

# **Inflation Monitor**

**May 2008**



**State Bank of Pakistan**

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## **Contents**

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<b>1.</b>	<b>Overview</b>	<b>1</b>
<b>2.</b>	<b>Consumer Price Index</b>	<b>4</b>
	2.1 Food Inflation	5
	2.2 Non-food Inflation	7
	2.3 City-wise Inflation	9
	2.4 Income Group-wise Inflation	11
	2.5 Services and Non-services Inflation	11
<b>3.</b>	<b>Wholesale Price Index</b>	<b>13</b>
<b>4.</b>	<b>Global Commodity Prices</b>	<b>17</b>
<b>5.</b>	<b>Sensitive Price Indicator</b>	<b>21</b>
	<b>Annexure A:</b>	<b>23</b>
	Table A1: CPI Inflation (YoY) by Groups	
	Table A2: Distribution of Price Changes of CPI Basket, May 2008 (YoY)	
	Table A3: Top Ten Contributors to YoY CPI Inflation in May 2008	
	Table A4: Distribution of YoY Price Changes - Selected CPI Items, May 2008	
	Table A5: City-wise CPI Inflation (YoY) by Income Groups, May 2008	
	Table A6: Income Group-wise CPI Inflation (YoY)	
	Table A7: Distribution of Wholesale Price Changes (YoY), May 2008	
	Table A8: SPI Item-wise Price Movements for the month of May 2008	
	Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities for May 2008	
	Figure A1: CPI Non-food Inflation	
	Figure A2: Frequency Distribution of Price Changes of CPI Items, May 2008	
	Figure A3: Frequency Distribution of Price Changes of WPI Items, May 2008	
	<b>Annexure B: Technical Notes</b>	<b>36</b>

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## Overview

The underlying inflationary pressures in the economy continued to show strength during May 2008. Consumer price index (CPI) registered record high inflation on YoY basis and reached 19.3 percent in May 2008. Both food and non-food groups of CPI contributed to this increase. Food inflation (YoY) was recorded at 28.5 percent during May 2008, mainly due to an increase in the prices of essential food items including rice, pulse masoor, and wheat. Similarly non-food inflation (YoY) also increased and reached 12.5 percent compared to 4.7 percent in the same month last year. All sub-groups of the non-food group witnessed increase in inflation (YoY) during May 2008. The *house rent index* (HRI) sub-group of CPI non-food group continued to accelerate during the month under review reflecting the impact of high international metal prices. Inflation (YoY) measured by wholesale price index (WPI) and sensitive price indicator (SPI) also witnessed a sharp rise in May 2008 (see **Table 1.1**).

**Table 1.1: Inflation (YoY)**

	percent						
	CPI			Core Inflation		WPI	SPI**
	General	Food	Non-food	NFNE *	Trimmed		
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
May-08	19.3	28.5	12.5	12.3	15.1	28.2	26.2

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

The continuous increase in CPI inflation has pushed up the long run annualized trend of inflation as measured by 12-month moving average (12-mma). During May 2008, 12-mma CPI inflation reached 10.8 percent compared to 7.8 percent in May 2007. The 12-mma CPI food inflation has remained in double digits since May 2007, and was recorded 15.8 percent in May 2008. Similarly, 12-mma non-food inflation also registered an increase in inflation and reached 7.2 percent during the month under review.

Monthly CPI inflation was recorded at 2.7 percent during May 2008. Although this 2.7 percent inflation is lower than the 3.0 percent inflation recorded in April 2008, it is still significantly higher than the 0.9 percent inflation recorded in May 2007. The monthly food inflation recorded a significant rise of 4.2 percent during May 2008, due to increasing prices of rice, onions, potatoes, pulses and some fruits, etc. Non-food inflation witnessed an increase of 1.4 percent on MoM 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 the *transport & communication* and *fuel & lighting* sub-groups, reflecting the impact of continuously rising crude oil prices in the international market.

Similar to headline inflation, both measures of core inflation (non-food non-energy and 20 percent trimmed mean) continued to show uptrend and registered record levels of inflation (YoY) during May 2008. NFNE based core inflation (YoY) increased to 12.3 percent during May 2008 from 5.2 percent in the corresponding month of last year. Core inflation based on 20 percent trimmed-mean also showed an uptrend and reached 15.1 percent (YoY) in May 2008 compared to 6.2 percent during May 2007.

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

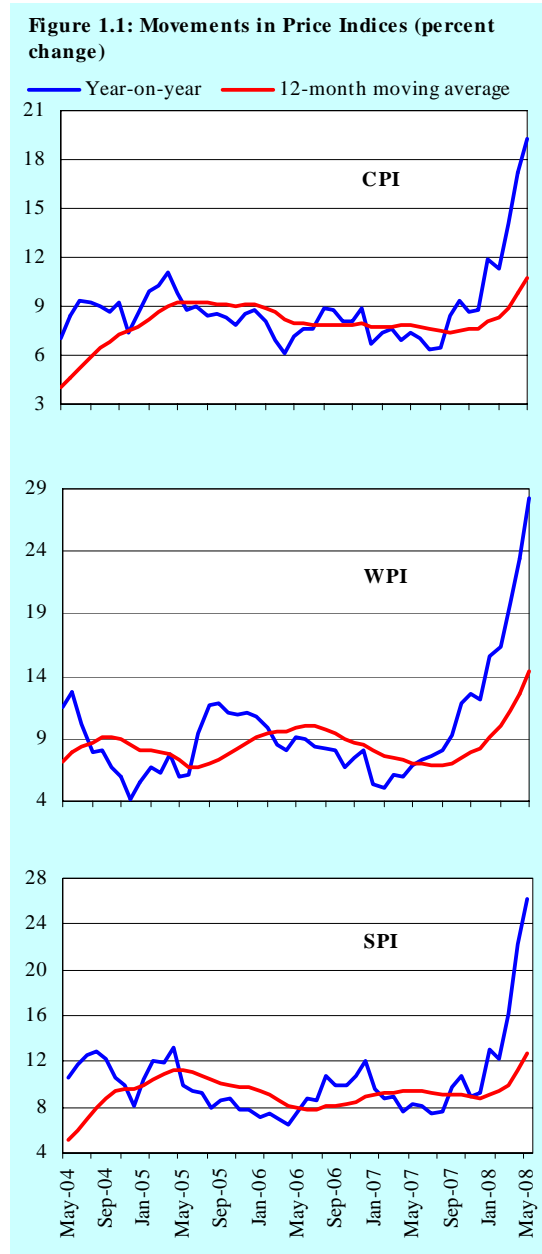
	May-06	May-07	May-08	5-year average#
<b>Year-on-year (May over May)</b>				
Overall CPI	7.1	7.4	19.3	6.8
Food group	5.6	11.3	28.5	8.4
Non-food group	8.2	4.7	12.5	5.7
<b>Core Inflation</b>				
NFNE*	6.8	5.2	12.3	5.6
Trimmed	6.3	6.2	15.1	6.0
<b>Period average (July-May over July-May)</b>				
Overall CPI	7.9	7.8	11.1	6.5
Food group	6.8	10.3	16.3	7.7
Non-food group	8.7	6.1	7.3	5.7
<b>Core Inflation</b>				
NFNE*	7.6	6.0	7.9	5.4
Trimmed	7.1	6.8	9.6	5.9
<b>12-month moving average</b>				
Overall CPI	8.0	7.8	10.8	6.5
Food group	7.0	10.1	15.8	7.6
Non-food group	8.7	6.2	7.2	5.7
<b>Core Inflation</b>				
NFNE*	7.6	6.0	7.8	6.0
Trimmed	7.0	6.8	9.4	6.5
<b>Monthly (May over Apr)</b>				
Overall CPI	0.5	0.9	2.7	0.3
Food group	0.0	1.8	4.2	0.0
Non-food group	0.7	0.3	1.4	0.5
<b>Core Inflation</b>				
NFNE*	0.7	0.4	1.7	0.5
Trimmed	0.6	0.5	2.2	0.5

\* NFNE is Non-food non-energy inflation

# 5-year average excluding FY08

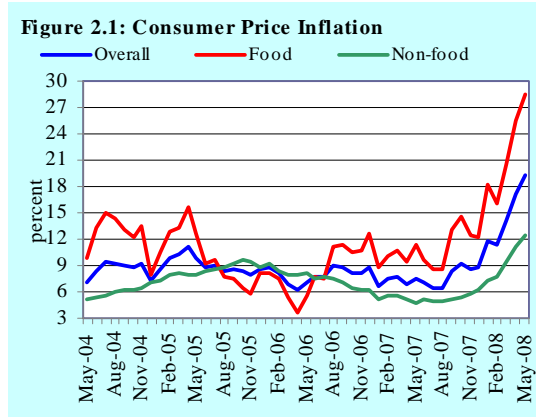
WPI also saw a significant increase, accelerated from 6.8 percent during May 2007 to record high 28.2 percent during May 2008. This steep rise in WPI was due to high inflation recorded by food and non-food groups of WPI. WPI food inflation increased to 28.8 percent in May 2008, compared to 10.3 percent in May 2007, and non-food inflation (YoY) was recorded at 27.8 percent in May 2008 compared to 4.4 percent during the same month last year. Further, item wise breakup of WPI basket showed that the wholesale prices of rice, pulse masoor, mustard/rapeseed oil, coke, furnace oil, fertilizers, vegetable ghee, cooking oil, wheat, maida, chemicals, etc. showed double digit (YoY) rise in May 2008.

SPI continued to accelerate in May 2008, and reached 26.2 percent (YoY), compared to 8.3 percent in the corresponding month last year (see **Figure 1.1**).

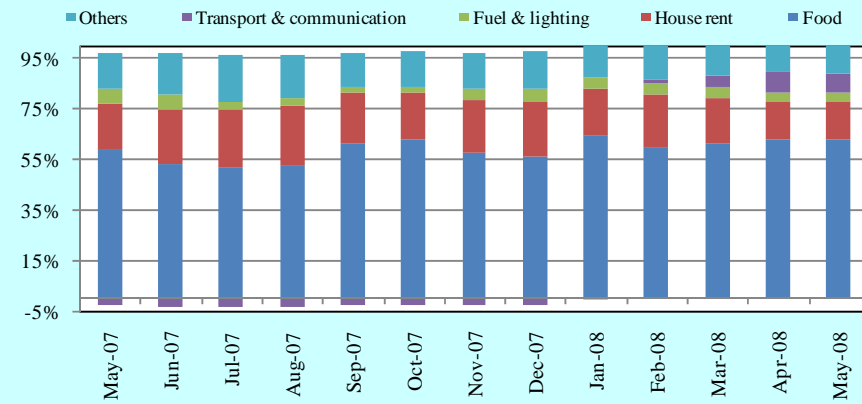


## 2. Consumer Price Index

The double digit upward trend in headline inflation (YoY) continued in May 2008. CPI inflation (YoY) reached 19.3 percent during May 2008 compared to 7.4 percent in May 2007. Both food and non-food inflation (YoY) accelerated in May 2008. Food inflation reached 28.5 percent in May 2008, compared to 11.3 percent in the same month last year. Non-food inflation (YoY) also recorded double digit growth of 12.5 percent during May 2008 compared to 4.7 percent in May 2007 (see **Figure 2.1**).



