	20.0	17.2	22.5
Non-food	6.5	7.6	8.5	8.6	9.0	10.9	10.7	13.0
<u>Rs. 3001-5000</u>								
General	7.3	9.9	11.2	10.2	10.4	14.5	13.0	16.6
Food	8.6	13.4	15.4	12.7	12.8	20.3	17.2	22.6
Non-food	6.5	7.4	8.2	8.3	8.7	10.5	10.0	12.4
<u>Rs. 5000-12000</u>								
General	6.9	9.1	10.2	9.4	9.5	13.0	12.0	14.9
Food	8.7	13.2	15.0	12.6	12.5	19.0	16.5	21.3
Non-food	5.6	6.1	6.7	7.0	7.4	8.6	8.7	10.2
<u>Above Rs. 12000</u>								
General	5.8	7.3	8.0	7.7	7.7	10.2	10.1	12.8
Food	8.6	12.6	13.9	12.3	11.8	16.6	15.0	18.8
Non-food	3.7	3.4	3.6	4.3	4.7	5.5	6.6	8.2
<u>All income groups</u>								
General	6.5	8.4	9.3	8.7	8.8	11.9	11.3	14.1
Food	8.6	13.0	14.7	12.5	12.2	18.2	16.0	20.6
Non-food	4.9	5.0	5.4	5.9	6.3	7.3	7.8	9.4

Table A7: Distribution of Price Change (YoY)--WPI Items: March 2008				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	More than 10% increase
Food	Onions Gur Sugar Refined Potatoes Moong Eggs Gram Whole Fresh Fruits Mash	Sugar Confectionary Tea Mineral Water Fish Meat	Salt Gram Split Beverages Fruit Prepared/Preserved Besan Milk Food	Vegetables Prepared/Preserved Chicken Powdered Milk Wheat Flour Fresh Milk, Jowar Dry Fruits Spices, Oil Cakes Wheat, Maize Condiments Beans, Rice Maida, Cooking Oil Mustard & Rapeseed Oil, Cotton Seed Oil Vegetable Ghee Bajra, Masoor Tomatoes
Raw material	Sugar Cane	Wool Tobacco	Hides Cotton Seeds Tobacco Skins	Cotton Pig Iron
Fuel & lighting			Natural Gas Elec. Agriculture Tariff-D	Electricity Ind. Supply Tariff-B Fire Wood Mobil Oil, Coal Motor Sprit Kerosine Oil Diesel Oil Furnace Oil, Coke
Manufactures	Paper Cotton Yarn Drugs & Medicines Glass Products Audio-Visual Instruments Foot Wear	Woolen Textiles Cosmetics, Ready Made Garments, Other Electrical Goods, Jute Cotton Textiles Nylon Yarn, Transports Pesticides & Insecticised Mattresses, Cigarettes, Matches, Utensils, Machinery	Dyeing Materials Hosiery Silk & Reyon Textiles	Sole Leather Plastic Products Tubes Blended Yarn Soaps Tyres Chrome Leather Chemicals Fertilizers
Building material	Cement Paints & Varnishes Cement Blocks	Sanitary Wares Tiles Timber	Glass Sheets Bricks	Pipe Fittings Wires And Cables Iron Bars & Sheets

Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Price Mar-08	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	17.0	36.0	-2.1
2	Wheat flour A quality.	Kg.	17.2	23.0	4.2
3	Rice basmati broken	Kg.	38.5	51.2	5.3
4	Rice irri-6	Kg.	28.0	46.6	5.0
5	Masur pulse washed	Kg.	80.7	74.0	7.7
6	Moong pulse washed	Kg.	53.4	-5.4	2.7
7	Mash pulse washed	Kg.	72.0	-0.1	1.5
8	Gram pulse washed	Kg.	44.0	4.6	4.3
9	Beef	Kg.	123.5	3.8	0.5
10	Mutton	Kg.	239.5	6.0	1.5
11	Egg Hen (farm)	Doz.	40.8	-6.6	-24.9
12	Bread plain m.s.	Each	19.6	26.6	1.0
13	Sugar	Kg.	25.4	-17.2	-1.3
14	Gur	Kg.	29.7	-18.4	-4.0
15	Milk fresh	Litr	31.2	15.5	4.1
16	Milk powdered Nido	400g	145.0	9.9	-0.1
17	Curd	Kg.	36.5	15.9	4.5
18	Veg.ghee tin	2.5k	358.7	55.4	12.8
19	Veg.ghee loose	Kg.	129.3	77.6	9.9
20	Mustard oil	Kg.	140.4	70.1	5.4
21	Cooking oil	2.5L	368.0	59.2	14.1
22	Potatoes	Kg.	11.3	-3.8	-1.7
23	Onions	Kg.	11.3	-44.5	-6.0
24	Tomatoes	Kg.	39.0	194.3	5.8
25	Bananas	Doz.	34.6	1.3	5.0
26	Salt powdered	Kg.	5.3	12.2	1.5
27	Red chillies (powder)	Kg.	150.1	47.5	9.2
28	Garlic	Kg.	41.0	-38.5	-4.5
29	Tea packet	250g	72.0	2.9	4.2
30	Tea (prepared)	Cup	7.2	12.8	2.4

continued

Table A8 (continued)

Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Price Mar-08	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	34.3	13.3	2.2
32	Cooked dal plate	Each	21.4	18.5	4.6
33	Cigarettes K-2	10's	8.4	4.4	0.0
34	Coarse latha	Mtr.	39.8	13.8	1.6
35	Lawn (avg.+s.qlty)	Mtr.	83.6	7.2	4.0
36	Voil printed	Mtr.	40.7	8.4	3.4
37	Shirting	Mtr.	71.9	9.9	0.1
38	Sandel gents bata	Pair	499.0	8.7	0.0
39	Sandel ladies bata	Pair	299.0	0.0	0.0
40	Chappal spng. Bata	Pair	99.0	4.2	0.0
41	Kerosene	Litr	47.0	20.3	11.0
42	Firewood	40kg	233.7	17.1	0.8
43	Elec. Bulb 60-wats	Each	12.9	6.9	0.0
44	Match box	Each	1.0	31.6	0.0
45	Washing soap	Cake	10.6	31.4	4.2
46	Bath soap lifebuoy	Cake	18.9	34.6	4.3
47	Chicken (farm)	Kg.	93.6	21.2	25.9
48	Gas chrg. All clb. Comb	D.mmbt	239.4	3.1	0.0
49	LPG.(cylinder 11kg.)	Each	716.8	22.6	-9.6
50	Elec.chrg.all slabs com	Bd. Unit	5.1	1.8	0.0
51	Petrol	Litr	61.0	13.2	13.2
52	Diesel	Litr	42.8	13.1	13.1
53	Telephone local	Call	2.3	0.0	0.0
Maximum				194.3	25.9
Median				12.8	2.2
Minimum				-44.5	-24.9

Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities

Item and Specification	Weights	Index	
		Mar-07	Mar-08
GENERAL	100.0005	143.17	163.38
FOOD & BEVERAGES.	40.3411	149.67	180.52
1 WHEAT	0.4830	143.27	199.63
2 WHEAT FLOUR	5.1122	139.75	177.72
3 MAIDA	0.1059	130.97	196.98
4 BESAN	0.1320	152.05	153.79
5 RICE	1.3369	157.93	237.15
6 PULSE MASOOR	0.2214	127.37	217.57
7 PULSE MOONG	0.2230	186.73	173.41
8 PULSE MASH	0.2017	155.88	156.57
9 PULSE GRAM	0.4272	145.72	151.12
10 GRAM WHOLE	0.1491	142.52	144.87
11 MUSTARD OIL	0.0456	146.27	253.51
12 COOKING OIL	0.6858	144.09	232.72
13 VEGETABLE GHEE	2.6672	153.82	264.09
14 SUGAR	1.9467	111.27	92.51
15 GUR	0.0735	139.59	115.24
16 TEA	1.2559	114.95	117.14
17 MILK FRESH	6.6615	153.37	181.13
18 MILK POWDER	0.1105	145.52	177.10
19 MILK PRODUCTS	0.5607	139.63	164.87
20 HONEY	0.0358	131.56	134.92
21 CEREALS	0.0878	133.14	168.56
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	128.64	143.37
23 BEVERAGES	0.7286	128.85	144.36
24 CONDIMENTS	0.3392	115.09	161.85
25 SPICES	0.6008	121.04	168.39
26 DRY FRUIT	0.2760	215.36	251.05
27 BAKERY & CONFECTIONARY	2.9837	118.00	128.33
28 CIGARETTES	0.9527	148.11	158.72
29 BETEL LEAVES & NUTS	0.1851	140.03	153.11
30 READYMADE FOOD	1.6833	154.43	182.89
31 SWEETMEAT & NIMCO	0.3846	152.39	187.36
32 FISH	0.2703	150.39	152.98
33 MEAT	2.6981	214.06	226.78
34 CHICKEN FARM	0.9158	146.84	174.04
35 EGGS	0.4119	170.09	150.74
36 POTATOES	0.6056	125.41	118.43
37 ONIONS	0.6487	198.03	99.91
38 TOMATOES	0.5083	81.05	217.41
39 VEGETABLES	1.7623	154.70	245.38
40 FRESH FRUITS	1.6155	203.92	187.19
APPAREL, TEXTILE & FOOTWEAR.	6.0977	127.10	135.89
41 COTTON CLOTH	1.6197	128.63	139.05
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	127.04	136.84
43 TAILORING CHARGES	0.8636	128.51	138.63
44 HOSIERY	0.1528	137.11	144.44
45 READYMADE GARMENTS	1.2038	122.57	128.15
46 WOOLEN READYMADE GARMENTS	0.1485	139.53	155.82
47 FOOTWEAR	1.5327	126.07	133.93
HOUSE RENT.	23.4298	142.89	158.04
48 HOUSE RENT INDEX (Combined)	23.4298	142.89	158.04
FUEL AND LIGHTING.	7.2912	151.34	164.25
49 KEROSENE	0.1366	235.87	291.58
50 FIREWOOD	0.4778	211.36	257.53
51 MATCH BOX	0.1301	100.00	100.00
52 BULB & TUBE	0.1311	86.73	93.52

(continued)

(continued)

Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities

Item and Specification	Weights	Index	
		Mar-07	Mar-08
53 ELECTRICITY	4.3698	119.53	127.23
54 NATURAL GAS	2.0458	207.02	221.63
H.HOLD.FURNITURE & EQUIPMENT ETC.	3.2862	133.62	142.91
55 UTENSILS	0.3690	119.84	129.40
56 PLASTIC PRODUCTS	0.1055	137.35	154.31
57 SUITCASE	0.0470	121.49	132.77
58 HOUSE HOLD EQUIPMENTS	0.0953	119.41	129.07
59 FURNITURE (Ready Made)	0.3054	132.22	147.61
60 FURNISHING	0.6362	128.53	138.49
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	120.65	130.81
62 SEWING MACHINE,CLOCK AND NEEDLES	0.1270	117.80	121.26
63 REFRIGERATOR & AIRCONDITIONER	0.1756	95.62	104.56
64 MARRIAGE HALL	0.0445	139.55	161.57
65 HOUSE HOLD SERVANT	1.1918	151.36	157.92
TRANSPORT & COMMUNICATION.	7.3222	145.45	158.04
66 PETROL	1.7253	175.59	205.51
67 DIESEL	0.2070	238.74	279.23
68 CNG. FILLING CHARGES	0.1649	140.33	160.76
69 SERVICE CHARGES	0.3835	130.43	141.12
70 VEHICLES	0.2596	100.81	104.24
71 TYRE & TUBE	0.2831	122.96	130.45
72 TRANSPORT FARE/CHARGES	2.1236	171.50	178.80
73 TRAIN FARE	0.1514	170.01	170.01
74 AIR FARE	0.0983	218.72	280.47
75 COMMUNICATION	1.9255	86.74	86.84
RECREATION & ENTERTAINMENT.	0.8259	105.52	106.51
76 RECREATION	0.3399	100.00	101.88
77 ENTERTAINMENT	0.4860	109.38	109.71
EDUCATION.	3.4548	135.15	139.85
78 TUTION FEES	2.3629	140.93	145.58
79 STATIONERY	0.3500	120.94	133.74
80 TEXT BOOKS	0.6894	126.54	127.75
81 COMPUTER & ALLIED PRODUCTS	0.0525	82.67	81.52
CLEANING LAUNDRY & PER.APPEARANCE.	5.8788	125.66	145.69
82 WASHING SOAP & DETERGENT	1.5535	116.54	134.34
83 TOILET SOAP	0.7436	120.15	161.07
84 TOOTH PASTE	0.4036	107.01	110.33
85 SHAVING ARTICLES	0.3480	111.32	128.13
86 COSMETICS	1.4272	123.95	130.26
87 WATCHES	0.0552	119.93	128.99
88 JEWELLERY	0.3936	196.65	282.34
89 LAUNDRY CHARGES	0.2207	143.14	153.96
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	128.09	137.37
MEDICARE.	2.0728	123.39	131.46
91 DRUGS & MEDICARES	1.0752	106.72	108.42
92 DOCTOR'S FEE	0.9976	141.37	156.29

