

# **Inflation Monitor**

**April 2008**



**State Bank of Pakistan**

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## Overview

Consumer price index (CPI) recorded the highest level of inflation on year on year basis in over three decades and reached 17.2 percent in April 2008. This increase came from double digit inflation (YoY) in both food and non-food groups of CPI. The impact of food inflation, however, was much higher than the non-food inflation. Food inflation (YoY) was recorded at 25.5 percent during April 2008, mainly due to an increase in the prices of essential food items including ghee, cooking oil, and vegetables. Similarly non-food inflation (YoY) also increased and reached 11.2 percent in April 2008 compared to 5.2 percent in the same month last year. Among the non-food group, *transport & communication, house rent index (HRI), fuel & lighting*, and *apparel, textile & footwear* sub-groups witnessed increase in inflation (YoY) during April 2008 compared to the same month last year. Increase in inflation in both *fuel & lighting* and *transport & communication* sub-groups was mainly due to an upward adjustment in the domestic prices of fuels due to soaring international oil prices. Further, a continuous acceleration in HRI is mostly due to the outcome of rising international metal prices. Wholesale price index (WPI) and sensitive price index SPI) also showed increased inflation (YoY) (see **Table 1.1**).

**Table 1.1: Inflation (YoY)**

	percent						
	CPI			Core Inflation		WPI	SPI**
	General	Food	Non-food	NFNE *	Trimmed		
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
Apr-08	17.2	25.5	11.2	10.8	14.1	23.5	22.3

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

Annualized inflation measured by 12-month moving average (12-mma) also registered increasing trend. During April 2008, 12-mma CPI reached 9.8 percent compared to 7.8 percent in April 2007. Since May 2007, the 12-mma CPI food inflation has remained in double digits and was recorded at 14.3 percent during the month under review compared to 9.7 percent during the same month last year.

Conversely, 12-mma non-food inflation indicated no change (6.5 percent) during April 2008 compared with April 2007.

During April 2008, monthly CPI increased to 3.0 percent from 0.3 percent in March 2008. Similarly monthly food inflation recorded a significant rise of 4.3 percent during April 2008, due to increasing prices of wheat, rice, ghee, milk, etc. Non-food inflation also witnessed increase of 2.0 percent on monthly basis during the month under review (see **Table 1.2**). Rise in non-food monthly inflation was mainly due to increase in the prices of items included in *transport & communication* sub-group, reflecting the impact of record high crude oil prices in the international market.

Both measures of core inflation (non-food non-energy and 20 percent trimmed mean) have shown upward trend since June 2007 and recorded unprecedented levels of

inflation (YoY) during April 2008. NFNE based core inflation (YoY) increased to 10.8 percent in April 2008 from 5.6 percent in the corresponding month last year. Core inflation based on 20 percent trimmed-mean reached 14.1 percent (YoY) in April 2008 compared to 6.6 percent during April 2007.

**Table 1.2: Different Dimensions of Inflation (percent)**

	Apr-06	Apr-07	Apr-08	5-year average #
<b>Year-on-year (Apr over Apr)</b>				
Overall CPI	6.2	6.9	17.2	6.5
Food group	3.6	9.4	25.5	7.5
Non-food group	8.0	5.2	11.2	5.8
Core Inflation				
NFNE*	6.8	5.6	10.8	5.6
Trimmed	6.2	6.6	14.1	6.0
<b>Period average (July-Apr over July-Apr)</b>				
Overall CPI	8.0	8.0	9.5	7.3
Food group	7.0	10.3	13.8	8.7
Non-food group	8.8	6.4	6.3	6.3
Core Inflation				
NFNE*	7.7	6.0	7.5	5.3
Trimmed	7.2	6.8	9.2	5.8
<b>12-month moving average</b>				
Overall CPI	8.2	7.8	9.8	6.4
Food group	7.6	9.7	14.3	7.5
Non-food group	8.7	6.5	6.5	5.7
Core Inflation				
NFNE*	7.7	6.1	7.2	6.0
Trimmed	7.2	6.8	8.9	6.5
<b>Monthly (Apr over Mar)</b>				
Overall CPI	1.0	0.3	3.0	0.9
Food group	1.5	0.3	4.3	1.5
Non-food group	0.7	0.3	2.0	0.5
Core Inflation				
NFNE*	0.7	0.4	1.8	0.6
Trimmed	0.6	0.4	2.0	0.5

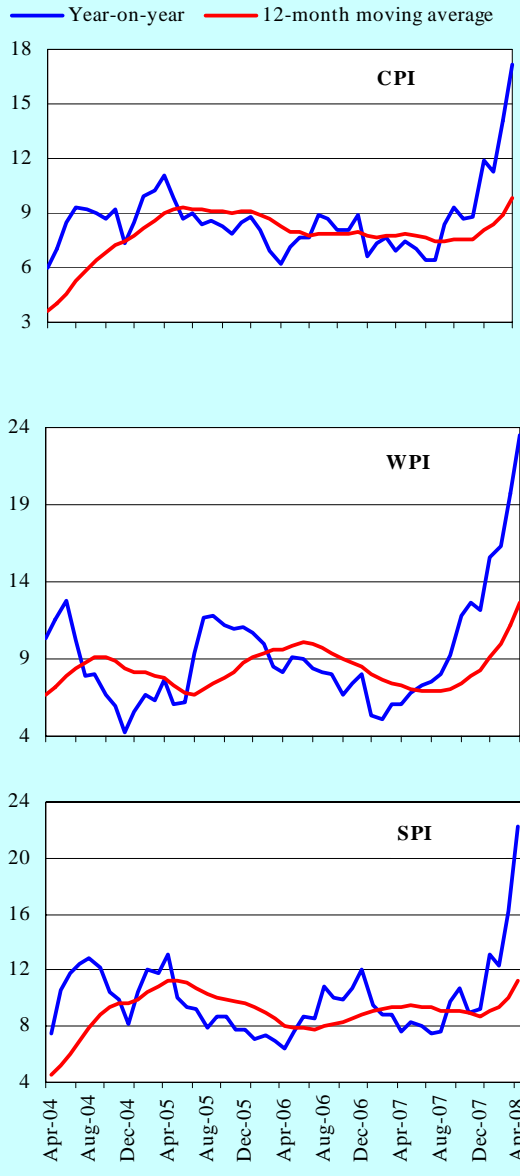
\* NFNE is Non-food non-energy inflation

# 5-year average excluding FY08

WPI also witnessed continuous inflationary pressures during FY08. WPI inflation (YoY) increased significantly from 6.0 percent during April 2007 to 23.5 percent during April 2008. This steep rise in WPI was due to high food and non-food groups' inflation. WPI food inflation increased to 24.6 percent in April 2008, compared to 8.4 percent in April 2007 and non-food inflation (YoY) was recorded at 22.7 percent in April 2008 compared to 4.3 percent during the same month last year. Further, item wise breakup of WPI basket showed that the wholesale prices of coke, eggs, pulse masoor, furnace oil, and vegetable ghee, cooking oil, diesel, fertilizers, rice, wheat, maida and chemicals showed double digit (YoY) rise in April 2008.

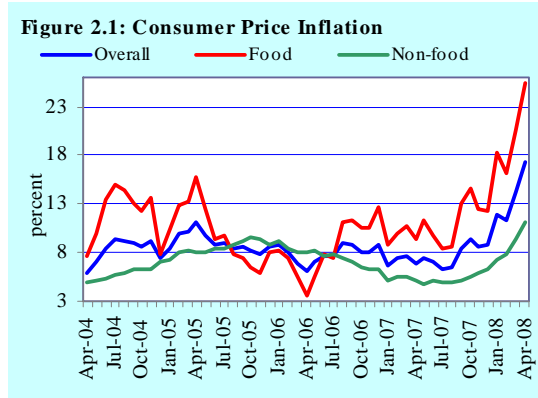
Sensitive Price Indicator (SPI) continued to accelerate in April 2008 and was recorded at 22.3 percent (YoY), compared to 7.7 percent in the corresponding month last year (see **Figure 1.1**).

**Figure 1.1: Movements in Price Indices (percent change)**

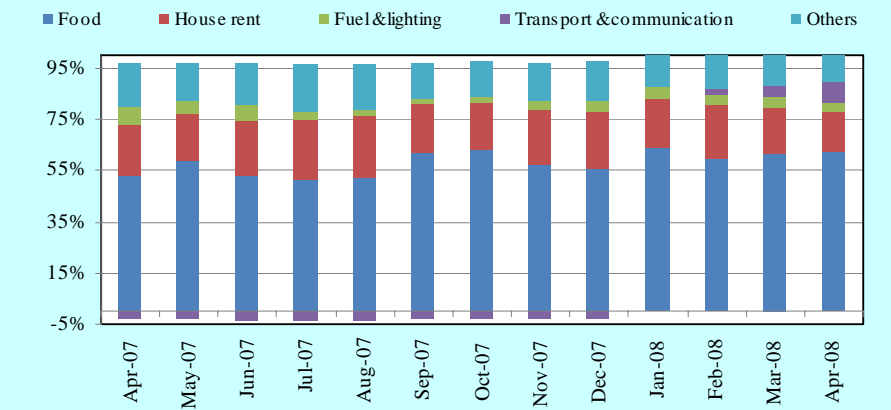


## 2. Consumer Price Index

CPI inflation (YoY) continued to show strength during April 2008 reaching 17.2 percent compared to 6.9 percent in April 2007. Food inflation also showed an increase of 16.1 percentage points in April 2008, compared to the same month last year. Similarly, non-food inflation (YoY) showed increase in April 2008 and rose to 11.2 percent compared to 5.2 percent during April 2007 (see **Figure 2.1**).



**Figure 2.2: Weighted Contribution to CPI Inflation (YoY)**



Weighted contribution of food group in overall CPI inflation increased to 62.5 percent in April 2008 from 56.1 percent during the same month last year. While contribution of non-food group in overall inflation decreased to 37.5 percent in April 2008 from 43.9 percent in April 2007. Among the sub-groups of non-food group a significant increase was recorded in the weighted contribution of *transport & communication* sub-group to the overall CPI inflation as it reached 7.7 percent in April 2008 from (-)2.8 percent in April 2007 (see **Figure 2.2**).



## 2.1 Food Inflation

Food inflation (YoY) remained strong at 25.5 percent (YoY) in April 2008 compared to 9.4 percent in April 2007. This sharp increase occurred as a result of the rising food prices in domestic markets on the back of rising international prices as well as domestic supply shortages.

Item wise analysis of the CPI food basket shows that out of

the total 124 commodities, 77 commodities including rice, pulse masoor, mustard oil, chilies green, vegetable ghee, cooking oil, wheat and some vegetables etc. exhibited double digit YoY price change in the range of 10 to 80 percent in April 2008. Combined weight of these food commodities was 68.5 percent in the food group. However, prices of 12 commodities including items such as onion, sugar, pulse moong and garlic, etc. either declined or remained unchanged during the month under review. The remaining food items having an aggregate weight of about 14.8 percent in the food group recorded subdued or moderate price change (see **Table A2** in Annexure A).