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

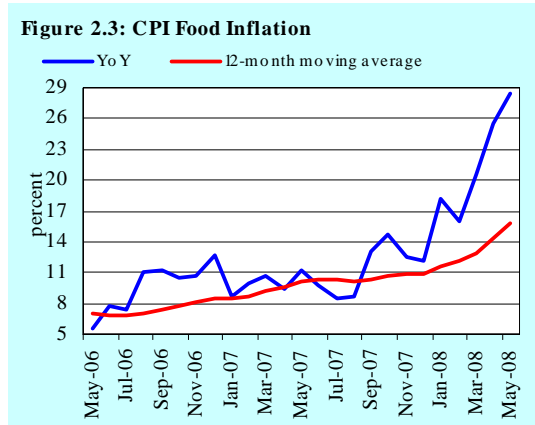


A marginal increase was recorded in weighted contribution of food group (62.8 percent in May 2008 to 62.5 percent in May 2007) in overall CPI inflation. Accordingly, weighted contribution of non-food group in overall inflation marginally decreased from 37.4 percent in May 2007 to 37.2 percent in May 2008 (see **Figure 2.2**).



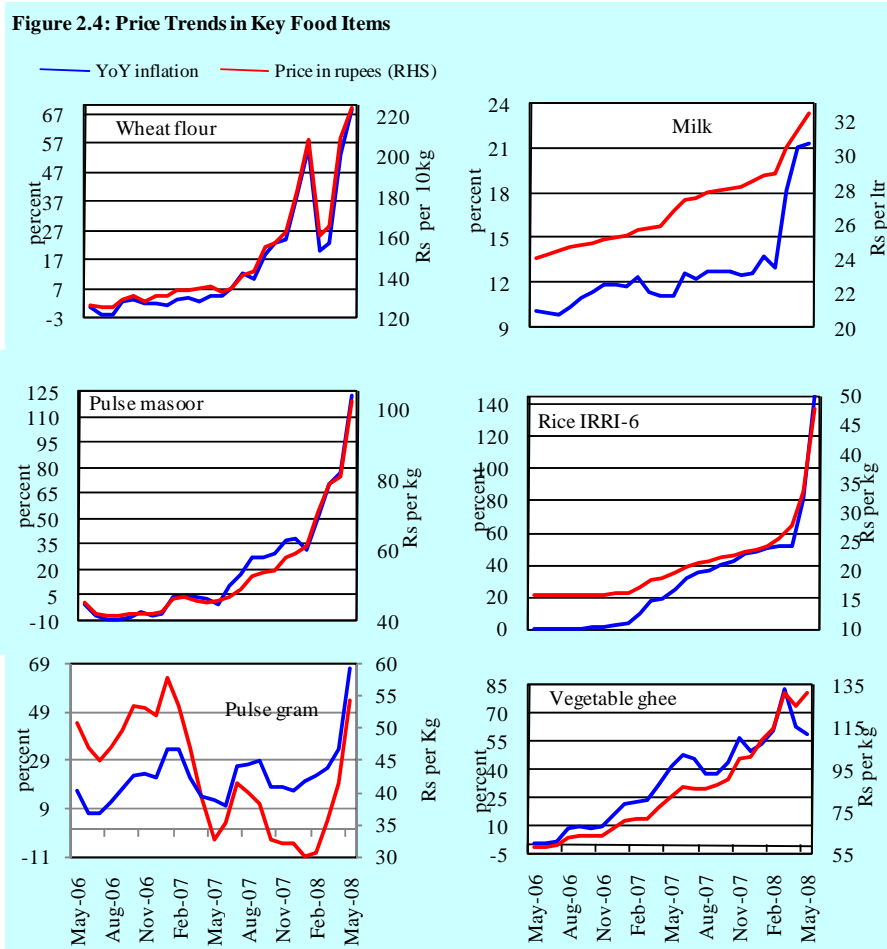
## 2.1 Food Inflation

Persistent rise in food prices in domestic markets resulted in double digit food inflation (YoY) during the month under review. CPI food inflation (YoY) was recorded at 28.5 percent in May 2008, compared to 11.3 percent in May 2007. A rising trend was also witnessed in the prices of key food staples in international markets during 2008.



Segregated analysis of CPI food basket shows that out of the total reported 110 commodities, 76 commodities including rice, pulse masoor, wheat, maida, mustard oil, vegetable ghee, eggs, cooking oil, and some vegetables etc. exhibited double digit YoY price change in the range of 10 to 145 percent in May 2008. Combined weight of these commodities was 69.7 percent in the food group. Significant (above 100 percent) price rise was recorded in three types of rice and pulse masoor. 20 food items having an aggregate weight of 14.1 percent in the food group recorded subdued or moderate price change. Prices of 14 commodities such as tomatoes, garlic, cucumber, lady finger and sugar, etc. either declined or remained unchanged during May 2008. Prices of other 14 seasonal food items were not reported in the month under review (see **Table A2** in Annexure A).

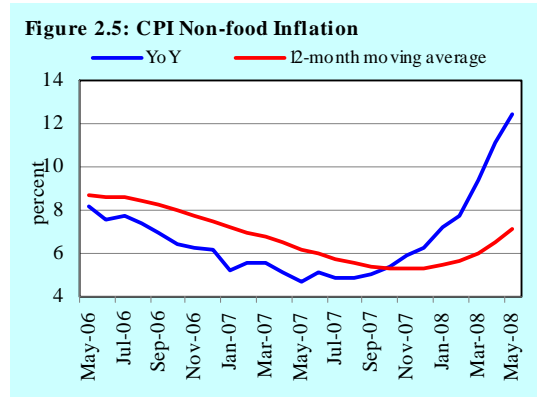
Price change on month over month (MoM) basis showed that 20 items such as rice, wheat, sugar, pulse masoor, potatoes, and onion, etc. recorded double digit increase in their prices during May 2008. Whereas prices of 28 items including tomatoes, chicken, eggs, chillies green, and cooking oil, etc. either declined or showed no change during May 2008, compared with the previous month (see **Figure 2.4**).



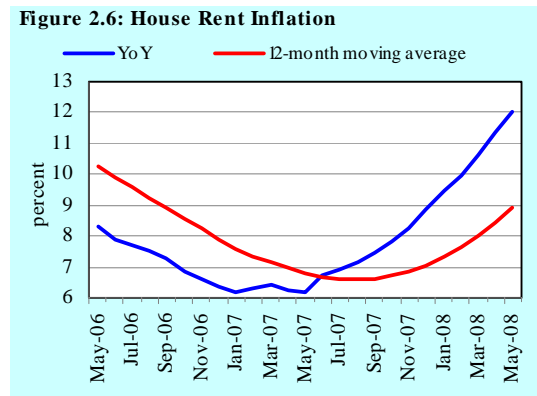
Weighted contribution of the top ten items in overall inflation during May 2008, indicates that 7 items are from the food group (composition is similar to April 2008) including wheat flour, vegetable ghee, rice, fresh milk, readymade food, cooking oil, and wheat. Combined weighted contribution of these food items in the overall inflation remained 49.6 percent during May 2008 (see **Table A3** in the Annexure). Moreover, within food group, wheat flour, vegetable ghee, milk fresh and rice contributed about 69.5 percent to the YoY food inflation during May 2008.

## 2.2 Non-food Inflation

Double digit inflation (YoY) was recorded in non-food group for the second consecutive month in May 2008. Non-food inflation (YoY) was recorded at 12.5 percent during May 2008, compared to 4.7 percent in May 2007 (see **Figure 2.5**). The main contributor of this double digit non-food inflation (YoY) was significant increase in *transport & communication* sub-group inflation during May 2008.



*House rent index* inflation (YoY) maintained its rising trend during May 2008. The increase during May 2008 was supported by high prices of cement, cement blocks, iron bars & sheets, pipe fittings, glass sheets, paints & varnishes and sanitary wares. The inflation recorded in the sub-group was 12.0 percent in May 2008, compared to 6.2 percent in the same month last year (see **Figure 2.6**).



After recording deflation in first seven months in FY08 the *transport & communication* sub-group started recording positive growth and has registered double digit inflation (YoY) since April 2008. The *transport & communication* sub-group inflation (YoY) was recorded at 19.1 percent in May 2008, compared to (-) 3.0 percent in the corresponding month last year. Similar to previous month, the rise in this sub-group was mainly due to an increase in the prices of key fuels, road and air fares, etc.

*Apparel, textile & footwear* sub-group recorded 9.4 percent increase in May 2008, compared to 7.0 percent in May 2007. Major items that contributed to the

increase in this sub-group's inflation include footwear, readymade garments, tailoring charges, etc.

Inflation (YoY) in *fuel & lighting* sub-group also reached 9.5 percent in May 2008, compared to 5.7 percent in the corresponding month last year. The reasons for this rising trend include increase in the prices of kerosene oil, firewood whole, electric charges, gas charges, CNG charges etc.

*Household furniture & equipment* sub-group inflation (YoY) showed increase of 3.6 percentage points during May 2008, and was recorded at 9.8 percent compared to 6.2 percent in the same month last year. This increase was due to a rise in the prices of almost all items in this sub-group.

Significant increase in inflation (YoY) of *recreation & entertainment* sub-group was recorded during May 2008. The inflation (YoY) reached at 9.7 percent in May 2008 compared to 0.1 percent during the same month last year. This significant increase was supported by an increase in the prices of daily newspapers and magazines.

Another significant increase was recorded in *cleaning, laundry & personal appearance* sub-group during May 2008. Inflation (YoY) reached 16.6 percent in May 2008 compared to 3.3 percent during the corresponding month last year. The reasons for this double digit inflation (YoY) are same as previous month, i.e. rising prices of jewellery, washing soap & detergents, laundry charges, etc.

Contrary to previous month, YoY inflation in the *education* sub-group accelerated from 6.0 percent in May 2007 to 7.9 percent in May 2008. This acceleration was due to the rise in prices of books, papers, school fee, etc.

Similarly, YoY inflation in *medicare* sub-group also showed acceleration in May 2008 and was recorded at 14.1 percent compared to 10.2 percent in May 2007. The reason for this acceleration was the increase in the prices of items such as cotton bandage, ORS, galxos-D, disprine, doctor fee, gripes water and polyfax eye ointment etc. (see **Figure A1** in Annexure).

Analyzing the whole basket of CPI non-food group reveals that out of 250 non-food items, 107 items witnessed double digit inflation during May 2008. The items showing double digit price change include gold and silver tezabi, air fare, kerosene oil, high speed diesel and firewood whole, etc. Further 61 items showed moderate price change in the range of 5 to 10 percent; all other commodities witnessed either price increase of less than 5 percent or decline ( 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

Strong and persistent inflationary pressures were exhibited in all major cities during May 2008. Inflation (YoY) was recorded in Islamabad, Lahore, Karachi, Quetta and

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
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
May-08	19.3	16.4	17.4	18.6	21.8	21.8

Peshawar was 16.4, 17.4, 18.6, 21.8 and 21.8 percent during May 2008 compared to 8.2, 7.5, 7.6, 8.7 and 7.1 percent in May 2007. Inflation (YoY) in Islamabad, Lahore and Karachi remained lower than the overall CPI inflation (see **Table 2.1**).