Figure A1: CPI Non-food Inflation

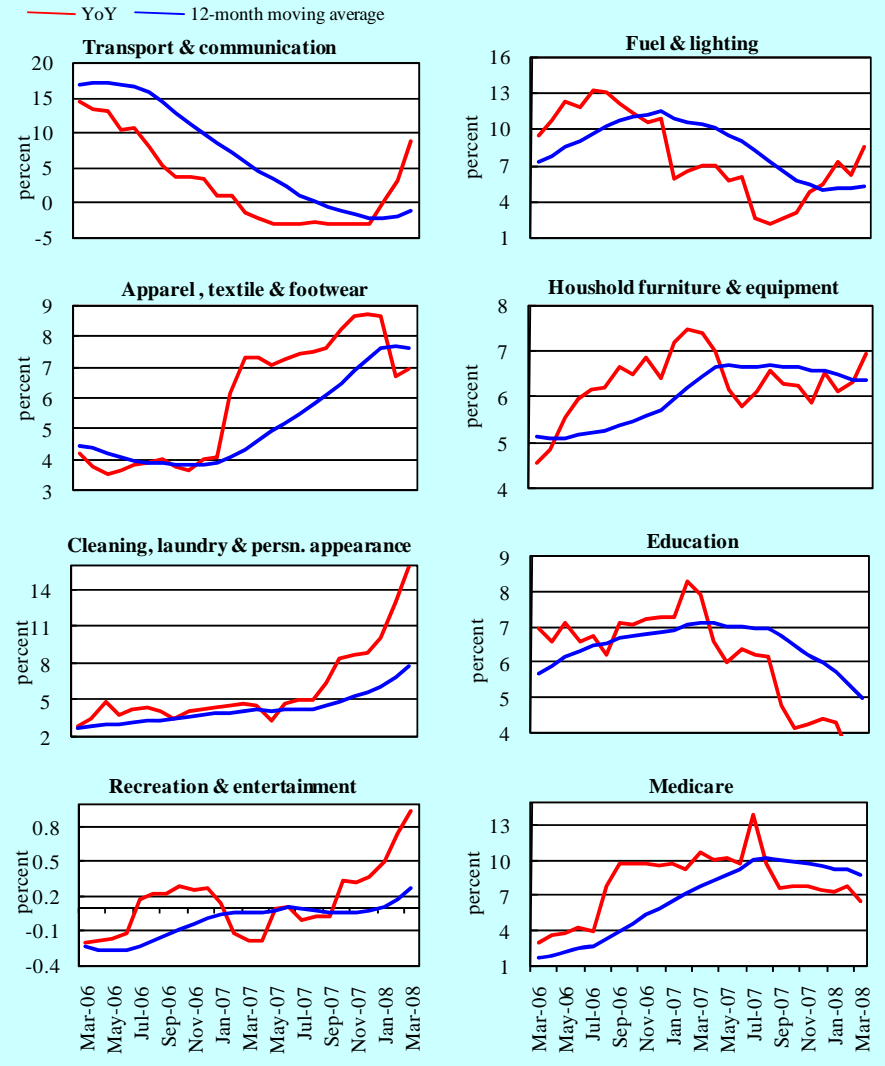


Figure A2: Frequency Distribution of Price