Inflation on month over month (MoM) basis during April 2008, also recorded increase due to a surge in the average prices of food commodities such as wheat, rice, eggs, chicken, carrot and some fruits compared to March 2008. On the other hand the prices of pulse mash, mustard oil, sugar, pulse moong, vegetable ghee, tomatoes and chilies green, etc. either declined or showed no change during April 2008 compared to the previous month (see **Figure 2.4**).

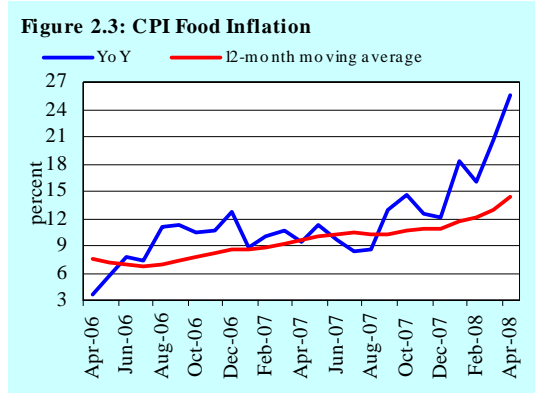
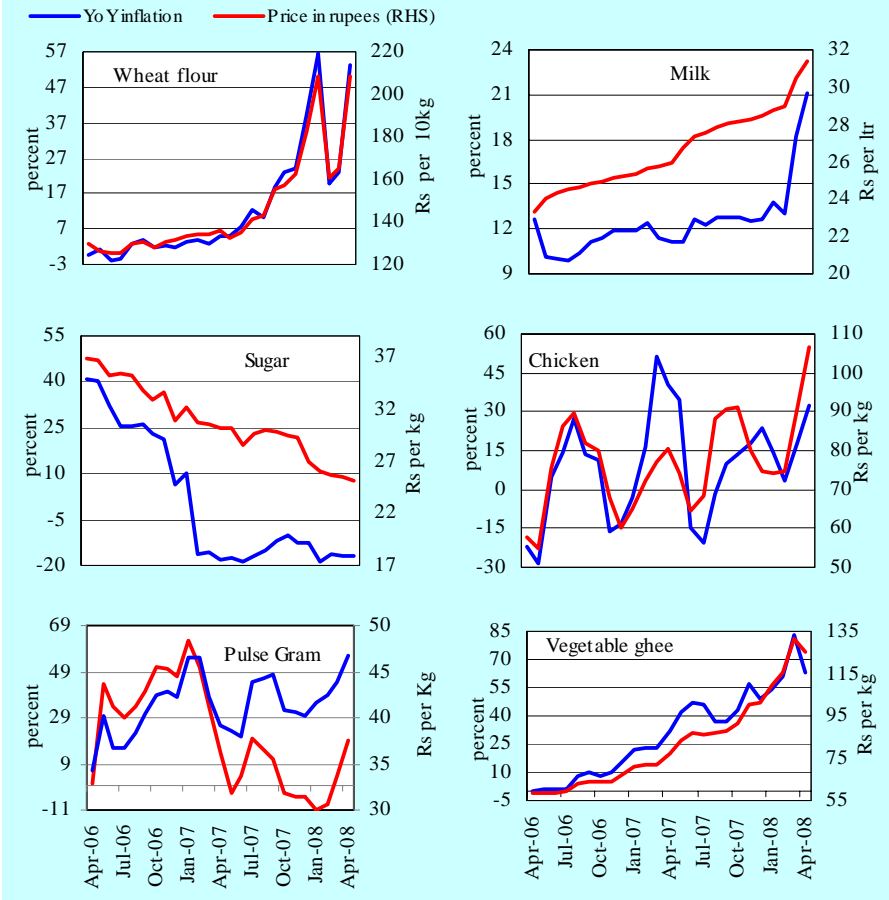


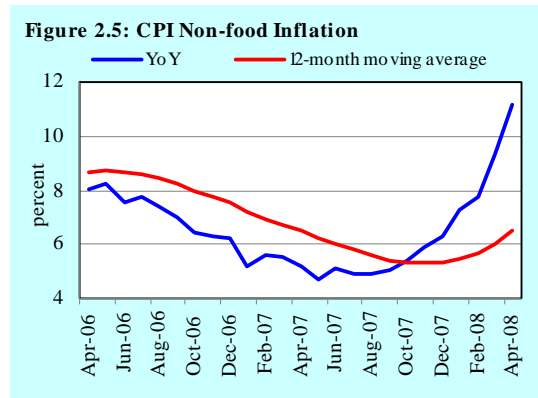
Figure 2.4: Price Trends in Key Food Items



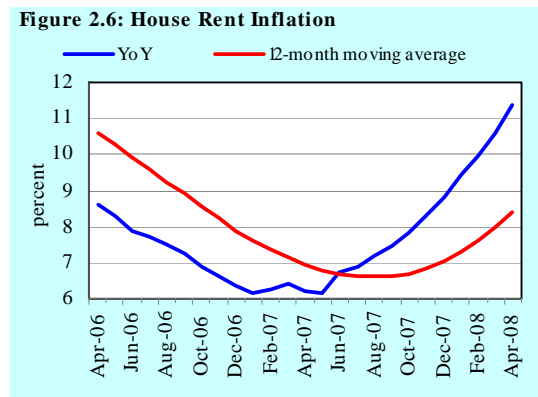
**Table A3** indicates contribution of the top ten items in the overall inflation during April 2008. Out of these top ten items, 7 items are from the food group including wheat flour, vegetable ghee, fresh milk, rice, cooking oil, vegetables and readymade food. Combined weighted contribution of these food items in the overall inflation remained 47.1 percent during April 2008 (see **Table A3** in the Annexure). Moreover, within food group, wheat flour, vegetable ghee, milk fresh and rice contributed about 64.5 percent to the YoY food inflation during April 2008.

## 2.2 Non-food Inflation

Non-food inflation (YoY) during April 2008 stood at 11.2 percent compared to 5.2 percent during the same month last year (see **Figure 2.5**). Increasing trend in non-food inflation can be attributed to rising *fuel & lighting, transport & communication* and *house rent index* sub-groups inflation during April 2008.



Increase in *house rent index* was mainly contributed by a continuous rise in the prices of bricks, iron bars & sheets, pipe fittings and timber. The inflation recorded in the sub-group was 11.4 percent during April 2008 compared to 6.2 percent in the same month last year (see **Figure 2.6**).



*Transport & communication* sub-group recorded 17.9 percent increase in April 2008, compared to (-)2.4 percent in the corresponding month last year. The rise in this sub-group was mainly due to a rise in the prices of key fuels, road and air fares etc.

Similarly, *apparel, textile & footwear* sub-group recorded 8.4 percent increase in April 2008, compared to 7.3 percent in April 2007. Major items that contributed to the increase in this sub-group's inflation include cotton cloths, readymade garments, tailoring charges, etc.

*Fuel & lighting* sub-group inflation also witnessed an increase of 1.6 percentage points to reach 8.6 percent in April 2008, compared to 7.0 percent in the corresponding month last year. *Cleaning, laundry & personal appearance* sub-group continued its uptrend for the 11<sup>th</sup> consecutive month and further accelerated to reach 15.8 percent in April 2008 compared to 4.5 percent during the corresponding month last year. The main reason for this double digit inflation

(YoY) in the sub-group was the significant increase in the prices of jewellery, washing soap & detergents, laundry charges etc.

Inflation (YoY) in *household furniture & equipment* sub-group showed an increase in April 2008 and was recorded at 8.4 percent compared to 7.0 percent in the same month last year. Inflation in *recreation & entertainment* sub-group also increased to mark 1.0 percent in April 2008, compared to a deflation of 0.2 percent in April 2007.

On the other hand, YoY inflation in the *education* sub-group declined from 6.6 percent in April 2007 to 4.7 percent in April 2008. Similarly, YoY inflation in *medicare* sub-group declined from 10.1 percent in April 2007 to 7.4 percent in April 2008 (see **Figure A1** in Annexure).

Item-wise analysis of the CPI non-food basket, shows that out of the 250 non-food items, 78 items witnessed double digit inflation during April 2008. The items showing double digit price change include gold and silver tezabi, gas cylinder, kerosene oil and doctors clinic fee, etc. Further 66 items showed moderate price change in the range of 5 to 10 percent; all other commodities witnessed price change of less than 5 percent ( see **Table A2** in the Annexure). Items that showed either negative or no price change included some Urdu and English text 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 showed strong inflationary pressures in all major cities during April 2008. Inflation (YoY) in provincial capitals Lahore, Karachi, Quetta and

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
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
Apr-08	17.2	13.8	15.4	16.0	17.5	18.9

Peshawar remained at 15.4, 16.0, 17.5 and 18.9 percent in April 2008 as compared to 7.2, 6.5, 7.9 and 5.8 percent in the corresponding month last year. The inflation (YoY) also remained strong in the capital city Islamabad at 13.8 percent in the month under review compared to 8.1 percent in April 2007. Inflation (YoY) in capital city and two provincial capitals namely Lahore and Karachi remained lower than the overall CPI inflation (see **Table 2.1**).

City-wise inflation data for the month of April 2008 shows that inflation in 20 cities was above the overall CPI inflation (YoY), while remaining 15 cities recorded inflation below overall CPI inflation. The highest level of YoY inflation was recorded in Loralai (23.7 percent) followed by Nawabshah (22.0 percent) and Mardan (21.5 percent) during the month under review. On the other hand, the lowest YoY inflation was recorded in Islamabad (13.8 percent) during the month under review (see **Table 2.2**).