Comparison of inflation (YoY) based on all 35 cities reveals that inflation in 26 cities was above the overall CPI inflation (YoY), while the remaining 9 cities recorded inflation below overall CPI inflation. The highest level of YoY inflation was recorded in Loralai (29.2 percent) followed by Mardan (24.6 percent) and Bannu (23.8 percent) during the month under review. On the other hand, the lowest YoY inflation was recorded in Multan (16.3 percent) during May 2008. The highest food inflation (YoY) was recorded in Loralai (42.3 percent) and the lowest in Rawalpindi (23.4 percent), whereas the highest non-food inflation was also observed in Loralai (20.3 percent) and the lowest in Lahore (8.9 percent) during May 2008 (see **Table 2.2**).

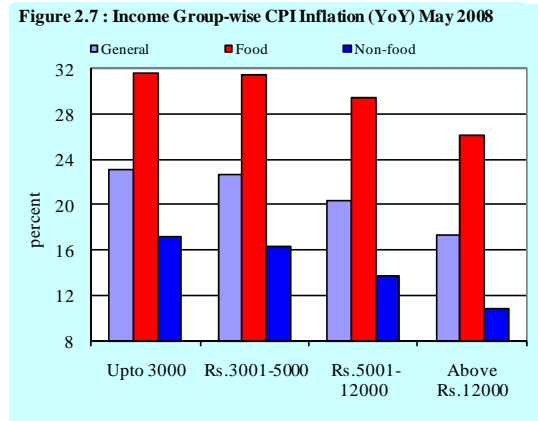
	<b>High inflation cities</b>				<b>Low inflation cities</b>		
	<b>General</b>	<b>Food</b>	<b>Non-food</b>		<b>General</b>	<b>Food</b>	<b>Non-food</b>
Loralai	29.2	42.3	20.3	Kunri	18.7	24.1	14.7
Mardan	24.6	33.7	18.0	Karachi	18.6	26.7	12.8
Bannu	23.8	35.4	15.5	Sialkot	17.9	27.4	10.5
Sukkur	23.7	35.4	15.6	Attock	17.5	24.1	12.9
Samundari	23.6	33.0	16.8	Lahore	17.4	28.6	8.9
Nawabshah	23.4	32.5	17.2	Bahawalpur	17.0	24.9	10.9
Turbat	23.1	29.3	18.9	Rawalpindi	16.9	23.4	12.1
Shahdadpur	22.5	30.6	16.8	Islamabad	16.4	23.5	11.4
Khuzdar	22.1	30.1	16.2	Multan	16.3	24.8	9.9
Larkana	21.8	30.1	15.5				
Peshawar	21.8	32.2	14.1				
Quetta	21.8	33.9	12.6				
Sargodha	21.5	29.3	15.5				
Mianwali	21.4	30.5	14.7				
Bahawalnagar	20.9	27.4	16.3				
Gujranwala	20.9	28.5	15.3				
D.I.Khan	20.8	33.0	11.8				
Jhang	20.7	28.7	14.9				
Hyderabad	20.6	28.4	15.0				
Jhelum	20.4	32.1	12.3				
Abbotabad	20.1	29.4	13.2				
Faisalabad	19.8	29.7	12.4				
Vehari	19.6	28.8	12.8				
D.G. Khan	19.5	25.6	14.9				
Okara	19.5	28.7	12.8				
Mirpur Khas	19.4	24.5	15.7				

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

## 2.4 Income Group-wise Inflation

Similar to previous month income group-wise inflation (YoY) during May 2008 in all income groups was higher than overall CPI inflation (YoY), except the highest income group (see **Figure 2.7**).

As in April 2008, the highest CPI inflation (YoY) was recorded for the income group of upto Rs. 3000 (23.2 percent) during May 2008, followed by income group of Rs. 3001 to 5000 (22.6 percent) and income group of Rs. 5001 to 12000 (20.4 percent). The highest income group of above Rs. 12000 experienced the lowest inflation in all categories (17.4 percent).



During May 2008, data on 17 cities with income groups revealed that the lowest YoY inflation was recorded in Rawalpindi for low-income groups of upto Rs. 3000 and Rs. 3001 to 5000. For the income groups of Rs. 5001 to 12000 and above Rs. 12000 per month, the lowest inflation was recorded in Multan. Whereas the highest YoY inflation was recorded in Khuzdar for all income groups during May 2008 (see **Table A5** in annexure A).

## 2.5 Services and Non-services Inflation

Inflation (YoY) in services<sup>1</sup> sector continued its upward trend during May 2008 compared to May 2007. Inflation (YoY) in services sector was recorded at 12.1 percent during May 2008 compared to 5.5 percent in May 2007. Similar to the trend of services sector, inflation in the non-services sector also accelerated and was recorded at 24.7 percent during May 2008 as compared to 8.9 percent in same month last year (see **Figure 2.8**).

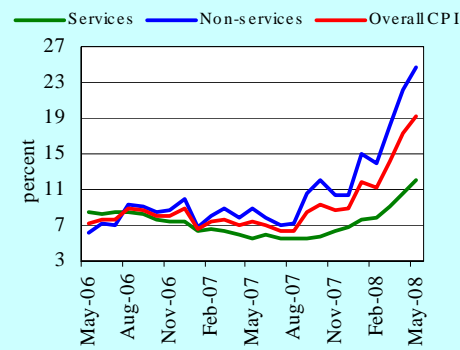
Segregated analysis of non-services sector data shows that inflation (YoY) in both durable<sup>2</sup> and non-durable goods accelerated in May 2008 compared to May 2007. Inflation (YoY) in durable goods was recorded at 21.2 percent in May 2008

<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.

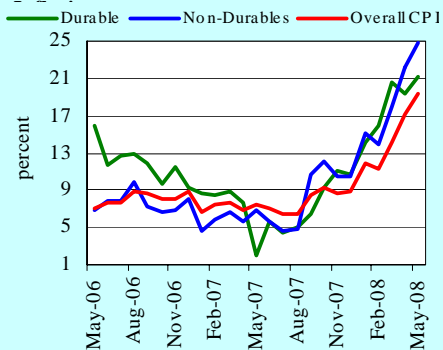
<sup>2</sup> Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewelry, etc.

compared to 2.1 percent for the same month last year. This significant increase was mainly due to a rise in the prices of jewelry, furniture and electric fans, etc. The non-durable goods inflation was recorded at 24.8 percent in May 2008 compared to 6.8 percent in the same month last year. Higher prices of rice, pulse masoor, wheat flour, pulse gram, maida, cooking oil and mustard oil, etc. are the main contributing factors for increase in non-durable goods inflation (see **Figure 2.9**).

**Figure 2.8: Services & Non-services Inflation**



**Figure 2.9: Durables and Non-durables**

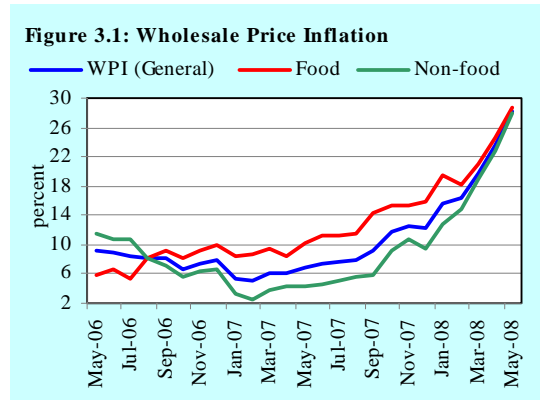




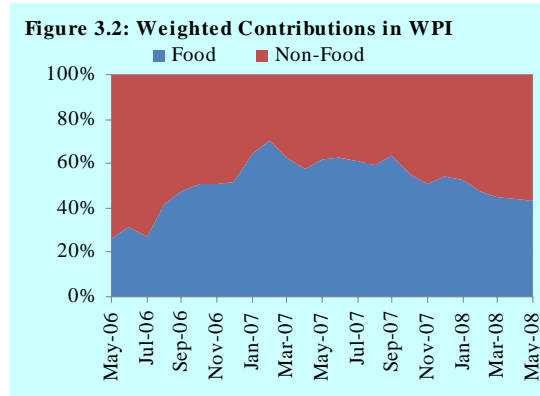
### 3. Wholesale Price Index

Wholesale price index (WPI) continued to show an uptrend during May 2008, and registered inflation of 28.4 percent YoY compared to 6.8 percent for the same month last year. This high inflation came from both food and non-food groups of WPI. WPI non-food inflation exhibited a sharp rise reaching at 27.8 percent in May 2008, compared to 4.4 percent during the same month last

year. Similarly, the food group of WPI witnessed a significant YoY increase of 28.8 percent in the month under review compared to 10.3 percent in May 2007. Like previous month, the inflation of WPI food and non-food, as well as, overall WPI inflation seem to be converging in May 2008 (see **Figure 3.1**).



The sharp increase in WPI non-food inflation in the last few months has increased its weighted contribution in overall WPI inflation. The non-food group contribution rose to 56.8 percent in May 2008, compared to 38.1 percent in May 2007. Consequently, the weighted contribution of food group in overall WPI inflation came down to 43.2 percent in May 2008, compared to 61.9 percent in the same month last year (see **Figure 3.2**).



A disaggregated analysis of WPI basket reveals that 57 out of 106 items exhibited double digit YoY growth in their prices, ranging between 11 to 131.6 percent. The major items recorded double digit increase in their prices include rice, pulse masoor, mustard/rapeseed oil, coke, furnace oil, fertilizers, vegetable ghee, cooking oil, wheat, maida, chemicals, etc. Seventeen items exhibited growth between 5 to 10 percent in their wholesale prices whereas 14 items showed

subdued increase and prices of 15 other items either declined or showed no change during May 2008 compared to May 2007 (see **Table 3.1**).

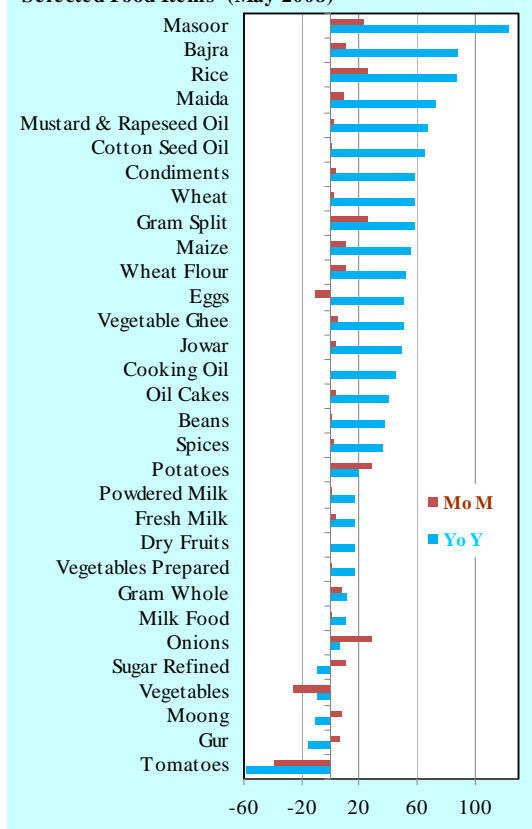
WPI food group remained in double digits for 13<sup>th</sup> consecutive month and reached 28.8 percent (YoY) during May 2008 compared to 10.3 percent in May 2007. Major food items contributing to this steep rise include, pulse masoor, bajra, vegetable ghee, cooking oil, rice, maida and wheat, etc. Among food group, the highest inflation was recorded in the wholesale price of pulse masoor that showed an increase of 123.5 percent during the month under review. On the other hand few commodities showed YoY deflation of different magnitudes in their wholesale prices including tomatoes (-58.4 percent), gur (-16.4 percent), pulse moong (-10.2 percent), and vegetables (-9.7 percent), etc. (see **Table A7** & **Figure 3.3**).