Changes of CPI Items, March 2008

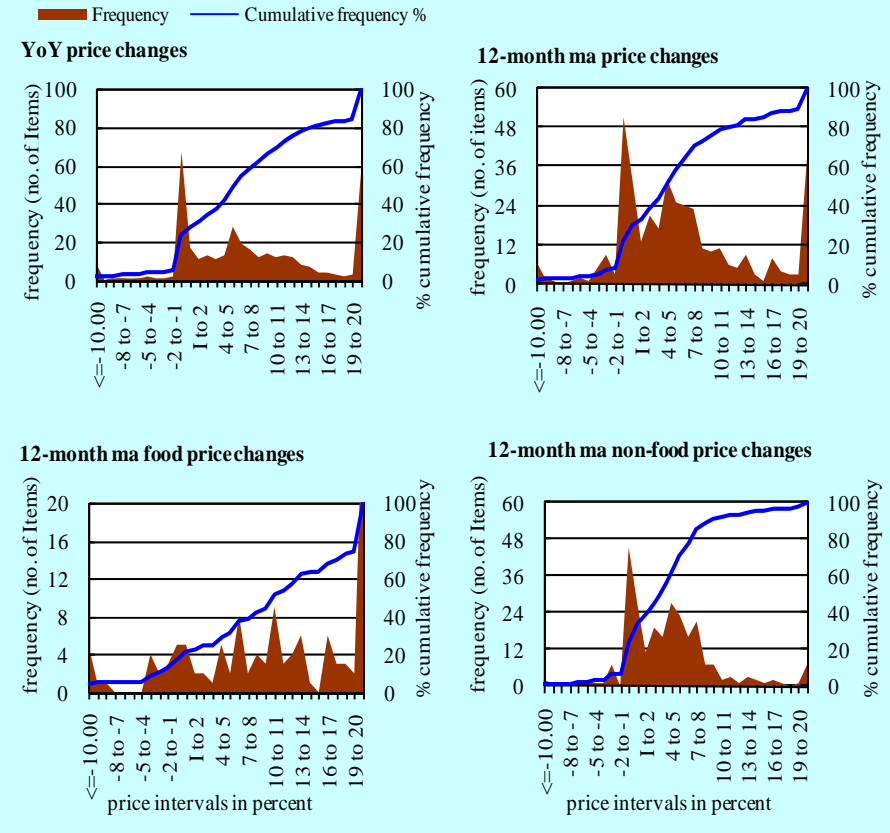
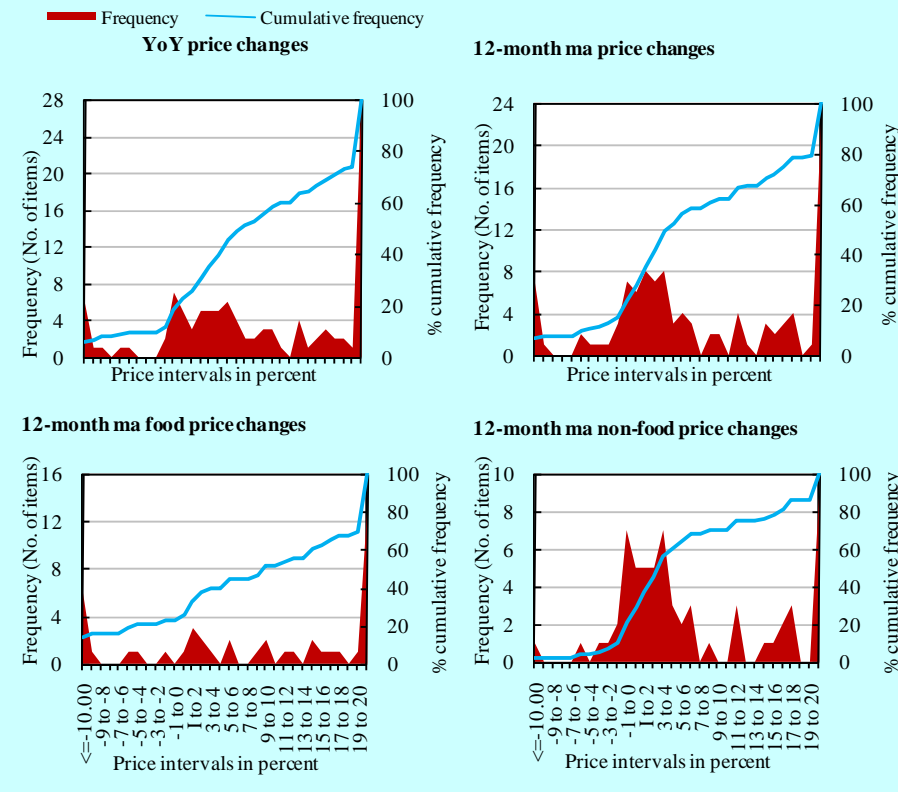