**Table 2.2: City wise Inflation in CPI (YoY), April 2008**

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Loralai	23.7	33.7	16.9	Jhang	17.0	22.7	12.9
Nawabshah	22.0	31.4	15.7	D.G. Khan	17.0	21.6	13.6
Mardan	21.5	30.7	14.9	Vehari	17.0	24.1	11.6
Samundari	21.5	30.6	14.9	Jhelum	17.0	24.9	11.3
Bannu	20.9	31.2	13.8	D.I.Khan	16.4	24.8	10.3
Gujranwala	20.7	29.2	14.5	Okara	16.3	23.3	11.1
Sukkur	20.5	30.6	13.6	Bahawalpur	16.3	24.2	10.3
Mianwali	20.0	28.6	13.6	Sargodha	16.1	20.6	12.8
Shahdadpur	19.9	26.7	15.1	Karachi	16.0	23.3	10.9
Faisalabad	19.5	30.4	11.3	Attock	15.9	23.9	10.2
Hyderabad	19.2	26.4	14.1	Sialkot	15.5	23.7	9.0
Peshawar	18.9	28.6	12.0	Lahore	15.4	25.2	8.1
Mirpur Khas	18.9	26.4	13.6	Multan	15.0	23.2	8.9
Kunri	18.3	26.2	12.8	Rawalpindi	14.9	21.4	10.1
Turbat	18.3	22.7	15.3	Islamabad	13.8	19.8	9.5
Khuzdar	18.1	23.9	13.9				
Abbotabad	18.0	25.7	12.3				
Larkana	17.9	24.4	13.1				
Quetta	17.5	25.8	11.4				
Bahawalnagar	17.2	20.2	15.1				

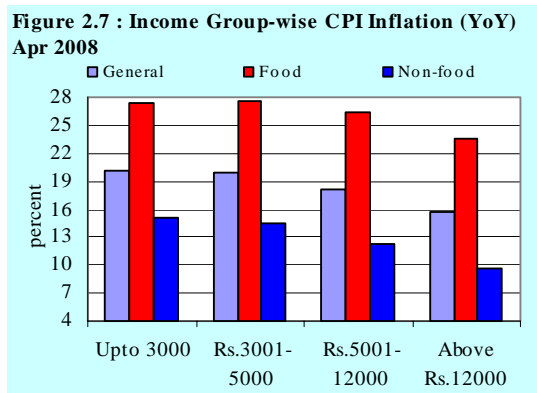
Note: High inflation refers to above average inflation, and low inflation refers to below average inflation

## 2.4 Income Group-wise Inflation

Income group-wise inflation (YoY) remained higher than the overall CPI inflation during April 2008 in all income groups, except the highest income group (see **Figure 2.7**).

The highest CPI inflation (YoY) was recorded for the income group of upto Rs. 3000 (20.2 percent), followed by income group of Rs. 3001 to 5000 (19.9 percent) and

income group Rs. 5001 to 12000 (18.1 percent), while the highest income group of above Rs. 12000 experienced the lowest inflation in all categories (15.7 percent).



City-wise data of income groups exhibit that the lowest YoY inflation was recorded in Rawalpindi for income groups of upto Rs. 3000, while Islamabad recorded the lowest inflation for the income group of Rs. 3001 to 5000 & income group of Rs. 5001 to 12000. For the income group above Rs. 12000 per month lowest inflation was recorded in Multan. In contrast the highest YoY inflation was recorded in Khuzdar for all income groups (see **Table A5** in annexure A).

## 2.5 Services and Non-services Inflation

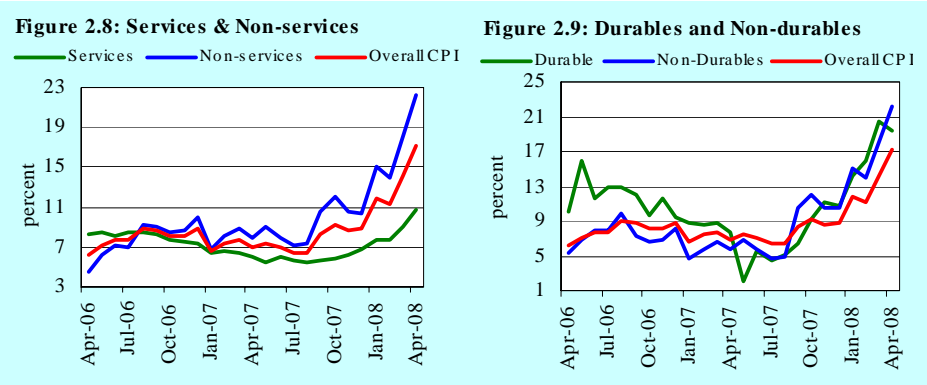
In services<sup>1</sup> sector (YoY) inflation showed an uptrend during April 2008 compared to the same month last year. Inflation (YoY) in services sector was recorded at 10.7 percent during April 2008 compared to 6.0 percent in April 2007. Following the trend in services sector, inflation in the non-services sector also increased and was recorded at 22.2 percent during April 2008 as compared to 7.8 percent in April 2007 (see **Figure 2.8**).

A detailed analysis of non-services sector data shows that inflation (YoY) in both durable<sup>2</sup> and non-durable goods increased in April 2008 compared to April 2007. In durable goods inflation (YoY) was recorded at 19.3 percent in April 2008 compared to 7.6 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

<sup>1</sup> 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.

<sup>2</sup> 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.

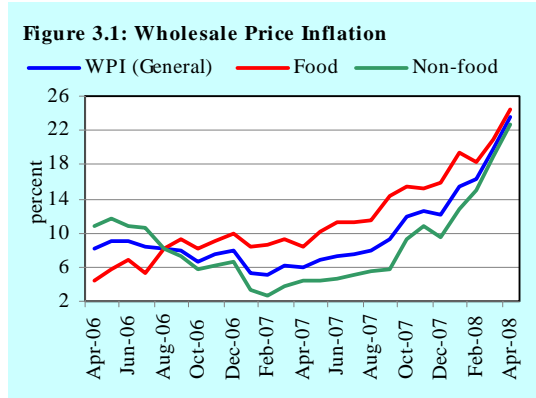
22.3 percent in April 2008 compared to 5.7 percent in the same month last year. Higher prices of petrol, diesel, kerosene oil, wheat flour, fresh milk and firewood, etc. are the main contributing factors for increase in non-durable goods inflation (see **Figure 2.9**).



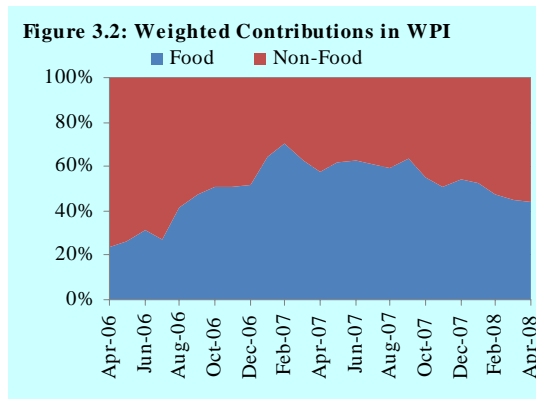
### 3. Wholesale Price Index

Inflation measured by wholesale price index (WPI) continued to show an uptrend and reached 23.5 percent in April 2008 –highest level since June 1994 – compared to 6.0 percent for the same month last year. Both food and non-food groups of WPI contributed to this steep rise in WPI (YoY) inflation. WPI food inflation was recorded at 24.6 percent in the month under review

compared to 8.4 percent in April 2007. Similarly, non-food group of WPI witnessed a YoY increase of 22.7 percent in April 2008 compared to only 4.3 percent during the same month last year. Interestingly, WPI food and non-food inflation, as well as, overall WPI inflation seem to be converging in April 2008 (see **Figure 3.1**).



The surge in WPI non-food inflation in the last few months has resulted in increase in its weighted contribution in overall WPI inflation. The non-food group contribution rose to 56.1 percent in April 2008 compared to 42.5 percent in April 2007. Consequently, the weighted contribution of food group in overall WPI inflation came down to 43.9 percent in April 2008 compared to 57.5 percent in the same month last year (see **Figure 3.2**).



An item-wise break up of WPI basket reveals that items showing double digit inflation were dominant in the WPI basket. Price distribution of YoY changes show that 54 items exhibited more than 10 percent YoY growth in their prices, ranging between 11 to 133.3 percent. Prices of major items that displayed double digit inflation include tomatoes, pulse masoor, mustard/rapeseed oil, coke, furnace oil, fertilizers, rice, vegetable ghee, cooking oil, wheat, maida, chemicals, etc. 15 items exhibited growth between 5 to 10 percent in their wholesale prices whereas



23 items showed subdued increase, while prices of 14 other items either declined or showed no change during April 2008 compared to April 2007 (see **Table 3.1**).

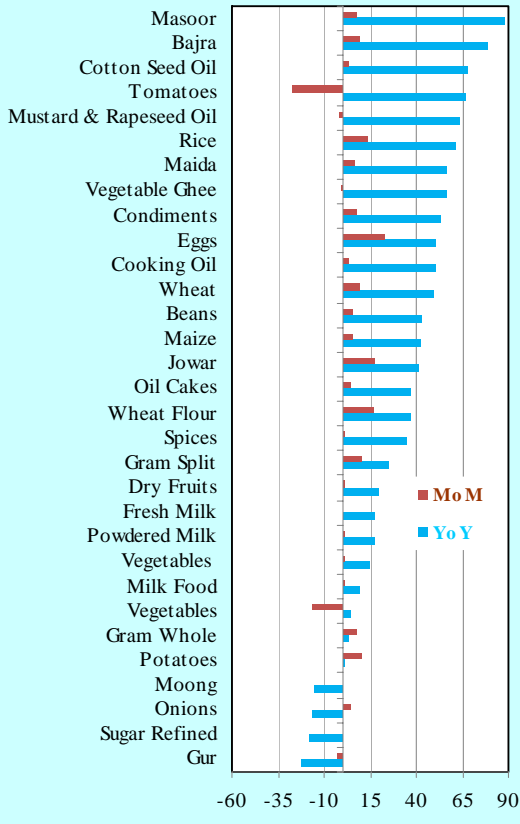
A further disaggregated analysis of items included in the WPI basket shows that 25 of the total 43 food items included in the WPI basket witnessed a rise of over 10 percent in their prices during April 2008 compared to the same month last year. Four food items exhibited growth between 5 to 10 percent in their wholesale prices, while eight items recorded subdued inflation of up to 5 percent. The wholesale prices of the remaining six food items either declined or remained stable.

WPI food group showed a growth of 24.6 percent during April 2008 compared to 8.4 percent in April 2007. Major food items that contributed in this steep rise include bajra, tomatoes, pulse masoor, vegetable ghee, cooking oil, rice, maida, wheat. Among food group highest inflation was recorded in the wholesale price of pulse masoor that showed an increase of 88.1 percent during the month under review. On the other hand, few commodities showed YoY

**Table 3.1: WPI Price Distribution of YoY Changes (April 2008)**

Groups	No. of Items				Total
	Decrease or no change	Up to 5%	5%-10%	More than 10%	
<b>A. Food</b>	6	8	4	25	<b>43</b>
<b>B. Non-Food</b>	8	15	11	29	<b>63</b>
Raw material	1	2		6	9
Fuel, lighting & lubricant			2	9	11
Manufactures	6	10	7	9	32
Building material	1	3	2	5	11
<b>Total</b>	<b>14</b>	<b>23</b>	<b>15</b>	<b>54</b>	<b>106</b>

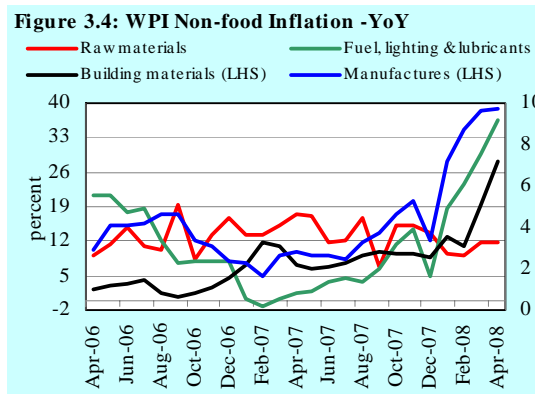
**Figure 3.3: Wholesale Price Inflation (%) in Selected Food Items (April 2008)**



deflation of different magnitudes in their wholesale prices including gur (22.7 percent), sugar (18.2 percent), onions (16.4 percent) and pulse moong (15.3 percent) etc. (see **Table A7 & Figure 3.3**).