Within the WPI food group 28 of the total 43 items exhibited double digit YoY inflation during May 2008. Five food items exhibited growth between 5 to 10 percent in their wholesale prices, while three items recorded subdued

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

Groups	No. of Items				Total
	Decrease or no change	Up to 5%	5%-10%	More than 10%	
<b>A. Food</b>	7	3	5	28	<b>43</b>
<b>B. Non-Food</b>	8	11	12	32	<b>63</b>
Raw material	1	1	2	5	9
Fuel, lighting & lubricant			2	9	11
Manufactures	6	8	6	12	32
Building material	1	2	2	6	11
<b>Total</b>	<b>15</b>	<b>14</b>	<b>17</b>	<b>57</b>	<b>106</b>

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



inflation of up to 5 percent. Wholesale prices of the remaining seven food items either declined or remained stable.

Wholesale prices of non-food group of WPI continued to show an uptrend seen throughout FY08 and recorded YoY inflation of 27.9 percent in May 2008 – highest since June 1994. All sub-groups of the non-food group, except the *raw material* sub-group, witnessed a significant YoY inflation in May 2008, compared to May 2007 (see **Figure 3.4**).

The major items that contributed to 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 continued to show strong growth and recorded YoY inflation of more than 100 percent for the seventh consecutive month in May 2008, reflecting the rising international energy prices. Prices of 8 non-food items, however, declined or showed no change in May 2008 including sugarcane, paper and tiles etc. (see **Figure 3.5**).

Within the non-food group of WPI, the *fuel, lighting & lubricant* sub-group continued to show a significant rise in its contribution to WPI non-food inflation and reached 68.3 percent in May 2008 compared to 18.9 percent in May 2007. This increase in the weighted contribution of *fuel, lighting & lubricant* sub-group can be attributed to continuously high international crude oil prices (see **Table 3.2**).

	May 07	Jun 07	Apr 08	May 08
Raw materials	46.9	31.4	6.9	6.9
Fuel, lighting & lubricants	18.9	34.9	66.8	68.3
Manufactures	22.0	21.4	15.6	14.7
Building materials	12.0	12.1	10.7	10.0

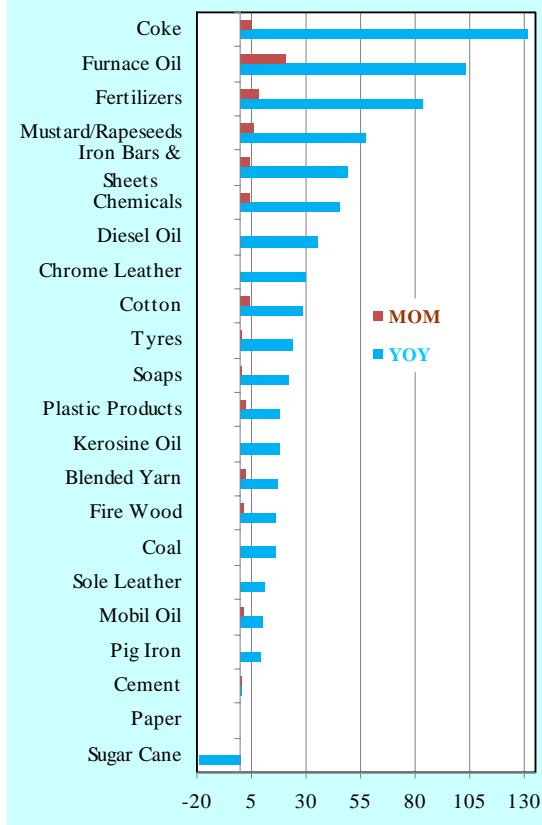
A detailed analysis of YoY inflation of various sub-indices of non-food group shows that the *fuel, lightning & lubricants* sub-group continued to show strong upward movement and recorded a significantly high YoY inflation of 45.8 percent during May 2008 compared to only 2.0 percent inflation during 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 with items like coke and furnace oil recording more than 100 percent inflation during the month under review (see **Table A7** in Annexure A).

On the other hand, the *raw material* sub-group recorded a deceleration in inflation in May 2008, and reached 14.3 percent (YoY) compared to 17.1 percent during the same month last year. In this sub-group, the wholesale prices of sugarcane declined while the wholesale prices of mustard/rapeseed, cotton and cotton seed, etc. registered double digit YoY increase during the month under review.

The *manufactures* sub-index of WPI non-food group also witnessed growth and recorded double digit (11.3 percent) YoY inflation for the first time since February 2004. This was mainly because of double-digit YoY rise in the wholesale prices of items such as fertilizers, chemicals, chrome leather, soaps, tyres, and plastic products, etc. Within the *manufactures* sub-group, the wholesale prices of fertilizers

continued to register high YoY growth and were recorded at 83.0 percent in May 2008 mainly due to rising DAP<sup>3</sup> prices in the international market. The *building material* sub-index accelerated significantly and witnessed a higher YoY inflation of 32.6 percent in May 2008 compared to only 6.3 percent registered during the same month last year. This upsurge was mainly due 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 (May 2008)**

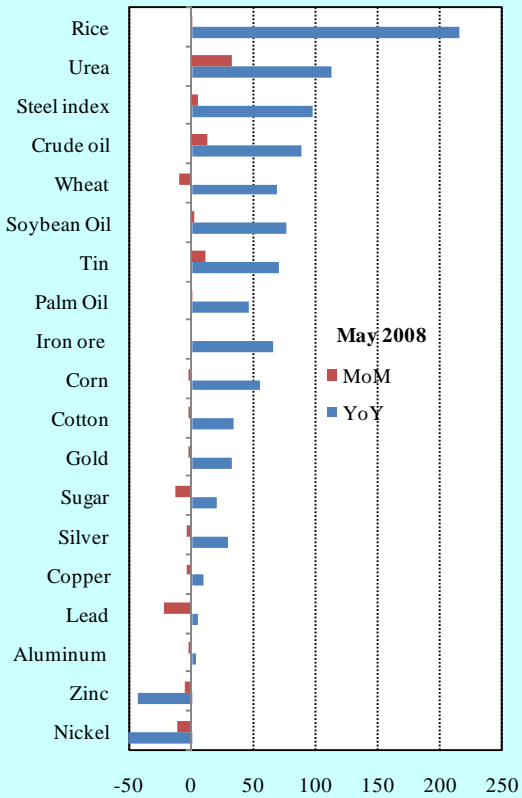


<sup>3</sup> DAP: Diammonium Phosphate

#### 4. Global Commodity Prices

Global inflation remained strong due to continuous rise (YoY) in the prices of food, energy and precious metals in May 2008. Prices of rice, urea, crude oil and wheat witnessed YoY growth of above 80 percent during the month under review. In metal group, however, prices of nickel and zinc declined in May 2008 compared to the same month last year (see **Figure 4.1**). The highest increase was witnessed in rice prices that exhibited sharp upward movement and registered a YoY increase of 215 percent in May 2008, as some key exporters discontinued exports to ensure local supplies<sup>4</sup>. The second highest upward movement on YoY basis was recorded for urea prices due to strong demand, high energy prices raising fertilizer production cost and levying of 100-135 percent export tax from China<sup>5</sup>. Crude oil price<sup>6</sup> was recorded at US\$ 122.8 per barrel driven by concerns about supplies amid strong growth in demand. On supply side non-OPEC supply growth continued to slow down while OPEC also remained reluctant to raise output. Supply was also disrupted during May 2008, as rebels in Nigeria (key African exporter) blew up a major pipeline. The strength in crude oil prices was also reflected in IMF energy index that moved up further in May 2008. On daily basis average crude oil price<sup>7</sup> reached US\$ 130.0 per barrel in May 2008, and showed 88.6 percent growth

**Figure 4.1: Percent Change in Price (US\$)**



Source: IMF and World Bank

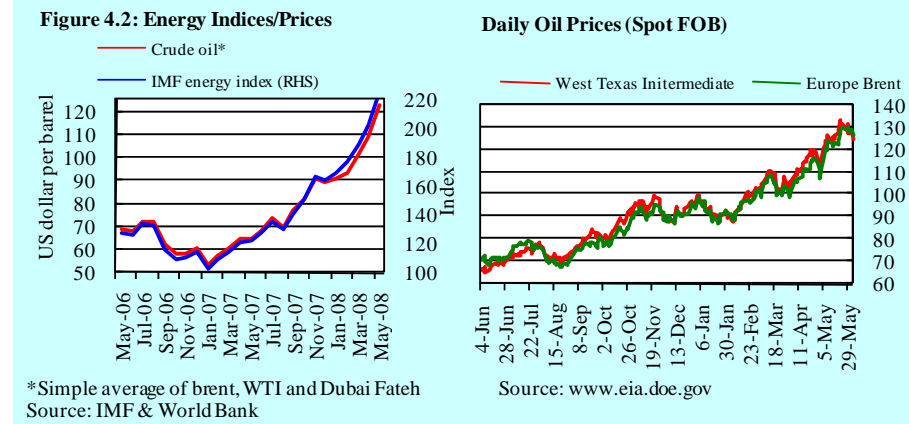
<sup>4</sup> [www.bloomberg.com](http://www.bloomberg.com)

<sup>5</sup> WB Commodity Market Review, June 11, 2008.

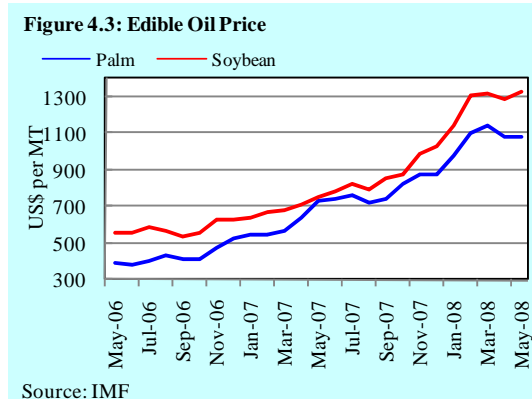
<sup>6</sup> Simple average of Brent, WTI and Dubai Fateh

<sup>7</sup> Average of West Texas International (WTI), Brent oil and Dubai Fateh

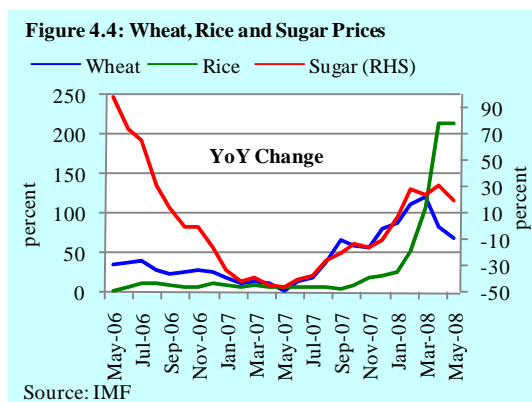
compared to the same month last year. Metal prices also remained on the rising path as reflected by the World Bank steel products index (see **Figure 4.2**).