Figure A3: Frequency Distribution of Price Changes of WPI Items, March 2008



Annexure B

Technical Notes

1. All the three measures of inflation, viz. CPI, WPI and SPI are computed by the following Laspeyres Index formula:

$$I_t = \sum_j w_0^j \left(\frac{P_t^j}{P_0^j} \right)$$

where I_t is price index, w_0^j is weight of commodity j in the overall basket, P_t^j is price of commodity j in period t and P_0^j is its price in the base year.

2. Base year for all the indices is the year 2000-01.
3. CPI basket contains 374 consumers' goods; WPI basket contains 425 commodities; SPI contains 53 commodities.
4. YoY inflation is the percent change of an index in a given month over the index in the same month of the last year. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

5. Period average inflation is the percent change of the average index during the period from July to the given month of a fiscal year over the average index during the corresponding period of the last year. It is computed as follows:

$$\bar{\pi}_t = \left(\frac{\sum_{i=0}^{t-v} I_{t-i}}{\sum_{i=0}^{t-12-v} I_{t-12-i}} - 1 \right) \times 100$$

where v is the serial number of the month of July of current fiscal year in a given time series.

6. Monthly inflation is the percent change of an index in a given month over the index in the preceding month. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

7. 12-month moving average inflation (Long-run trend inflation) is the percent change of 12-month moving average of a price index; it is computed as follows:

$$\tilde{\pi}_t = \left(\frac{\sum_{i=0}^{11} I_{t-i}}{\sum_{i=0}^{11} I_{t-12-i}} - 1 \right) \times 100$$

8. Core Inflation is defined as the persistent component of measured inflation that excludes volatile and controlled prices. It reflects the normal supply and demand conditions in the economy. Core inflation is computed by the following two methods:
- a) Non-food, Non-energy inflation (NFNE inflation); it is computed by excluding food group and energy items (kerosene oil, petrol, diesel, CNG, electricity and natural gas) from the CPI basket.
 - b) 20% trimmed-mean inflation; it is computed through the following steps:
 - i. All CPI items are arranged in ascending order according to YoY/12-month moving average/monthly/period average changes in their price indices in a given month.
 - ii. 20 percent of the items showing extreme changes are excluded with 10 percent of the items at the top of the list (corresponding to cumulative weight of 90% or more) and 10 percent of the items at the bottom of the list (corresponding to cumulative weight of 10 percent or less).
 - iii. The weighted mean of the changes in price indices of the rest of the items is core inflation.
9. Weighted contribution of different items (or sub-groups) to total inflation is worked out as below:

Let the overall index (I_t) is the weighted average of price indexes of individual items or sub-groups (I_{it}), i.e.

$$I_t = \sum_i w_i \cdot I_{it}$$

The weighted contribution of a single item (or a sub-group) to overall inflation is defined as below:

$$C_{it} = \alpha_{it-12} \cdot w_i \cdot \left(\frac{\pi_{it}}{\pi_t} \right)$$

Where C_{it} : Contribution of i^{th} item to the overall inflation

$$\alpha_{it-12} = \frac{I_{it-12}}{I_{t-12}} ; \text{ i.e. ratio of item's index to overall index in the reference month}$$

w_i : Weights of i^{th} item

π_{it} : Inflation of i^{th} item

π_t : Overall inflation