The wholesale prices of non-food group of WPI surged considerably and recorded YoY inflation of 22.7 percent in April 2008 – highest since

July 1994 – compared to 4.3 percent for the same month last year. All sub-groups of the non-food group, except the *raw material* sub-group, witnessed a significant acceleration in YoY inflation during April 2008 compared to April 2007 (see **Figure 3.4**).



The major items that contributed to the significant rise in WPI non-food (YoY) inflation include coke, furnace oil, fertilizers, rapeseeds, chemicals, iron bars & sheets etc. In particular, the wholesale price of coke witnessed a YoY rise of 133.3 percent in April 2008 reflecting the rising international energy prices. However, prices of 8 non-food items declined or showed no change in April 2008 including sugarcane, cement and paper etc. (see **Figure 3.5**).

Within WPI non-food, the *fuel, lighting & lubricant* sub-group continued to show a significant rise in its contribution and reached 66.8 percent in April 2008 compared to 14.3 percent in April 2007. This increase in the weighted contribution of *fuel, lighting & lubricant* sub-group can be attributed to the continuously rising international crude oil prices (see **Table 3.2**).

**Table 3.2: Contribution of Sub-Indices to WPI Non-food Inflation (YoY)**

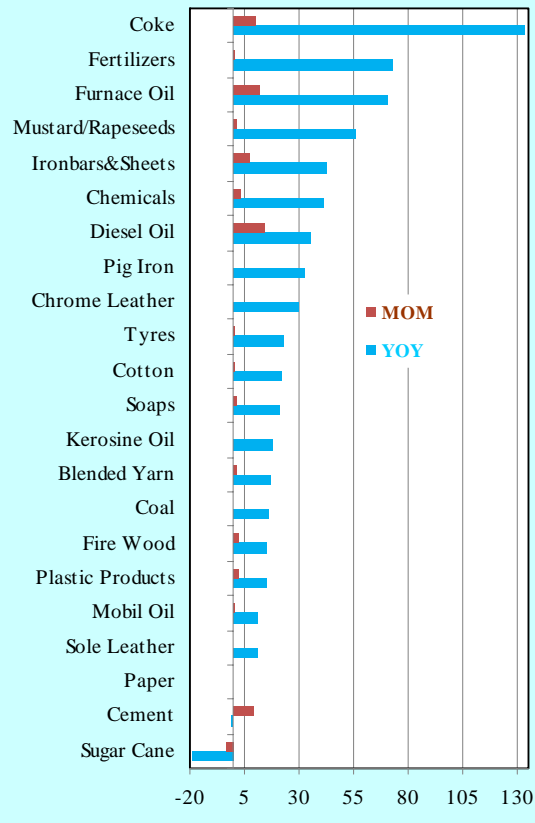
	Apr 07	Jun 07	Mar 08	Apr 08
Raw materials	47.8	31.4	8.3	6.9
Fuel, lighting & lubricants	14.3	34.9	63.9	66.8
Manufactures	24.1	21.4	18.7	15.6
Building materials	13.6	12.1	9.0	10.7

Further analysis of YoY inflation of various sub-indices of non-food group exhibited that the *raw material* sub-group showed a decrease in inflation in April 2008 and was recorded at 11.6 percent compared to 17.4 percent during the same month last year. In this sub-group, the wholesale prices of sugarcane declined while the wholesale prices of mustard/rapeseed, pig iron and cotton registered double digit YoY increase in April 2008.

Similar to previous month the *fuel, lightning & lubricants* sub-group continued to show strong upward movement and recorded a significantly high YoY inflation of 36.6 percent during April 2008, compared to only 1.5 percent inflation during the same month last year. This steep rise is largely on account of high crude oil prices in the international markets that directly affected the wholesale prices of coke, furnace oil and mobil oil in the 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 April 2008 compared to 2.7 percent in April 2007. This was mainly because of double-digit YoY rise in the wholesale prices of items such as fertilizers, chemicals, chrome leather, soaps, tyres, plastic products and sole leather. Within the *manufactures* sub-group the wholesale prices of fertilizers continued to register high YoY growth and was recorded at 72.2 percent in April 2008 mainly due to the rising DAP<sup>3</sup> prices in the international market. The *building material* sub-index accelerated significantly and witnessed a higher YoY inflation of 28.2 percent in April 2008, compared to 7.0 percent for the same month last year. This upsurge can be attributed to the 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).

**Figure 3.5: Wholesale Prices Inflation (%) in Selected Non-food Items (April 2008)**



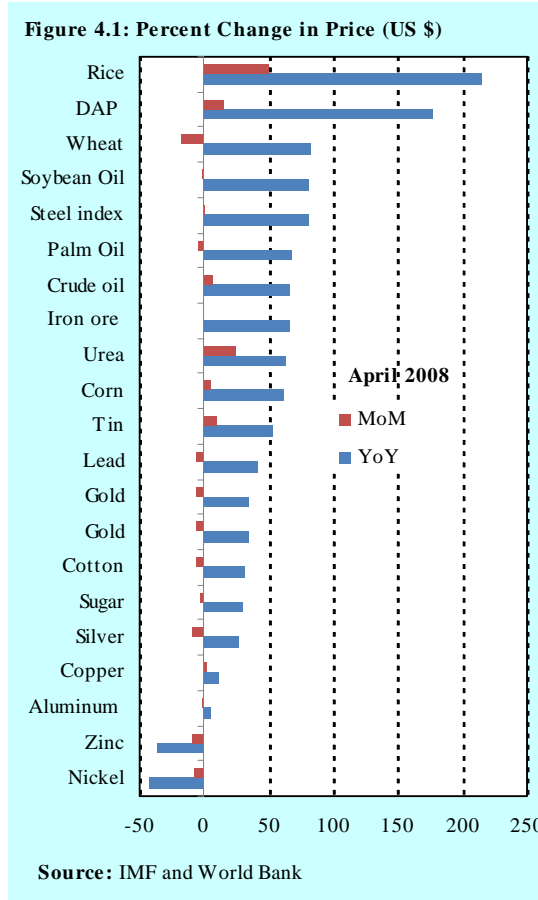
<sup>3</sup> DAP: Diammonium Phosphate

#### 4. Global Commodity Prices

Commodity prices of food, fertilizer<sup>4</sup>, energy and metal continued to rise in April 2008 compared with the same month last year. The crude oil prices touched new highs and prices of fertilizers and some essential food items (rice, soybean oil, wheat, etc.) witnessed above 50 percent YoY growth in their prices during the month. Rice prices particularly exhibited strong upward movement and registered a YoY increase of 215 percent in April 2008. This sharp increase in the price of staple food of half of the world population, was the result of supply concerns due of export bans from major rice exporting countries<sup>5</sup>.

Crude oil prices reached historic peaks due to refinery workers strike in Britain, attack on pipeline in Nigeria (the largest oil producing country in Africa) and weak dollar in

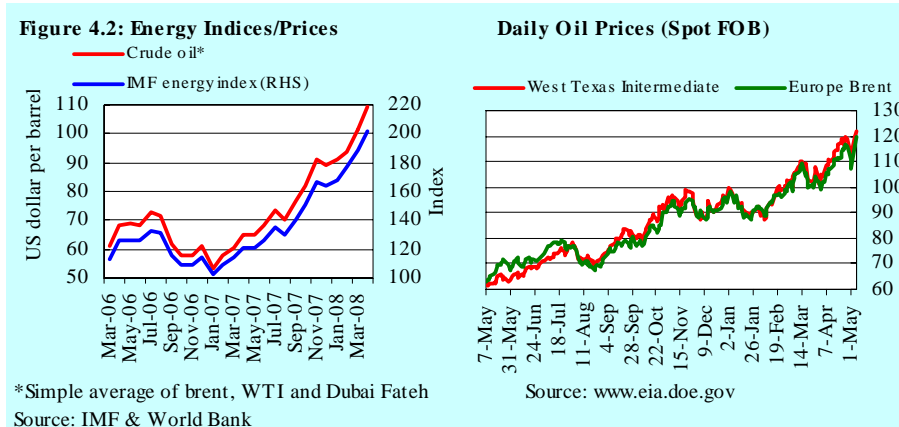
April 2008. Average crude oil prices<sup>6</sup> reached close to US\$ 109.0 per barrel in April 2008 and showed 68.1 percent YoY increase (see **Figure 4.1**).



<sup>4</sup> Dia-amonium Phosphate (DAP) and Urea.

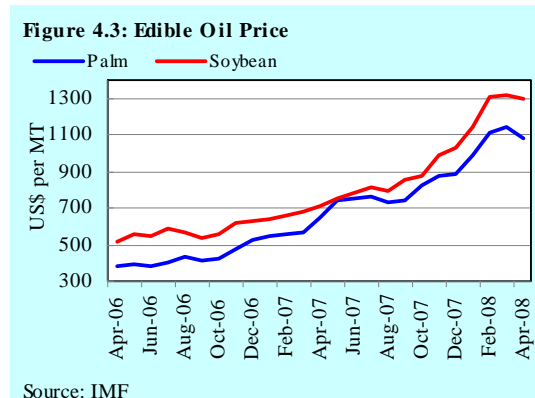
<sup>5</sup> [www.reuters.com](http://www.reuters.com)

<sup>6</sup> Average of West Texas International (WTI), Brent oil and Dubai Fatah



The IMF and World Bank energy indices showed strong upward movements in April 2008 compared to the same month last year. Crude oil prices in the US market were recorded near US\$ 120 per barrel on April 28, 2008 and remained well above US\$ 100 per barrel mark throughout the month. Prices of crude oil have been driven primarily by expectations of supply tightness<sup>7</sup>. There were further supply concerns as the non-OPEC production growth continued to slow down. In the first quarter of 2008, Russian crude oil production fell for the first time in nine years. The WTI spot crude oil price fluctuated in the wider range of US\$ 100.9 – US\$ 119.7 per barrel during April 2008 (see **Figure 4.2**).