Within food group, edible oil prices continued to show YoY increase. Palm and soybean oil prices increased to US\$ 1068.8 and US\$ 1330 per MT in May 2008 from US\$ 740.6 and US\$ 756.1 per MT in May 2007. The rise in palm oil prices was the result of reduced output in Malaysia and strong demand in India. Rise in soybean prices in international market was supported by a record crude oil price boosting the demand outlook for bio-fuel<sup>8</sup> (see **Figure 4.3**).

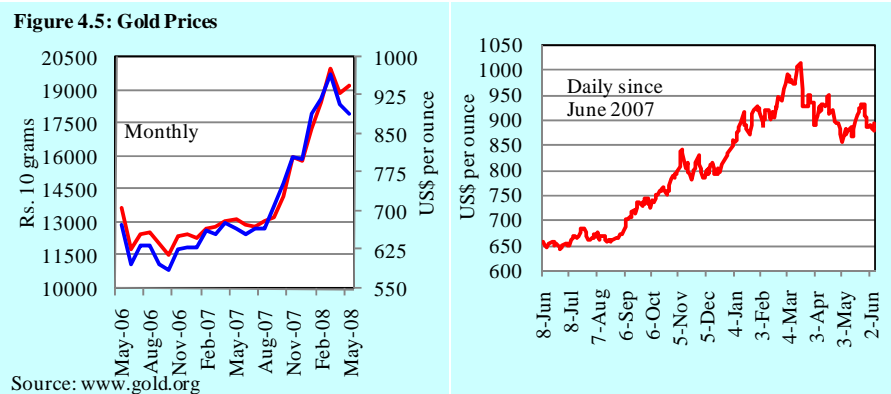


In food grains, major upward movement on YoY basis was observed in rice prices in May 2008. This rising trend was supported by supply concerns after a cyclone devastated Myanmar and a larger than



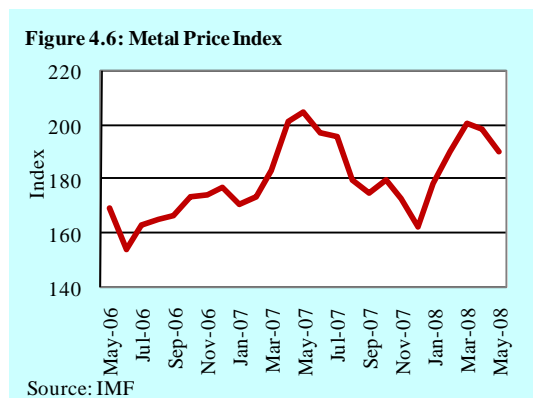
<sup>8</sup> Bloomberg and Reuters

expected purchase of rice by Malaysia. Moreover Mexico which usually applies 20 percent tariff on all rice imports, allowed 250,000 metric tons of rice to enter the country without paying tariff to protect its people from soaring global food prices<sup>9</sup>. Wheat prices recorded 68 percent rise in May 2008 compared to the same month last year due to record low stocks in the world (see **Figure 4.4**).



Growth in gold prices slowed down further in May 2008, but remained higher than its price for the same month last year. The slowdown in gold prices in the international market is attributed to investors' diminishing interest in the precious metal as a result of strengthening dollar<sup>10</sup>. Daily gold prices fluctuated in the range of US\$ 853.0 and US\$ 946.0 per ounce during May 2008 (see **Figure 4.5**).

Metal prices declined by 7.3 percent in May 2008, compared to May 2007, as indicated by IMF metal price index. This reversal in metal prices was mainly the result of 50.6 and 43.4 percent reduction in the prices of nickel and zinc in the international markets (see **Figure 4.6**). Nickel prices dropped due to continuous weakness in the stainless steel sector and large supply growth expected over the next year<sup>11</sup>. Zinc prices dropped due to a weak demand and



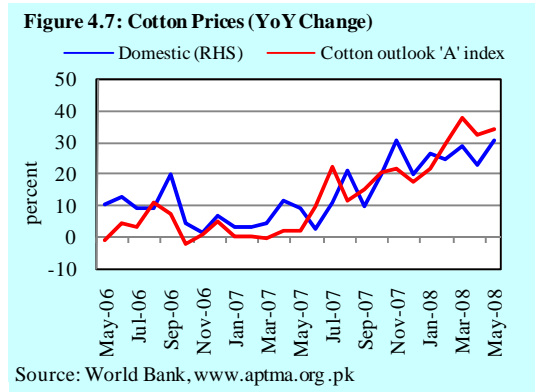
<sup>9</sup> Financial Times and Reuters.

<sup>10</sup> Bloomberg.

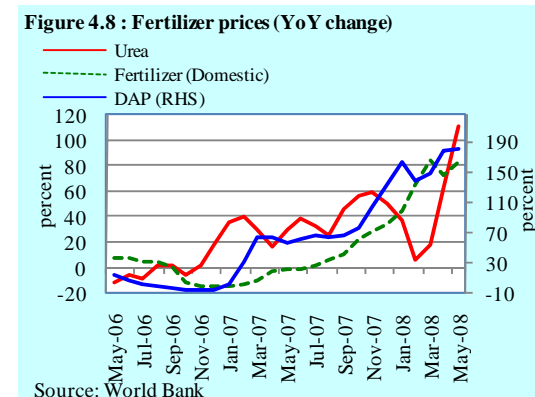
<sup>11</sup> Bloomberg

rebound in Chinese production<sup>12</sup>.

Cotton prices continued its rising trend and witnessed a YoY increase in the international market during May 2008. Cotton prices reflected by the cotton outlook 'A' index registered a YoY growth of 34 percent during the month under review. Rise in cotton prices in global market is due to the expectation of lower cotton crop in the US as a result of decline in acreage for the white fiber. In domestic market cotton prices registered an increase of 30 percent during the month under review (see **Figure 4.7**).



Fertilizer prices continued to exhibit strong uptrend in international, as well as, domestic markets. In particular, the prices of DAP has been recording triple digit growth since November 2007. In the international market DAP and urea prices surged by 181.2 and 111.8 percent respectively on YoY bases in May 2008 (see **Figure 4.8**). The surge in fertilizer prices is the result of



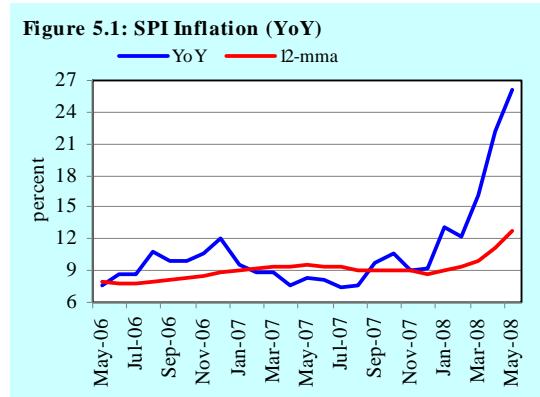
(a) strong demand induced by high grain prices; (b) export taxes by China; and (c) high energy prices that have increased fertilizer production cost.

<sup>12</sup> WB Commodity Markets Review (June 11, 2008)



### 5. Sensitive Price Indicator

Persistent and strong inflation was observed throughout May 2008 measured by sensitive price indicator (SPI). SPI inflation (YoY) reached 26.2 percent during May 2008 compared to 8.3 percent in the same month last year. Long-run trend in SPI indicated by 12 month moving average also accelerated and recorded double digit YoY inflation for the third consecutive month in May 2008 (see **Figure 5.1**).

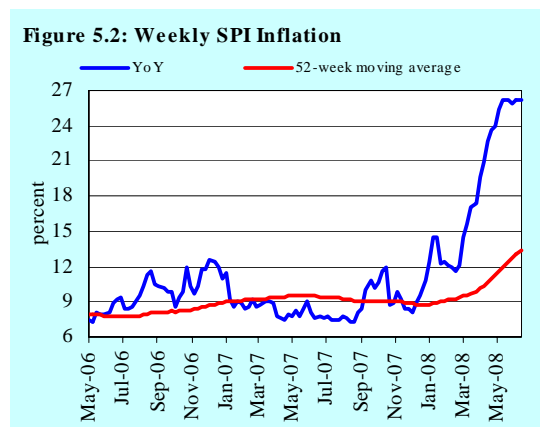


Analysis of items in the SPI basket shows that out of 53 items, prices of 7 items either declined or showed no change, 3 items having price change between 0 to 5 percent, 8 items recorded price change between 5 to 10 percent and 35 items having price change of more than 10 percent during May 2008 (see **Table 5.1**). The items mainly contributing to the significant increase in SPI inflation (YoY) are rice irri-6 (140.9 percent), pulse masoor (123.4 percent), rice broken (90.91 percent), red chilies (71.9 percent), and wheat (67.4 percent).

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

Percent Change	Number of items			
	May-07	Jun-07	Apr-08	May-08
0 or less	13	13	8	7
0 to 5	8	8	5	3
5 to 10	12	12	7	8
10 or above	20	20	33	35
Minimum	-37.2	-29.2	-39.6	-46.9
Maximum	137.3	67.1	84.3	140.9

SPI inflation measured by month over month (MoM) basis, however, showed a decline during May 2008 and was recorded at 4.5 percent compared to 5.4 percent in April 2008. This decline in SPI inflation (MoM) can be attributed to the fall in the



prices of tomatoes (-44.9 percent), chicken (-14.0 percent), eggs (-7.0 percent), etc. (see **Table A8** in Annexure A).

It is important to note that weekly SPI inflation during May 2008 though higher than that recorded in April 2008, moved in a narrow range of 25.4 percent to 26.2 percent, contrary to a secular rising trend since January 2008 onwards (see **Figure 5.2**). It indicates that probably SPI inflation may begin to ease in months ahead.

SPI data on income group-wise showed significant acceleration in SPI inflation (YoY) for all income groups during May 2008 compared to May 2007. The SPI inflation (YoY) was the highest in the lowest income group in May 2008. The income group-wise SPI inflation further reveals that all income groups, except for the highest income group, showed higher SPI inflation than the average SPI inflation during May 2008 (see **Table 5.2**).