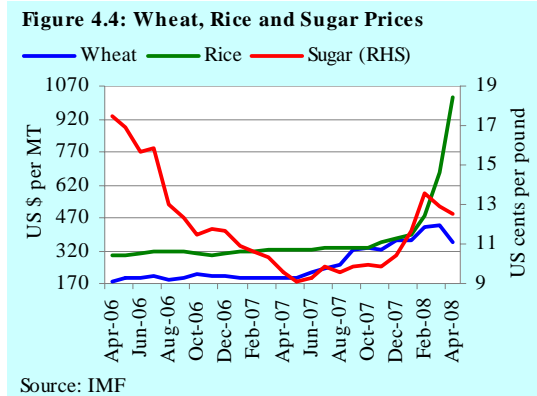
In food group, palm and soybean oil prices remained strong and showed sharp increases of 67.9 and 80.9 percent in April 2008 compared to the same month last year. Factors responsible for this surge in edible oil prices include decline in acreage planting, continued unrest among farmers in Argentina over higher export taxes on soybeans and a cut in the import duty on edible oil by India (the second largest importer) to ensure domestic supplies<sup>8</sup> (see **Figure 4.3**).



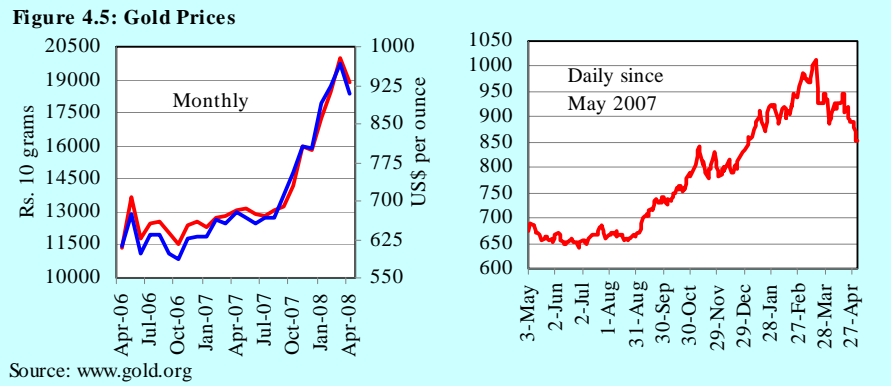
<sup>7</sup> Financial Times

<sup>8</sup> WB Commodity Markets Review (May 9, 2008)

Prices of other major food items also continued to show uptrend and exhibited strong YoY growth in April 2008. Most significant movement was observed in rice prices in international market which rose to all time high during the month under review. The following factors contributed in this sharp increase: (i) Expected supply shortages and (ii) export restrictions from a



number of countries including Vietnam, India, Brazil, China, etc aimed at protecting domestic supplies. Wheat prices also witnessed a strong upward movement in April 2008 compared to the same month last year. In international market, wheat prices remained 82.9 percent higher in April 2008 compared to April 2007 mainly due to record low stocks. Sugar prices registered YoY growth of 30.5 percent in April 2008 (see **Figure 4.4**).



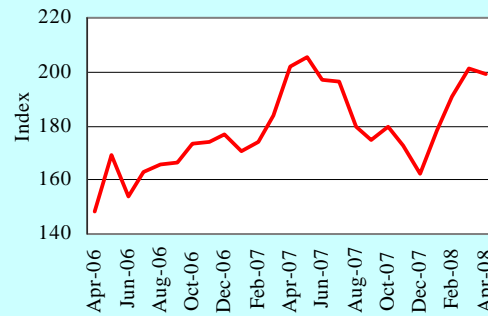
Gold prices remained significantly higher in April 2008 compared to the same month last year both in the international, as well as, in the domestic markets. On month over month (MoM) basis, however, gold prices declined by 6.1 percent. Increase in gold prices in the international market is attributed to investors' diminishing interest in the precious metal as a result of strengthening dollar. On daily basis, gold price remained higher and fluctuated in the range of US\$ 871.0 and US\$ 946.0 per ounce during April 2008 (see **Figure 4.5**).

After witnessing a YoY rise for three consecutive months, metal prices declined in April 2008 as indicated by IMF metal price index. This reversal in metal prices was mainly the result of 42.4 and 36.1 percent (YoY) reduction in the prices of nickel and lead in the international markets. Nickel prices fell as mining companies ramped up production, adding to a surplus, and stainless-steel makers cut back on purchases<sup>9</sup>. Zinc prices dropped due to a weak demand and rebound in Chinese production<sup>10</sup> (see **Figure 4.6**).

International cotton prices as reflected by the cotton outlook 'A' index increased by 32.0 percent on YoY basis in April 2008, over the same month last year. Current rise in global cotton prices is the result of US farmers switching towards the plantings of corn and wheat due to higher prices and rising Asian purchases<sup>11</sup>. Cotton prices in the domestic market registered an increase of 28.7 percent during the month under review showing a strong link between international and domestic cotton prices (see **Figure 4.7**).

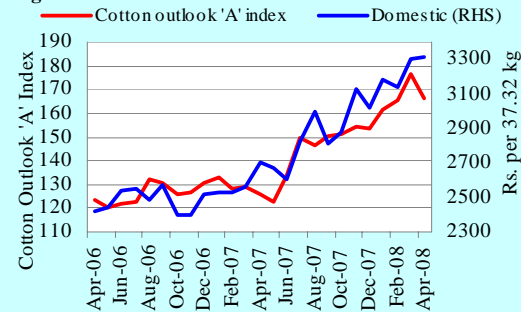
DAP and urea prices surged by 177.7 and 63.3 percent (YoY)

**Figure 4.6: Metal Price Index**



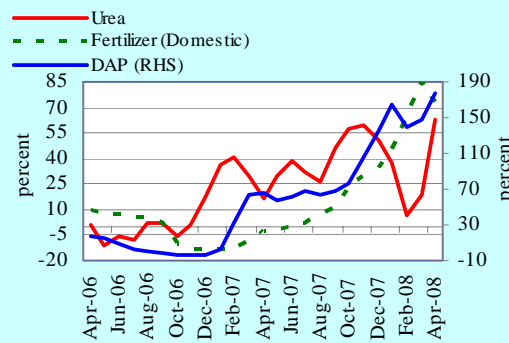
Source: IMF

**Figure 4.7: Cotton Prices**



Source: World Bank, www.apmta.org.pk

**Figure 4.8 : Fertilizer prices (YoY change)**



Source: World Bank

<sup>9</sup> Bloomberg

<sup>10</sup> WB Commodity Markets Review (May 9, 2008)

<sup>11</sup> Reuters

in the international market. This sharp increase came mainly due to its increased demand for crop plantings in the northern hemisphere, capacity constraints and new export taxes by Russia and China to ensure adequate supplies for domestic use<sup>12</sup> (see **Figure 4.8**). Like international prices, fertilizer prices are on the rise in the domestic market as Pakistan imports significant quantity of DAP and urea from international market.

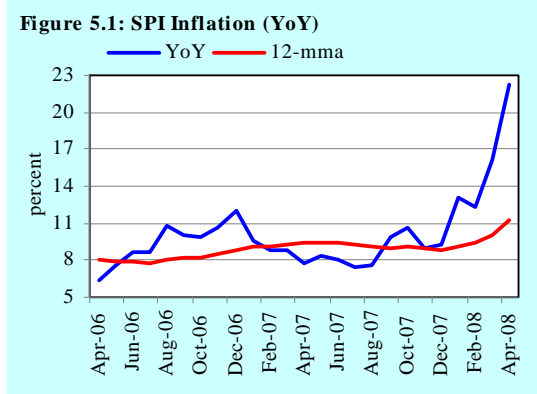
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<sup>12</sup> WB Commodity Markets review (May 9, 2008)



### 5. Sensitive Price Indicator

Like CPI and WPI, the sensitive price indicator (SPI) also showed significant rise in inflation (YoY) and reached 22.3 percent in April 2008 compared to 7.7 percent in the same month last year. Similarly long-run trend indicated by 12 month moving average also recorded double digit YoY inflation for the second consecutive month in April 2008 (see **Figure 5.1**).



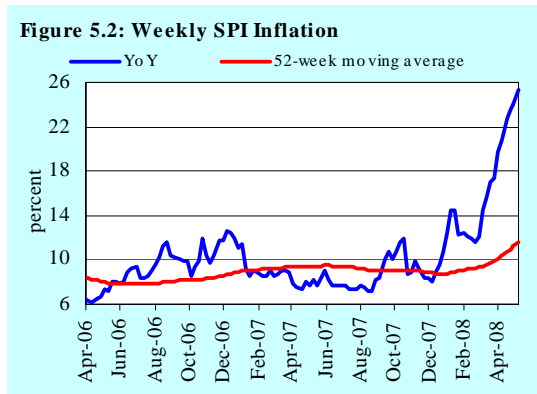
Item wise analysis of SPI basket shows that out of 53 items, prices of 33 items

recorded YoY inflation above 10 percent, 7 items between 5 to 10 percent, 5 items between 0 to 5 percent while 8 items recorded either negative or no inflation in April 2008 (see **Table 5.1**). Major items contributing to SPI inflation were pulse masur (84.3 percent), tomatoes (78.2 percent), rice irri-6 (77.6 percent), red chilies (70.8 percent), and mustard oil (69.3 percent).

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

Percent Change	Number of items			
	Apr-07	Jun-07	Mar-08	Apr-08
0 or less	8	13	10	8
0 to 5	11	8	8	5
5 to 10	12	12	7	7
10 or above	22	20	28	33
Minimum	-43.9	-29.2	-44.5	-39.6
Maximum	61.5	67.1	194.3	84.3

On month over month (MoM) basis, SPI showed a sharp rise of 5.4 percent in April 2008 over March 2008. This rise can be attributed to the acceleration in the MoM inflation of eggs (25.7 percent), red chilies (25.0 percent), rice irri-6 (23.1 percent), and wheat flour (20.9 percent) (see **Table A8** in Annexure A).



Weekly SPI inflation (YoY)

showed increasing trends in YoY inflation during the month under review and fluctuated within the range of 19.7 percent to 23.9 percent. Thus after recording weekly SPI YoY inflation of 17.4 percent in the last week of March 2008, SPI inflation increased to 23.9 percent by the last week of April 2008- historic high level. The long run trend indicated by 52-week moving average has also shown an increasing trend since January 2008 (see **Figure 5.2**).