<b>Table 5.2 : Income Group-wise SPI Inflation (YoY)</b>				
	percent			
	<b>May-07</b>	<b>Jun-07</b>	<b>Apr-08</b>	<b>May-08</b>
Up to Rs. 3000	9.1	9.7	24.9	29.9
Rs. 3001-5000	9.3	9.6	24.5	29.1
Rs. 5000-12000	9.0	8.9	22.8	26.8
Above Rs. 12000	7.0	6.2	19.9	23.2
<b>All income groups</b>	<b>8.3</b>	<b>8.0</b>	<b>22.3</b>	<b>26.2</b>

## Annexure A

Table A1: CPI Inflation (YoY) by Groups

	Weights	May-04	May-05	May-06	May-07	May-08
<b>I. Food Group</b>	<b>40.3</b>	<b>10.0</b>	<b>12.5</b>	<b>5.6</b>	<b>11.3</b>	<b>28.5</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>5.1</b>	<b>8.0</b>	<b>8.2</b>	<b>4.7</b>	<b>12.5</b>
Apparel, textile, etc.	6.1	0.7	5.3	3.5	7.0	9.4
House rent	23.4	7.6	12.0	8.3	6.2	12.0
Fuel & lighting	7.3	1.7	4.6	12.3	5.7	9.5
Household furniture & equipment	3.3	5.0	5.5	5.6	6.2	9.8
Transport & com.	7.3	8.1	11.1	13.0	-3.0	19.1
Recreation & entertainment	0.8	-1.1	-0.1	-0.2	0.1	9.7
Education	3.5	2.7	4.0	7.2	6.0	7.9
Cleaning, laundry, etc.	5.9	4.6	2.6	4.9	3.3	16.6
Medicare	2.1	1.7	0.8	3.9	10.2	14.1
<b>Headline</b>	<b>100</b>	<b>7.0</b>	<b>9.8</b>	<b>7.1</b>	<b>7.4</b>	<b>19.3</b>

Table A2: Distribution of Price Changes of CPI Basket, May 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>28.5</b>	<b>110</b>	<b>14</b>	<b>5</b>	<b>15</b>	<b>76</b>
<b>II. Non-Food Group</b>	<b>12.5</b>	<b>250</b>	<b>47</b>	<b>35</b>	<b>61</b>	<b>107</b>
Apparel, textile, etc.	9.4	42	4	7	19	12
House rent	12.0	1				1
Fuel & lighting	9.5	15	1		9	5
Household furniture & equipment	9.8	44		5	11	28
Transport & com.	19.1	43	10		3	30
Recreation & entertainment	9.7	16	3	6	1	6
Education	7.9	24	8	5	4	7
Cleaning, laundry, etc.	16.6	36	3	7	13	13
Medicines	14.1	29	18	5	1	5
<b>Overall</b>	<b>19.3</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 May 2008</b>					
<b>Items</b>	<b>weights</b>	<b>YoY change</b>		<b>Weighted Contribution</b>	
		<b>May-07</b>	<b>May-08</b>		
<b>A. Ranked by Weighted Contribution</b>					
1	Wheat Flour	5.11	4.64	72.26	18.21
2	House Rent Index	23.43	6.16	12.05	14.57
3	Vegetable Ghee	2.67	33.79	53.70	8.93
4	Rice	1.34	37.31	103.57	8.47
5	Milk Fresh	6.66	11.14	21.36	8.09
6	Petrol	1.73	-6.91	28.17	3.05
7	Transport Fare/Charges	2.12	1.95	21.32	2.78
8	Readymade Food	1.68	6.08	25.10	2.34
9	Cooking Oil	0.69	25.35	50.04	1.97
10	Wheat	0.48	4.41	67.76	1.59
<b>Total</b>		<b>45.91</b>			<b>69.99</b>
<b>B. Ranked by Percentage Change</b>					
1	Pulse Masoor	0.22	0.50	122.90	1.23
2	Rice	1.34	37.31	103.57	8.47
3	Maida	0.11	0.43	76.07	0.38
4	Mustard Oil	0.05	25.46	74.60	0.18
5	Wheat Flour	5.11	4.64	72.26	18.21
6	Wheat	0.48	4.41	67.76	1.59
7	Eggs	0.41	33.94	54.96	0.90
8	Vegetable Ghee	2.67	33.79	53.70	8.93
9	Pulse Gram	0.43	-3.94	53.28	1.09
10	Cooking Oil	0.69	25.35	50.04	1.97
		<b>11.50</b>			<b>42.94</b>
<b>C. Ranked by Weights</b>					
1	House Rent Index	23.43	6.16	12.05	14.57
2	Milk Fresh	6.66	11.14	21.36	8.09
3	Wheat Flour	5.11	4.64	72.26	18.21
4	Electricity	4.37	10.07	6.44	1.20
5	Bakery & Confectionary	2.98	2.02	11.05	1.39
6	Meat	2.70	5.94	7.45	1.56
7	Vegetable Ghee	2.67	33.79	53.70	8.93
8	Tuition Fees	2.36	7.21	8.30	1.00
9	Transport Fare/Charges	2.12	1.95	21.32	2.78
10	Natural Gas	2.05	0.54	6.81	1.03
		<b>54.45</b>			<b>58.75</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 19.3 percent in May 2008.					

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

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
Food Group	Sugar Refined		Beef With Bone	Milk Fresh (Unboiled)
	Tomatoes		Av.Qlty., Mutton	Wheat Flour Bag
	Lady Finger		Av.Qlty., Tea Loose	Vegetable Ghee
	Kinnu		Kenya Av.Qlty 250G,	(Loose), Wheat Flour
	Garlic	Fish-Rahu Medium Size	Tea Lipton Yellow	Fine/Superior.
	Karaila	Cigarettes K-2 10'S	Label 200G, Cigarettes	Vegetable Ghee Tin
	Turai	Pulse Moong (Washed)	Gold Leaf 20'S,	Chicken Farm Broiler
	Cocumber (Kheera)	Pulse Mash (Washed)	Cigarettes Morven	(Live), Cooking Oil
	Aloo Bukhara	Milo 200 Gm.	,Gold 20'S Betel	(Dalda), Rice Basmati
Apparel & Textile	Ladies Sandal Bata	School Uni. , Kameez,	Tailoring Coat-Pant	Frock W/Wear Girls
	Child Shoe Power	Shal.Girl, School Uni.	Suit, School Uni.	Underwear Av.Qlty
	Lite Bata, Gents	Kameez,Shal.Boys	Pant,Shirt Boys	Medium Siz,
	Shoes Paul Bata	Full Pant Boy	Georgette Av.Qlty	Lungi/Dhoti(Cotton)
House Rent Index	—	—	—	House Rent Index
Fuel & Lighting			Elect.Charges Above 1000 Uni, Elect.	Elect.Charges 101 - 300 Unit
	Elect.Charges Upto 50 Units		Charges 301 - 1000 Uni, Gas Chrg 6.7438 - 10.1157Mmb	Firewood Whole Kerosene Oil
H/hold Furniture		Blanket (90" X 54")	Household Servant	Sup.Qlty, Ceiling Fan
		Sewing Thread/Reel (Asli Pari), Sewing Machine(Singer)	Female, Quilt (Lihaf) 3 Kg. Cotton, Tea Set Pak. Chinaware 21 Pc	48" Super Qlty, Pedestal Fan 22" Super Qlty
Transport & Comm.	Telephone Charges Local Call, Tel Charges Out Side City, Car Tax for 800 cc to 1300 cc Plateform Ticket		Tyre Car With Tube General	Petrol Super
			Car Suzuki 800 cc (W/O. A/C)	Bus Fare Outside City
Recreation & Entertainment	TV.Licence Fee domestic, T.V. 20" Colored With R/Cont, Daily "Nawa-e-Waqt"	Video Game Sega 16 Byte, Radio With C.Player National Vid. Cassette Blk. Tdk/Sony	Cinema A/C. Highest Class	Daily "Jang" Weekly "Akhbar-e-Jahan", Daily "Dawn"
	Govt. College Fee Ist. Year, Govt. College fee 4th Year Urdu Book Ist.Year/Inter	Eng. Book Ist.Yr Complete, English Book Class IX or X, Govt. Engg. College. Fee Ist Year	Maths Book Ist.Year Maths Book Class Ix Or X Govt. University Fee Msc.	School Fee Secondary Eng.Med. School Fee Primary Eng.Med. Paper Fullscope
Cleaning & Laundry	Toothpaste	Perfume Med.Size	Haircut Charges For Men, Shampoo Plain	Washing Soap
	Macklines 70 Grm	Medora/Broa, Talc	Medora 200 Ml.	Nyl(135-160Gms)
	Lipstick	Powder Vice ,Roay,	Hair-Oil, Amla/	Toilet Soap Lux 95 Grams, Surf (Medium)
	S.Miss/Medora Robin Blue (35 Grams)	B.Cat, Nail Polish S.Miss/Medora, Hair-Colour Begin (6 Gms)	Chambeli, Facecream Ponds (Medium)	160 Grm, Washing Powder 1000 Grm
Medicare	Dettol (Medium)			Doctor (MBBS) Clinic Fee, Gripe-Water
	Jouhar Joshanda CAC. 1000 Tab	Cotton Bandage 2" - 4" Brufen Tabs 200-Mg.	O.R.S. (Nimcol)	Woodwards Galxos-D (450 Grms)

<b>Table A5: City-wise Inflation (YoY) by Income Groups, May2008</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	20.2	29.3	14.1	20.4	30.7	13.5
2	Faisalabad	21.7	31.0	15.4	23.1	31.5	17.5
3	Rawalpindi	17.4	22.1	14.2	18.0	24.2	13.8
4	Multan	19.1	27.9	13.1	18.8	27.3	13.1
5	Gujranwala	22.6	29.9	17.6	23.6	31.6	18.2
6	Islamabad	18.4	25.5	13.7	18.0	24.8	13.4
7	Sargodha	23.4	30.3	18.7	23.0	30.5	17.9
8	Sialkot	19.4	27.7	13.8	19.0	27.7	13.1
9	Bahawalpur	20.2	28.2	14.7	20.3	28.8	14.5
10	Karachi	21.8	29.0	16.9	20.9	28.1	16.1
11	Hyderabad	21.7	27.9	17.5	21.2	27.6	16.8
12	Sukkur	23.4	34.7	15.7	25.3	37.0	17.4
13	Larkana	22.6	30.3	17.3	22.4	29.5	17.6
14	Peshawar	22.6	30.1	17.5	25.7	35.2	19.4
15	Bannu	26.5	36.5	19.7	25.3	36.3	17.9
16	Quetta	21.5	28.2	16.9	23.8	35.7	15.7
17	Khuzdar	33.8	46.7	25.0	31.6	43.7	23.3
		<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	18.7	30.2	11.0	15.8	26.4	8.6
2	Faisalabad	21.4	30.9	15.0	18.1	28.1	11.4
3	Rawalpindi	17.2	23.9	12.7	16.6	22.9	12.3
4	Multan	17.0	25.7	11.2	14.0	21.6	8.9
5	Gujranwala	21.3	29.1	16.0	18.1	24.3	13.9
6	Islamabad	17.7	25.7	12.2	16.2	22.9	11.7
7	Sargodha	21.7	29.4	16.5	20.1	28.6	14.4
8	Sialkot	18.5	28.0	12.1	17.3	27.0	10.8
9	Bahawalpur	17.1	25.0	11.7	14.1	20.6	9.8
10	Karachi	19.8	26.8	15.0	17.2	26.2	11.1
11	Hyderabad	20.9	28.6	15.7	19.8	27.9	14.3
12	Sukkur	23.8	35.6	15.8	22.2	33.3	14.7
13	Larkana	21.4	29.4	16.0	22.4	33.0	15.3
14	Peshawar	23.0	34.2	15.5	19.9	29.1	13.6
15	Bannu	23.3	35.3	15.2	22.8	34.1	15.1
16	Quetta	22.1	34.9	13.5	21.0	32.3	13.3
17	Khuzdar	27.4	41.6	17.8	24.3	37.2	15.6