Income group-wise SPI inflation (YoY) recorded significant increase for all income groups in April 2008 compared to the same month last year. Like previous month the incidence of inflation remained the highest for the lowest income group in April 2008. This is mainly because majority of the commodities showing high inflation are from food group and thus are more significant to the lowest income group as compared to other groups. Income group-wise SPI inflation further reveals that all income groups, except the highest income group, showed higher SPI inflation than the average SPI inflation during the month under review (see **Table 5.2**).

	percent			
	<b>Apr-07</b>	<b>Jun-07</b>	<b>Mar-08</b>	<b>Apr-08</b>
Up to Rs. 3000	8.3	9.7	18.6	24.9
Rs. 3001-5000	8.3	9.6	17.9	24.5
Rs. 5000-12000	8.2	8.9	16.9	22.8
Above Rs. 12000	6.9	6.2	14.6	19.9
<b>All income groups</b>	<b>7.7</b>	<b>8.0</b>	<b>16.2</b>	<b>22.3</b>

## Annexure A

Table A1: CPI Inflation (YoY) by Groups

	Weights	Apr-04	Apr-05	Apr-06	Apr-07	Apr-08
<b>I. Food Group</b>	<b>40.3</b>	<b>7.6</b>	<b>15.7</b>	<b>3.6</b>	<b>9.4</b>	<b>25.5</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>4.9</b>	<b>8.0</b>	<b>8.0</b>	<b>5.2</b>	<b>11.2</b>
Apparel, textile, etc.	6.1	1.0	4.9	3.8	7.3	8.4
House rent	23.4	7.0	12.1	8.6	6.2	11.4
Fuel & lighting	7.3	3.1	5.0	10.7	7.0	8.6
Household furniture & equipment	3.3	5.2	5.1	4.9	7.0	8.4
Transport & com.	7.3	6.1	10.8	13.4	-2.4	17.9
Recreation & entertainment	0.8	-1.4	0.1	-0.2	-0.2	1.0
Education	3.5	3.6	3.9	6.6	6.6	4.7
Cleaning, laundry, etc.	5.9	4.9	2.3	3.5	4.5	15.8
Medicare	2.1	1.4	1.0	3.7	10.1	7.4
<b>Headline</b>	<b>100</b>	<b>6.0</b>	<b>11.1</b>	<b>6.2</b>	<b>6.9</b>	<b>17.2</b>

Table A2: Distribution of Price Changes of CPI Basket, April 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%)
<b>I. Food Group</b>	<b>25.5</b>	<b>110</b>	<b>12</b>	<b>9</b>	<b>12</b>	<b>77</b>
<b>II. Non-Food Group</b>	<b>11.2</b>	<b>250</b>	<b>64</b>	<b>42</b>	<b>66</b>	<b>78</b>
Apparel, textile, etc.	8.4	42	4	10	20	8
House rent	11.4	1				1
Fuel & lighting	8.6	15	2		9	4
Household furniture & equipment	8.4	44		6	15	23
Transport & com.	17.9	43	19		3	21
Recreation & entertainment	1.0	16	9	4	1	2
Education	4.7	24	9	8	3	4
Cleaning, laundry, etc.	15.8	36	3	7	15	11
Medicines	7.4	29	18	7		4
<b>Overall</b>	<b>17.2</b>	<b>360</b>				

Note: Prices of 14 seasonal items were not reported during the month.

<b>Table A3: Top Ten Contribution to YoY CPI Inflation in April 2008</b>					
<b>Items</b>	<b>weights</b>	<b>YoY change</b>		<b>Weighted Contribution</b>	
		<b>Apr-07</b>	<b>Apr-08</b>		
<b>A. Ranked by Weighted Contribution</b>					
1	Wheat Flour	5.11	4.45	54.07	15.78
2	House Rent Index	23.43	6.22	11.35	15.44
3	Vegetable Ghee	2.67	25.32	59.90	10.54
4	Milk Fresh	6.66	11.17	20.97	8.73
5	Rice	1.34	28.36	60.22	5.21
6	Petrol	1.73	-6.91	28.17	3.45
7	Transport Fare/Charges	2.12	2.47	19.56	2.88
8	Cooking Oil	0.69	18.21	59.06	2.48
9	Vegetables	1.76	7.88	18.58	2.21
10	Readymade Food	1.68	6.37	20.69	2.17
<b>Total</b>		<b>47.19</b>			<b>68.89</b>
<b>B. Ranked by Percentage Change</b>					
1	Pulse Masoor	0.22	3.48	77.86	0.88
2	Mustard Oil	0.05	25.88	69.46	0.19
3	Rice	1.34	28.36	60.22	5.21
4	Vegetable Ghee	2.67	25.32	59.90	10.54
5	Cooking Oil	0.69	18.21	59.06	2.48
6	Maida	0.11	0.00	57.20	0.32
7	Eggs	0.41	46.16	56.88	1.16
8	Tomatoes	0.51	5.77	56.85	1.16
9	Wheat Flour	5.11	4.45	54.07	15.78
10	Wheat	0.48	5.70	53.53	1.48
		<b>11.58</b>			<b>39.20</b>
<b>C. Ranked by Weights</b>					
1	House Rent Index	23.43	6.22	11.35	15.44
2	Milk Fresh	6.66	11.17	20.97	8.73
3	Wheat Flour	5.11	4.45	54.07	15.78
4	Electricity	4.37	10.07	6.44	1.36
5	Bakery & Confectionary	2.98	2.30	9.65	1.37
6	Meat	2.70	7.79	6.54	1.54
7	Vegetable Ghee	2.67	25.32	59.90	10.54
8	Tution Fees	2.36	7.89	4.84	0.66
9	Transport Fare/Charges	2.12	2.47	19.56	2.88
10	Natural Gas	2.05	3.45	6.76	1.16
		<b>54.45</b>			<b>59.46</b>
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 17.2 percent in April 2008.					

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

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Sugar Refined	Tea (L/R) Brookbond	Jam Ahmed/Mitchelles	Milk Fresh (Unboiled)
	Onion	Supreme 250Gm.	Rooh Afza	Wheat Flour Bag
	Pulse Moong (Washed)	Tea Lipton Yellow Label 200G	Fruit Juice Tetra Pack	Vegetable Ghee (Loose), Wheat Flour
	Kinnu	Fish-Rahu Medium Size	Powder Milk Nido 400Gm.	Fine/Superior.
	Garlic	Cigarettes K-2 10'S	Honey Langanese 500 grams., Betel Nuts	Vegetable Ghee Tin
	Malta/Mosambi	Beef With Bone		Chicken Farm Broiler (Live), Cooking Oil (Dalda),Potatoes, Tomatoes
	Carrot	Average Quality, Gram		
	Ice Cream Walls	Whole Yellow Average Quality, Mutton		
	Gur Average Quality	Average Quality., Milo 200 grams.		
	<b>Apparel &amp; Textile</b>	Ladies Sandal Bata, Child Shoe Power	School Uniform	Lawn Average Quality., Shirting
Lite Bata, Gents Shoes Paul Bata		Kameez,Shalwar., Tailoring Coat-Pant Suit	Average Quality, Tailoring Shirt	Female, Nylon Jogger 27 Size 2-5
		Georgette Average Quality		
<b>House Rent Index</b>	—	—	—	House Rent Index
<b>Fuel &amp; Lighting</b>	Match Box Small	—	Electricity .Charges above 1000 Units, Gas Charges 6.7438 - 10.1157Mmb	Electricity .Charges 101 - 300 Unit
	Electricity .Charges Up to 50 Units		Gas Charges 10.1157 - 13.4876Mmb	Firewood Whole Kerosene Oil
<b>H/hold Furniture</b>		Blanket (90" X 54")	Household Servant	Ceiling Fan 48" Super Quality, Pedestal Fan
		Sewing Thread/Reel(Asli Pari Sewing Machine(Singer)	Female P/T, Quilt (Lihaf) 3 Kg. Cotton Tea Set Pak. Chinaware 21 Pc	22" Super Quality, Bucket (Balti)
<b>Transport &amp; Comm.</b>	Telephone charges Local Call,	—	Tyre Car With Tube General	Petrol Super A/C Bus Fare Outside City, High Speed
	Telephone Charges Out Side City, Car Tax For 800cc To 1300cc Platform Ticket		Internet Charges Car Suzuki 800 cc (W/O. A/C)	Diesel (HSD), CNG Filling Charges
<b>Recreation &amp; Entertainment</b>	Tv.Licence fee domestic, Daily "Jang", Daily "Nawa-e-Waqt"	Radio With CD .Player National, Video. Cassette, Tape Recorder	Cinema A/C. Highest Class	Dry Cell 1.5 Volt(Local), Weekly "Akhbar-e-Jahan"
<b>Education</b>	Govt. College Fee Ist. Year, Govt. College Fee 4th. Year, Urdu Book Ist. Year/Inter	Eng. Book Ist. Year .English Book Class Ix Or X, Maths Book Class Ix Or X	School Fee Secondary English Medium, School Fee Primary English Medium, Maths Book Ist. Year	Exercise Book, Paper Fullscape (27"X17") Urdu Book Class Ix/X(T.B.B)
<b>Cleaning &amp; Laundry</b>	Robin Blue (35 Grams), Toothpaste Macklines 70 Grams, Lipstick S..Miss/Medora	Perfume Medium .Size Medora/Broa, Talcum Powder Vice, Roay,B.Cat, Nail Polish S.Miss/Medora Hair-Colour Begin (6 Grams)	Haircut Charges For Men, Shampoo Plain Medora 200 ml. Surf (Medium) 160 Gram, Hair-Oil Amla/Chambeli	Washing Soap Nyl(135-160Gms) Toilet Soap Lux 95 Grams, Washing Powder 1000 Gram Toilet Soap Lifebuoy 140 Gram
<b>Medicare</b>	Gripe-Water	O.R.S. (Nimcol)	—	Doctor (MBBS) Clinic Fee
	Woodwards Dettol (Medium) Jouhar Joshanda	Cotton Bandage 2" - 4" Daonil Tablet. 5 mg.		Glaxose-D (450 Grams), Disprin Tab.