<b>Table A6 : Income Group-wise Inflation (YoY)</b>								percent
	<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>	<b>May-08</b>
<u>Up to Rs. 3000</u>								
General	11.2	10.1	10.4	14.7	13.4	17.0	20.2	23.2
Food	14.9	12.2	12.4	20.0	17.2	22.5	27.4	31.5
Non-food	8.5	8.6	9.0	10.9	10.7	13.0	15.1	17.1
<u>Rs. 3001-5000</u>								
General	11.2	10.2	10.4	14.5	13.0	16.6	19.9	22.6
Food	15.4	12.7	12.8	20.3	17.2	22.6	27.6	31.4
Non-food	8.2	8.3	8.7	10.5	10.0	12.4	14.5	16.3
<u>Rs. 5000-12000</u>								
General	10.2	9.4	9.5	13.0	12.0	14.9	18.1	20.4
Food	15.0	12.6	12.5	19.0	16.5	21.3	26.3	29.5
Non-food	6.7	7.0	7.4	8.6	8.7	10.2	12.2	13.7
<u>Above Rs. 12000</u>								
General	8.0	7.7	7.7	10.2	10.1	12.8	15.7	17.4
Food	13.9	12.3	11.8	16.6	15.0	18.8	23.6	26.1
Non-food	3.6	4.3	4.7	5.5	6.6	8.2	9.7	10.8
<u>All income groups</u>								
General	9.3	8.7	8.8	11.9	11.3	14.1	17.2	19.3
Food	14.7	12.5	12.2	18.2	16.0	20.6	25.5	28.5
Non-food	5.4	5.9	6.3	7.3	7.8	9.4	11.2	12.5

<b>Table A7: Distribution of Price Change (YoY)--WPI Items: May 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>	Tomatoes Gur Moong Vegetables Sugar Refined Fish Mash	Sugar Confectionary Mineral Water Salt	Meat Onions Tea Fruit Prepared/Preserved Chicken	Beverages, Milk Food Fresh Fruits, Gram Whole, Vegetables Prepared/Preserved Dry Fruits, Fresh Milk Powdered Milk, Potatoes Spices, Beans, Oil Cakes, Cooking Oil, Besan, Jowar, Vegetable Ghee, Eggs, Wheat Flour, Maize, Gram Split, Wheat, Condiments, Cotton Seed Oil, Mustard & Rapeseed Oil, Maida Rice, Bajra, Masoor
<b>Raw material</b>	Sugar Cane	Wool	Hides Pig Iron	Tobacco, Skins, Cotton Seeds, Cotton Mustard/Rapeseeds
<b>Fuel &amp; lighting</b>	—	—	Natural Gas Elec. Agriculture Tariff-D	Mobil Oil, Electricity Ind. Supply Tariff-B, Coal, Fire Wood, Kerosine Oil, Motor Sprit, Diesel Oil, Furnace Oil, Coke
<b>Manufactures</b>	Paper Drugs & Medicines Cotton Yarn Cosmetics Audio-Visual Instruments Foot Wear	Ready Made Garments, Pesticides & Insecticides Woolen Textiles Transports, Other Electrical Goods, Jute Manufactures Nylon Yarn, Cigarettes	Glass Products Cotton Textiles Dying Materials Mattresses Machinery Silk & Reyon Textiles	Hosiery, Sole Leather Matches, Utensils Blended Yarn, Plastic Products, Tubes, Soaps Tyres, Chrome Leather Chemicals, Fertilizers
<b>Building material</b>	Tiles	Cement Bricks	Timber Sanitary Wares	Cement Blocks, Glass Sheets, Paints & Varnishes, Wires & Cables, Pipe Fittings, Iron Bars & Sheets



Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Price May-08	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	19.5	67.4	6.6
2	Wheat flour average quality.	Kg.	22.8	65.5	9.8
3	Rice basmati broken	Kg.	52.7	90.9	23.3
4	Rice irri-6	Kg.	48.0	140.9	39.4
5	Masur pulse washed	Kg.	104.6	123.4	23.1
6	Moong pulse washed	Kg.	56.2	0.7	5.8
7	Mash pulse washed	Kg.	73.0	1.2	0.6
8	Gram pulse washed	Kg.	59.8	56.7	21.3
9	Beef	Kg.	128.4	6.6	2.5
10	Mutton	Kg.	245.0	6.9	1.2
11	Egg Hen (farm)	Doz.	47.7	47.7	-7.0
12	Bread plain	Each	20.2	30.6	2.8
13	Sugar	Kg.	28.6	-4.3	13.7
14	Gur	Kg.	31.0	-12.0	8.4
15	Milk fresh	Litr	33.1	16.9	3.6
16	Milk powdered Nido	400g	146.3	7.9	0.9
17	Curd	Kg.	39.1	18.5	4.2
18	Veg.ghee tin	2.5k	374.0	52.8	0.3
19	Veg.ghee loose	Kg.	131.0	59.1	4.5
20	Mustard oil	Kg.	144.1	71.9	1.8
21	Cooking oil	2.5L	383.7	56.1	0.2
22	Potatoes	Kg.	15.8	29.1	25.4
23	Onions	Kg.	15.1	15.3	28.7
24	Tomatoes	Kg.	16.6	-46.9	-44.9
25	Bananas	Doz.	50.0	43.5	37.5
26	Salt powdered	Kg.	5.4	13.7	0.4
27	Red chillies (powder)	Kg.	209.8	80.3	11.9
28	Garlic	Kg.	37.5	-32.5	-3.5
29	Tea packet	250g	72.0	10.7	0.0
30	Tea (prepared)	Cup	7.4	13.0	1.2

continued

Table A8 (continued)

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

S.No	Items	Unit	Price May-08	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	36.0	18.7	2.5
32	Cooked dal plate	Each	23.3	28.3	4.6
33	Cigarettes K-2	10's	8.4	4.4	0.0
34	Coarse latha	Mtr.	41.8	17.5	2.4
35	Lawn (avg.+s.qlty)	Mtr.	89.3	7.3	1.2
36	Voil printed	Mtr.	43.5	12.7	2.4
37	Shirting	Mtr.	73.0	10.7	0.4
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	0.0
41	Kerosene	Litr	49.8	27.3	2.1
42	Firewood	40kg	236.8	18.5	0.7
43	Elec. Bulb 60-wats	Each	13.0	8.4	0.3
44	Match box	Each	1.0	31.6	0.0
45	Washing soap	Cake	11.2	35.2	2.4
46	Bath soap lifebuoy	Cake	19.5	30.4	2.8
47	Chicken (farm)	Kg.	87.7	24.3	-14.0
48	Gas chrg. All clb. Comb	D.mmbt	239.4	6.6	0.0
49	LPG.(cylinder 11kg.)	Each	626.3	8.2	2.9
50	Elec.chrg.all slabs com	Bd. Unit	5.5	8.2	0.0
51	Petrol	Litr	69.1	28.3	7.6
52	Diesel	Litr	50.3	32.8	10.6
53	Telephone local	Call	2.3	0.0	0.0
<b>Maximum</b>				<b>140.9</b>	<b>39.4</b>
<b>Median</b>				<b>17.5</b>	<b>2.4</b>
<b>Minimum</b>				<b>-46.9</b>	<b>-44.9</b>

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

Item and Specification	Weights	Index	
		May-07	May-08
<b>GENERAL</b>	<b>100.0010</b>	<b>144.94</b>	<b>172.87</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3416</b>	<b>152.77</b>	<b>196.28</b>
1 WHEAT	0.4830	135.45	227.23
2 WHEAT FLOUR	5.1122	137.83	237.42
3 MAIDA	0.1059	130.59	229.93
4 BESAN	0.1320	142.88	208.18
5 RICE	1.3369	171.00	348.10
6 PULSE MASOOR	0.2214	126.83	282.70
7 PULSE MOONG	0.2230	184.80	185.87
8 PULSE MASH	0.2017	156.32	160.54
9 PULSE GRAM	0.4272	133.29	204.31
10 GRAM WHOLE	0.1491	141.31	159.15
11 MUSTARD OIL	0.0456	150.22	262.28
12 COOKING OIL	0.6858	160.34	240.58
13 VEGETABLE GHEE	2.6672	174.33	267.94
14 SUGAR	1.9467	109.60	100.87
15 GUR	0.0735	135.37	119.73
16 TEA	1.2559	110.00	118.88
17 MILK FRESH	6.6615	159.04	193.01
18 MILK POWDER	0.1105	150.05	181.45
19 MILK PRODUCTS	0.5607	143.77	174.14
20 HONEY	0.0358	129.33	138.27
21 CEREALS	0.0878	133.83	180.18
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	130.46	145.39
23 BEVERAGES	0.7286	135.23	159.85
24 CONDIMENTS	0.3392	115.89	163.21
25 SPICES	0.6008	121.49	176.51
26 DRY FRUIT	0.2760	218.73	255.33
27 BAKERY & CONFECTIONARY	2.9837	117.68	130.68
28 CIGARETTES	0.9527	148.12	159.35
29 BETEL LEAVES & NUTS	0.1851	141.27	154.08
30 READYMADE FOOD	1.6833	154.83	193.69
31 SWEETMEAT & NIMCO	0.3846	152.94	197.58
32 FISH	0.2703	148.02	154.35
33 MEAT	2.6981	216.39	232.51
34 CHICKEN FARM	0.9158	140.90	170.46
35 EGGS	0.4119	110.78	171.67
36 POTATOES	0.5542	127.08	166.70
37 ONIONS	0.5973	119.45	140.18
38 TOMATOES	0.4569	218.64	101.89
39 VEGETABLES	1.9165	151.85	148.45
40 FRESH FRUITS	1.6160	224.93	248.76
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>127.95</b>	<b>139.96</b>
41 COTTON CLOTH	1.6197	130.84	145.59
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	127.75	139.49
43 TAILORING CHARGES	0.8636	129.55	143.10
44 HOSIERY	0.1528	137.63	147.05
45 READYMADE GARMENTS	1.2038	122.89	130.30
46 WOOLEN READYMADE GARMENTS	0.1485	138.32	156.03
47 FOOTWEAR	1.5327	126.07	137.74
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>144.28</b>	<b>161.66</b>
<b>48 HOUSE RENT INDEX (Combined)</b>	<b>23.4298</b>	<b>144.28</b>	<b>161.66</b>

(continued)

(continued)

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

Item and Specification	Weights	Index	
		May-07	May-08
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>151.05</b>	<b>165.40</b>
49 KEROSENE	0.1366	235.87	315.01
50 FIREWOOD	0.4778	212.64	263.71
51 MATCH BOX	0.1301	100.00	147.96
52 BULB & TUBE	0.1311	86.73	93.52
53 ELECTRICITY	4.3698	119.53	127.23
54 NATURAL GAS	2.0458	205.70	219.71
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>	<b>3.2862</b>	<b>134.33</b>	<b>147.52</b>
55 UTENSILS	0.3690	120.60	132.06
56 PLASTIC PRODUCTS	0.1055	138.20	158.48
57 SUITCASE	0.0470	123.83	135.11
58 HOUSE HOLD EQUIPMENTS	0.0953	120.25	134.52
59 FURNITURE (Ready Made)	0.3054	132.91	156.91
60 FURNISHING	0.6362	128.72	141.12
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	122.76	138.43
62 SEWING MACHINE,CLOCK AND NEEDLES	0.1270	117.80	122.28
63 REFRIGERATOR & AIRCONDITIONER	0.1756	96.98	108.60
64 MARRIAGE HALL	0.0445	142.47	166.97
65 HOUSE HOLD SERVANT	1.1918	151.95	163.01
<b>TRANSPORT &amp; COMMUNICATION.</b>	<b>7.3222</b>	<b>145.53</b>	<b>173.39</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	161.67
69 SERVICE CHARGES	0.3835	130.64	147.09
70 VEHICLES	0.2596	100.89	107.47
71 TYRE & TUBE	0.2831	123.03	131.65
72 TRANSPORT FARE/CHARGES	2.1236	171.59	208.17
73 TRAIN FARE	0.1514	170.01	189.83
74 AIR FARE	0.0983	218.72	298.68
75 COMMUNICATION	1.9255	86.74	86.88
<b>RECREATION &amp; ENTERTAINMENT.</b>	<b>0.8259</b>	<b>105.81</b>	<b>116.10</b>
76 RECREATION	0.3399	100.97	124.83
77 ENTERTAINMENT	0.4860	109.20	110.00
<b>EDUCATION.</b>	<b>3.4548</b>	<b>136.62</b>	<b>147.41</b>
78 TUTION FEES	2.3629	142.73	154.57
79 STATIONERY	0.3500	122.31	142.43
80 TEXT BOOKS	0.6894	127.04	130.40
81 COMPUTER & ALLIED PRODUCTS	0.0525	82.67	81.90
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>	<b>5.8788</b>	<b>126.79</b>	<b>147.86</b>
82 WASHING SOAP & DETERGENT	1.5535	117.14	138.48
83 TOILET SOAP	0.7436	124.25	164.74
84 TOOTH PASTE	0.4036	107.09	110.88
85 SHAVING ARTICLES	0.3480	111.61	129.63
86 COSMETICS	1.4272	124.37	131.20
87 WATCHES	0.0552	120.29	128.99
88 JEWELLERY	0.3936	200.91	278.51
89 LAUNDRY CHARGES	0.2207	143.72	160.76
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	128.16	139.49
<b>MEDICARE.</b>	<b>2.0728</b>	<b>124.00</b>	<b>141.43</b>
91 DRUGS & MEDICARES	1.0752	106.72	111.86
92 DOCTOR'S FEE	0.9976	142.63	173.30

Figure A1: CPI Non-food Inflation

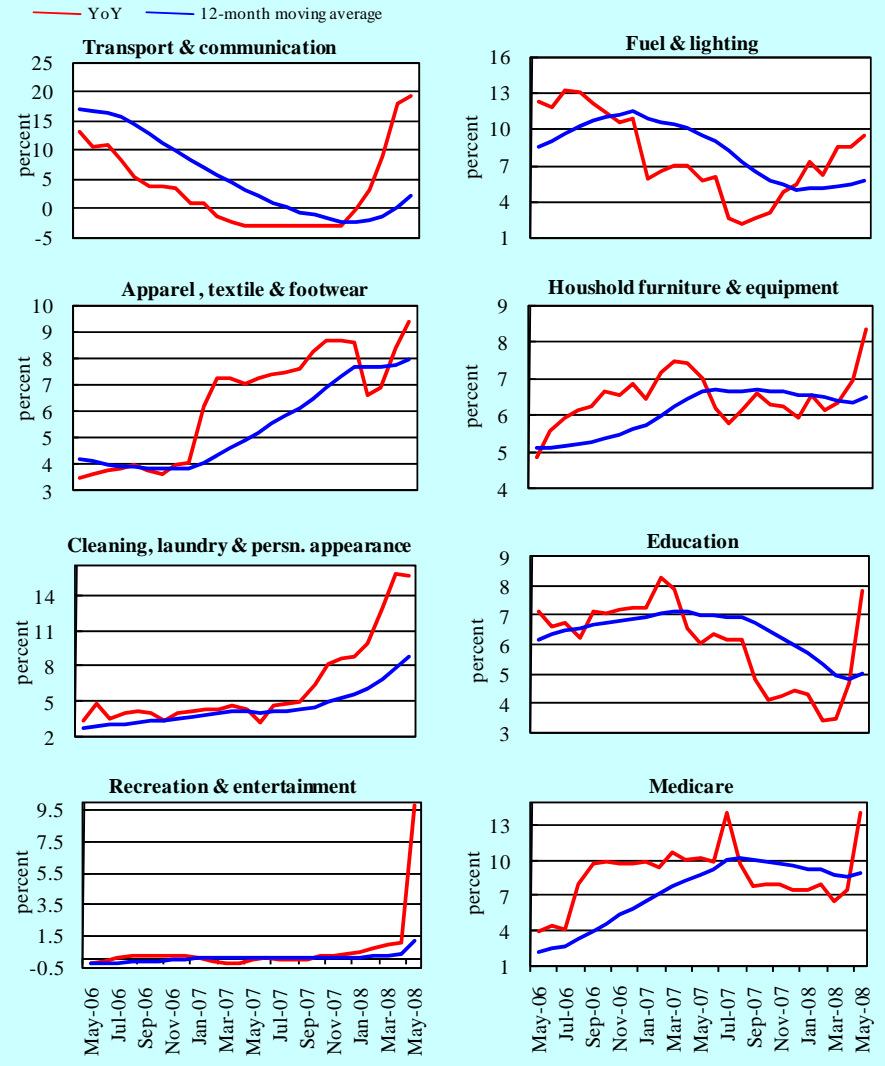
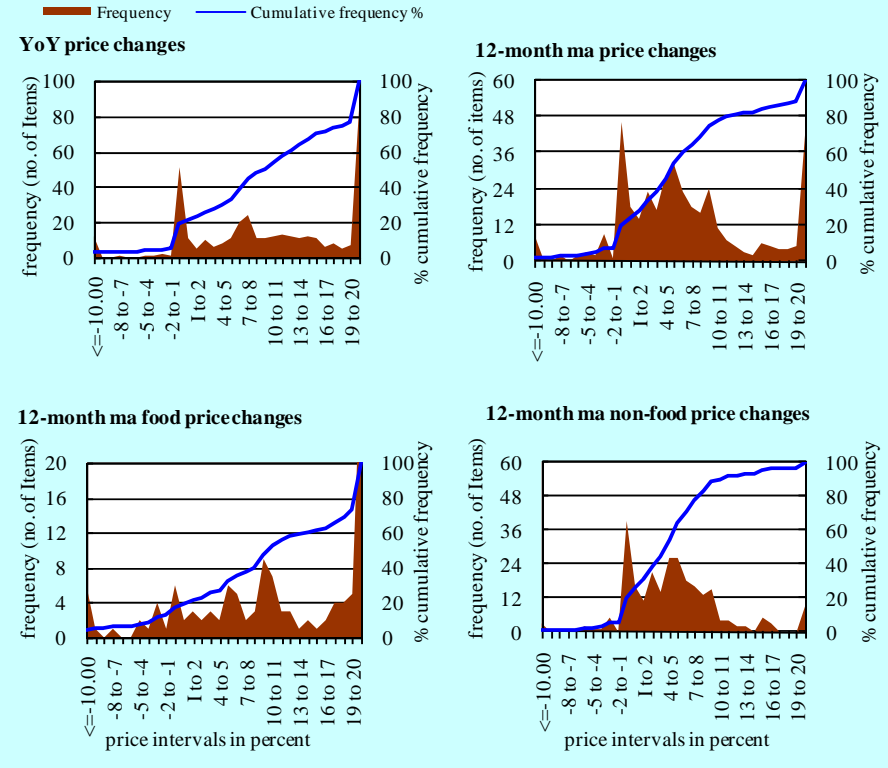
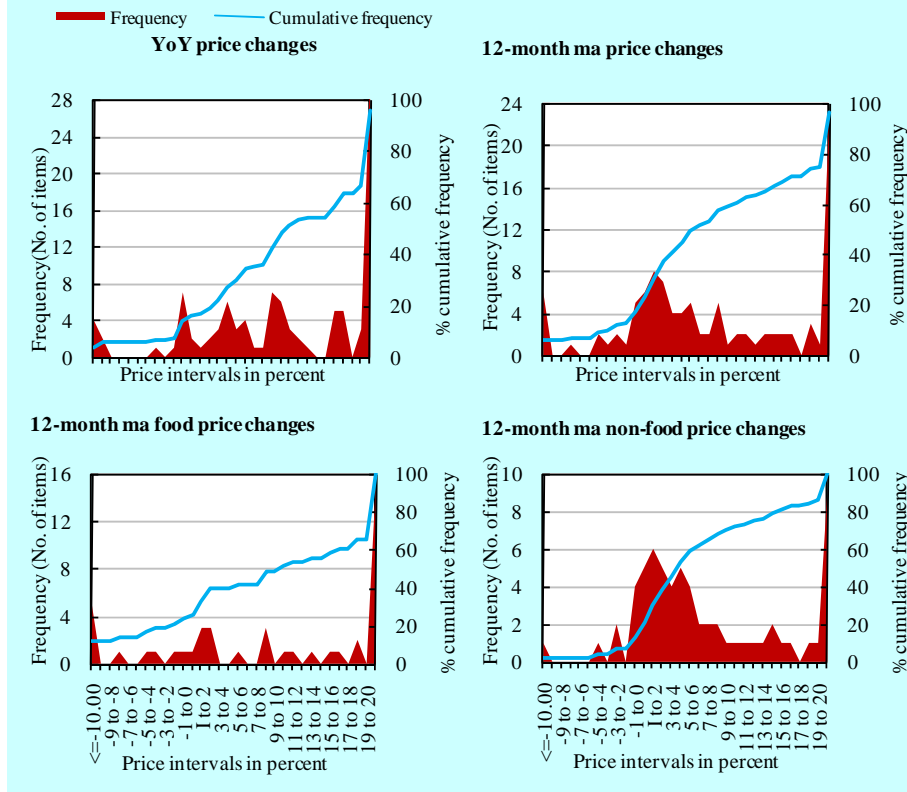


Figure A2: Frequency Distribution of Price Changes of CPI Items, May 2008



**Figure A3: Frequency Distribution of Price Changes of WPI Items, May 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