<b>Table A5: City-wise Inflation (YoY) by Income Groups, April 2008</b>							
		<b>Upto Rs:3000</b>			<b>Rs 3001-5000</b>		
		<b>General</b>	<b>Food</b>	<b>Non-Food</b>	<b>General</b>	<b>Food</b>	<b>Non-Food</b>
1	Lahore	17.3	24.7	12.4	17.9	26.5	12.1
2	Faisalabad	21.2	31.2	14.5	22.8	31.9	16.6
3	Rawalpindi	15.6	20.4	12.4	16.5	23.2	11.9
4	Multan	16.8	24.7	11.5	17.1	25.1	11.8
5	Gujranwala	22.2	30.8	16.4	23.2	32.1	17.2
6	Islamabad	16.0	21.7	12.1	16.0	21.9	12.1
7	Sargodha	18.1	22.1	15.4	17.3	21.5	14.5
8	Sialkot	16.9	24.2	11.9	16.7	24.6	11.4
9	Bahawalpur	18.3	25.3	13.6	18.5	25.9	13.5
10	Karachi	18.2	25.0	13.5	17.7	24.1	13.3
11	Hyderabad	20.3	26.2	16.3	20.0	26.5	15.7
12	Sukkur	20.8	30.7	14.1	21.8	31.5	15.2
13	Larkana	19.6	26.2	15.2	19.9	26.2	15.6
14	Peshawar	19.0	25.4	14.6	22.3	31.1	16.4
15	Bannu	23.4	31.9	17.6	22.6	32.5	15.9
16	Quetta	20.0	27.6	14.9	19.4	28.4	13.2
17	Khuzdar	27.0	35.9	21.0	26.1	35.0	20.1
		<b>Rs 5001-12000</b>			<b>above Rs 12000</b>		
		<b>General</b>	<b>Food</b>	<b>Non-Food</b>	<b>General</b>	<b>Food</b>	<b>Non-Food</b>
1	Lahore	16.6	26.4	10.0	14.0	23.6	7.6
2	Faisalabad	21.1	31.5	14.1	17.7	29.0	10.1
3	Rawalpindi	15.3	22.2	10.7	14.3	20.2	10.3
4	Multan	15.8	24.2	10.1	12.9	20.3	7.9
5	Gujranwala	21.0	29.7	15.2	18.2	25.6	13.2
6	Islamabad	15.0	22.3	10.1	13.6	19.2	9.7
7	Sargodha	16.2	20.6	13.2	15.3	19.8	12.2
8	Sialkot	16.0	24.4	10.4	14.9	23.0	9.5
9	Bahawalpur	16.4	24.3	11.0	14.4	22.2	9.2
10	Karachi	17.1	23.5	12.7	14.9	22.9	9.5
11	Hyderabad	19.7	27.2	14.6	17.8	24.3	13.4
12	Sukkur	20.6	30.8	13.7	19.4	29.3	12.6
13	Larkana	18.1	24.7	13.6	16.0	22.1	12.0
14	Peshawar	19.9	30.3	12.9	17.4	26.1	11.5
15	Bannu	21.0	32.1	13.5	19.3	28.7	13.0
16	Quetta	17.9	27.1	11.7	16.8	23.8	12.0
17	Khuzdar	23.1	33.6	15.9	20.7	29.5	14.8

<b>Table A6 : Income Group-wise Inflation (YoY)</b>								percent
	<b>Sep-07</b>	<b>Oct-07</b>	<b>Nov-07</b>	<b>Dec-07</b>	<b>Jan-08</b>	<b>Feb-08</b>	<b>Mar-08</b>	<b>Apr-08</b>
<u>Up to Rs. 3000</u>								
General	9.9	11.2	10.1	10.4	14.7	13.4	17.0	20.2
Food	13.0	14.9	12.2	12.4	20.0	17.2	22.5	27.4
Non-food	7.6	8.5	8.6	9.0	10.9	10.7	13.0	15.1
<u>Rs. 3001-5000</u>								
General	9.9	11.2	10.2	10.4	14.5	13.0	16.6	19.9
Food	13.4	15.4	12.7	12.8	20.3	17.2	22.6	27.6
Non-food	7.4	8.2	8.3	8.7	10.5	10.0	12.4	14.5
<u>Rs. 5000-12000</u>								
General	9.1	10.2	9.4	9.5	13.0	12.0	14.9	18.1
Food	13.2	15.0	12.6	12.5	19.0	16.5	21.3	26.3
Non-food	6.1	6.7	7.0	7.4	8.6	8.7	10.2	12.2
<u>Above Rs. 12000</u>								
General	7.3	8.0	7.7	7.7	10.2	10.1	12.8	15.7
Food	12.6	13.9	12.3	11.8	16.6	15.0	18.8	23.6
Non-food	3.4	3.6	4.3	4.7	5.5	6.6	8.2	9.7
<u>All income groups</u>								
General	8.4	9.3	8.7	8.8	11.9	11.3	14.1	17.2
Food	13.0	14.7	12.5	12.2	18.2	16.0	20.6	25.5
Non-food	5.0	5.4	5.9	6.3	7.3	7.8	9.4	11.2

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



Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Price Apr-08	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	18.3	50.6	8.0
2	Wheat flour A quality.	Kg.	20.8	48.5	20.9
3	Rice basmati broken	Kg.	42.7	63.6	11.0
4	Rice irri-6	Kg.	34.4	77.6	23.1
5	Masur pulse washed	Kg.	85.0	84.3	5.3
6	Moong pulse washed	Kg.	53.1	-3.8	-0.5
7	Mash pulse washed	Kg.	72.6	1.1	0.7
8	Gram pulse washed	Kg.	49.3	27.4	11.9
9	Beef	Kg.	125.2	4.3	1.4
10	Mutton	Kg.	242.1	6.1	1.1
11	Egg Hen (farm)	Doz.	51.3	63.0	25.7
12	Bread plain m.s.	Each	19.7	27.0	0.3
13	Sugar	Kg.	25.1	-16.9	-0.9
14	Gur	Kg.	28.6	-20.1	-3.6
15	Milk fresh	Litr	32.0	16.7	2.6
16	Milk powdered Nido	400g	145.0	7.6	0.0
17	Curd	Kg.	37.6	18.0	2.8
18	Veg.ghee tin	2.5k	373.0	55.4	4.0
19	Veg.ghee loose	Kg.	125.4	61.0	-3.0
20	Mustard oil	Kg.	141.5	69.3	0.8
21	Cooking oil	2.5L	383.0	58.7	4.1
22	Potatoes	Kg.	12.6	14.7	11.5
23	Onions	Kg.	11.7	-10.5	4.1
24	Tomatoes	Kg.	30.0	78.2	-23.0
25	Bananas	Doz.	36.4	7.7	5.1
26	Salt powdered	Kg.	5.4	13.3	0.9
27	Red chillies (powder)	Kg.	187.5	70.8	25.0
28	Garlic	Kg.	38.8	-39.6	-5.4
29	Tea packet	250g	72.0	2.9	0.0
30	Tea (prepared)	Cup	7.3	14.2	1.2

continued

Table A8 (continued)

**Table A8: SPI Item-wise Price Movements**

S.No	Items	Unit	Price Apr-08	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	35.1	16.0	2.5
32	Cooked dal plate	Each	22.3	23.0	4.0
33	Cigarettes K-2	10's	8.4	4.4	0.0
34	Coarse latha	Mtr.	40.8	15.1	2.4
35	Lawn (avg.+s.qlty)	Mtr.	88.2	8.6	5.5
36	Voil printed	Mtr.	42.5	11.0	4.5
37	Shirting	Mtr.	72.7	11.0	1.1
38	Sandel gents bata	Pair	499.0	0.0	0.0
39	Sandel ladies bata	Pair	299.0	0.0	0.0
40	Chappal spng. Bata	Pair	109.0	10.1	10.1
41	Kerosene	Litr	48.7	24.7	3.7
42	Firewood	40kg	235.2	17.2	0.7
43	Elec. Bulb 60-wats	Each	13.0	8.1	0.2
44	Match box	Each	1.0	31.6	0.0
45	Washing soap	Cake	10.9	34.2	2.6
46	Bath soap lifebuoy	Cake	19.0	31.2	0.4
47	Chicken (farm)	Kg.	102.0	27.7	9.0
48	Gas chrg. All clb. Comb	D.mmbt	239.4	6.6	0.0
49	LPG.(cylinder 11kg.)	Each	608.7	3.6	-15.1
50	Elec.chrg.all slabs com	Bd. Unit	5.5	8.2	8.2
51	Petrol	Litr	64.2	19.3	5.3
52	Diesel	Litr	45.5	20.1	6.2
53	Telephone local	Call	2.3	0.0	0.0
<b>Maximum</b>				<b>84.3</b>	<b>25.7</b>
<b>Median</b>				<b>15.1</b>	<b>2.4</b>
<b>Minimum</b>				<b>-39.6</b>	<b>-23.0</b>

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

Item and Specification	Weights	Index	
		Apr-07	Apr-08
<b>GENERAL</b>	<b>100.0010</b>	<b>143.62</b>	<b>168.34</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3416</b>	<b>150.10</b>	<b>188.37</b>
1 WHEAT	0.4830	141.20	216.79
2 WHEAT FLOUR	5.1122	141.16	217.48
3 MAIDA	0.1059	131.07	206.04
4 BESAN	0.1320	143.41	163.94
5 RICE	1.3369	159.96	256.29
6 PULSE MASOOR	0.2214	126.29	224.62
7 PULSE MOONG	0.2230	182.87	170.63
8 PULSE MASH	0.2017	155.13	156.52
9 PULSE GRAM	0.4272	135.11	161.24
10 GRAM WHOLE	0.1491	142.32	146.81
11 MUSTARD OIL	0.0456	149.34	253.07
12 COOKING OIL	0.6858	151.25	240.58
13 VEGETABLE GHEE	2.6672	163.02	260.67
14 SUGAR	1.9467	109.85	91.02
15 GUR	0.0735	137.01	109.66
16 TEA	1.2559	114.80	117.84
17 MILK FRESH	6.6615	154.47	186.86
18 MILK POWDER	0.1105	147.42	178.46
19 MILK PRODUCTS	0.5607	140.31	170.13
20 HONEY	0.0358	127.93	137.99
21 CEREALS	0.0878	133.14	171.64
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	130.18	144.26
23 BEVERAGES	0.7286	130.73	146.76
24 CONDIMENTS	0.3392	115.74	162.23
25 SPICES	0.6008	121.04	169.16
26 DRY FRUIT	0.2760	217.97	253.37
27 BAKERY & CONFECTIONARY	2.9837	117.63	128.98
28 CIGARETTES	0.9527	147.95	159.14
29 BETEL LEAVES & NUTS	0.1851	140.79	153.48
30 READYMADE FOOD	1.6833	153.75	185.56
31 SWEETMEAT & NIMCO	0.3846	152.89	190.74
32 FISH	0.2703	148.46	152.68
33 MEAT	2.6981	215.36	229.44
34 CHICKEN FARM	0.9158	153.29	202.44
35 EGGS	0.4119	122.38	191.99
36 POTATOES	0.5542	113.76	129.97
37 ONIONS	0.5973	114.90	105.63
38 TOMATOES	0.4569	99.41	155.92
39 VEGETABLES	1.9165	166.82	197.82
40 FRESH FRUITS	1.6160	217.04	236.03
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>127.72</b>	<b>138.44</b>
41 COTTON CLOTH	1.6197	130.43	143.01
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	127.68	137.89
43 TAILORING CHARGES	0.8636	129.11	140.03
44 HOSIERY	0.1528	137.24	146.07
45 READYMADE GARMENTS	1.2038	122.68	129.32
46 WOOLEN READYMADE GARMENTS	0.1485	138.32	155.69
47 FOOTWEAR	1.5327	126.07	137.66
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>143.50</b>	<b>159.79</b>
<b>48 HOUSE RENT INDEX (Combined)</b>	<b>23.4298</b>	<b>143.50</b>	<b>159.79</b>

(continued)

(continued)

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

Item and Specification	Weights	Index	
		Apr-07	Apr-08
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>151.33</b>	<b>164.27</b>
49 KEROSENE	0.1366	235.87	293.19
50 FIREWOOD	0.4778	211.55	260.42
51 MATCH BOX	0.1301	100.00	100.00
52 BULB & TUBE	0.1311	86.73	93.52
53 ELECTRICITY	4.3698	119.53	127.23
54 NATURAL GAS	2.0458	206.95	220.95
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>	<b>3.2862</b>	<b>134.12</b>	<b>145.33</b>
55 UTENSILS	0.3690	120.49	130.92
56 PLASTIC PRODUCTS	0.1055	138.01	157.25
57 SUITCASE	0.0470	123.62	133.83
58 HOUSE HOLD EQUIPMENTS	0.0953	119.94	131.16
59 FURNITURE (Ready Made)	0.3054	132.68	152.78
60 FURNISHING	0.6362	128.69	139.89
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	122.39	137.00
62 SEWING MACHINE,CLOCK AND NEEDLES	0.1270	117.95	121.57
63 REFRIGERATOR & AIRCONDITIONER	0.1756	96.70	106.04
64 MARRIAGE HALL	0.0445	141.35	162.92
65 HOUSE HOLD SERVANT	1.1918	151.65	160.29
<b>TRANSPORT &amp; COMMUNICATION.</b>	<b>7.3222</b>	<b>145.52</b>	<b>171.59</b>
66 PETROL	1.7253	175.59	225.06
67 DIESEL	0.2070	238.74	317.00
68 CNG, FILLING CHARGES	0.1649	142.33	160.76
69 SERVICE CHARGES	0.3835	130.46	143.65
70 VEHICLES	0.2596	100.81	106.51
71 TYRE & TUBE	0.2831	123.00	130.84
72 TRANSPORT FARE/CHARGES	2.1236	171.59	205.16
73 TRAIN FARE	0.1514	170.01	170.01
74 AIR FARE	0.0983	218.72	280.47
75 COMMUNICATION	1.9255	86.74	86.85
<b>RECREATION &amp; ENTERTAINMENT.</b>	<b>0.8259</b>	<b>105.50</b>	<b>106.60</b>
76 RECREATION	0.3399	100.00	101.91
77 ENTERTAINMENT	0.4860	109.34	109.88
<b>EDUCATION.</b>	<b>3.4548</b>	<b>136.46</b>	<b>142.87</b>
78 TUTION FEES	2.3629	142.65	149.56
79 STATIONERY	0.3500	121.31	136.60
80 TEXT BOOKS	0.6894	127.04	127.75
81 COMPUTER & ALLIED PRODUCTS	0.0525	82.67	81.71
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>	<b>5.8788</b>	<b>126.23</b>	<b>146.15</b>
82 WASHING SOAP & DETERGENT	1.5535	116.73	136.81
83 TOILET SOAP	0.7436	121.75	161.07
84 TOOTH PASTE	0.4036	107.06	110.80
85 SHAVING ARTICLES	0.3480	111.61	128.59
86 COSMETICS	1.4272	124.06	130.95
87 WATCHES	0.0552	120.29	129.17
88 JEWELLERY	0.3936	200.20	272.79
89 LAUNDRY CHARGES	0.2207	143.59	159.81
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	128.14	137.37
<b>MEDICARE.</b>	<b>2.0728</b>	<b>123.39</b>	<b>132.57</b>
91 DRUGS & MEDICARES	1.0752	106.72	108.60
92 DOCTOR'S FEE	0.9976	141.37	158.40

**Figure A1: CPI Non-food Inflation**

— YoY — 12-month moving average

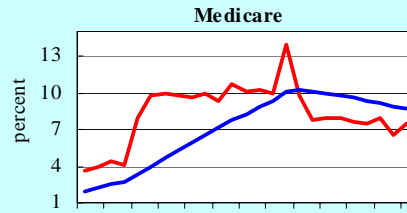
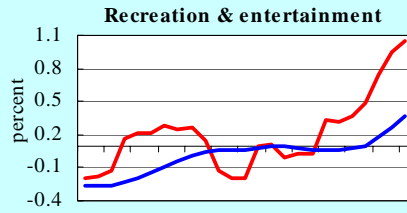
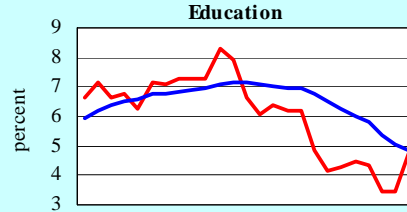
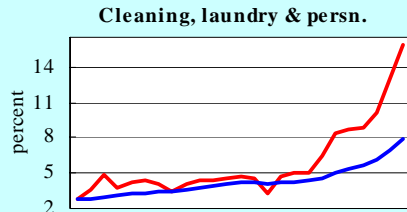
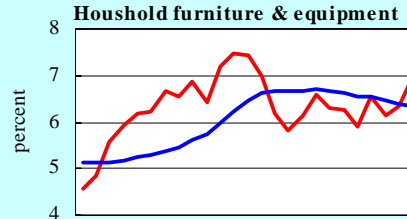
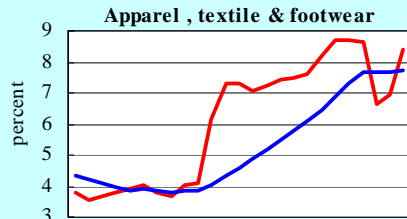
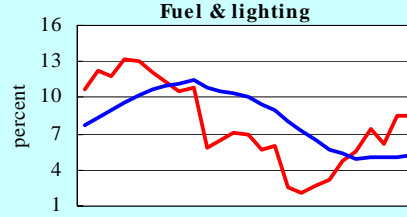
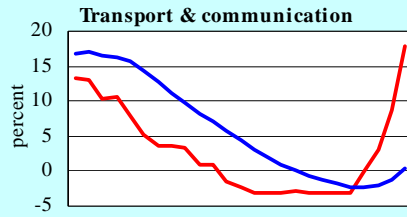
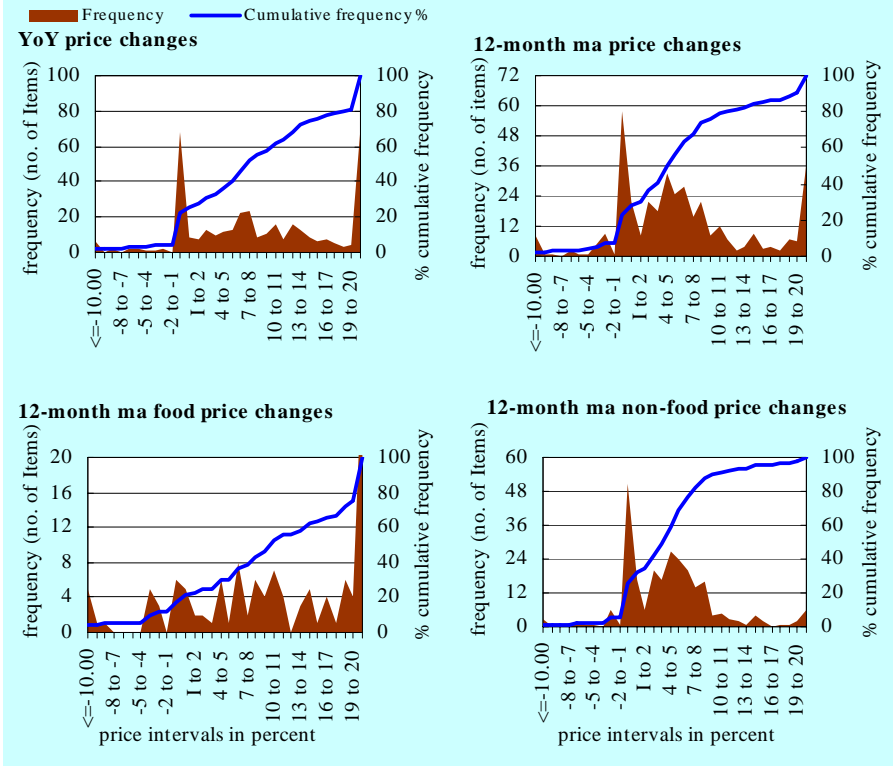
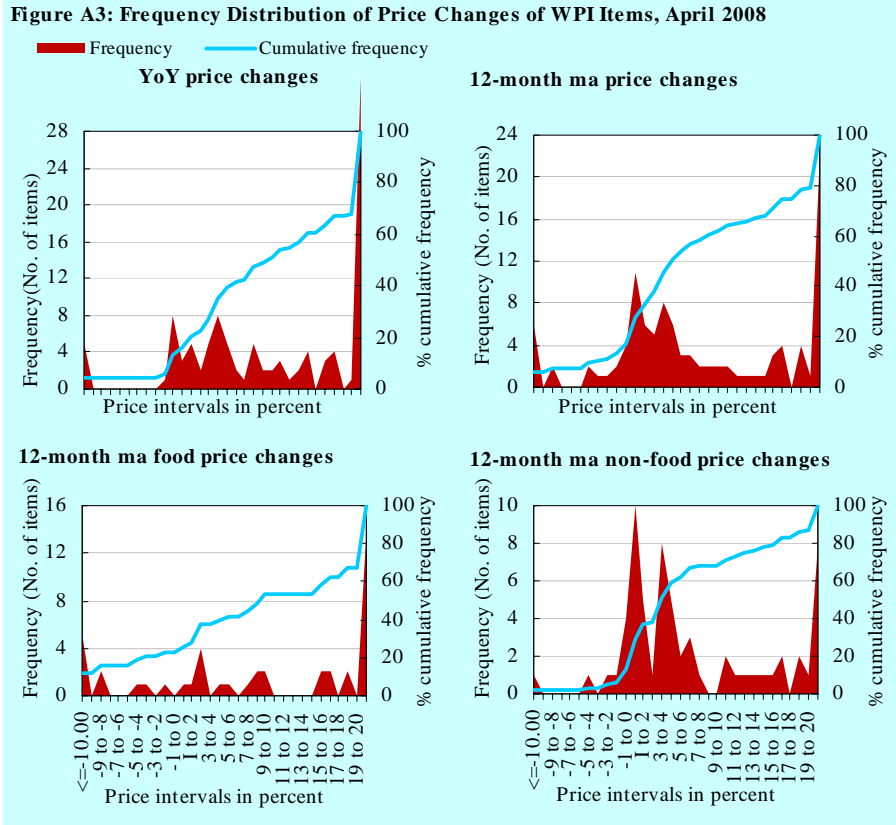


Figure A2: Frequency Distribution of Price Changes of CPI Items, April 2008





## **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  $i^{\text{th}}$  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  $i^{\text{th}}$  item

$\pi_{it}$  : Inflation of  $i^{\text{th}}$  item

$\pi_t$  : Overall inflation