

# **Inflation Monitor**

**September 2008**



**State Bank of Pakistan**

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## Overview

Headline CPI inflation remained strong at 23.9 percent (YoY) in September 2008. While this was sharply higher compared to 8.4 percent in the same month last year, the September 2008 inflation was slightly lower than in the previous month – the first break in a six month uptrend. This slowdown in the headline inflation can be attributed mainly to the food group of CPI registering 29.9 percent YoY inflation during the month under review as against 34.1 percent in August 2008. On the other hand, non-food inflation (YoY) maintained its uptrend witnessed in the recent past and reached 19.2 percent in September 2008 compared to 18.7 percent during the previous month. Among the various components of CPI non-food group, *transport & communication*, *house rent index (HRI)* and *fuel & lighting* sub-groups witnessed significant increase in inflation (YoY) during September 2008 compared to the same month last year. Other measures of inflation i.e. wholesale price index (WPI) and sensitive price indicator (SPI) followed the trend of CPI and showed slight ease in inflationary pressure during the month under review as compared to August 2008 (see **Table 1.1**).

**Table 1.1: Inflation (YoY)**

	percent						
	CPI			Core Inflation		WPI	SPI**
	General	Food	Non-food	NFNE *	Trimmed		
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
Jun-08	21.5	32.0	13.8	13.0	17.2	30.6	26.3
Jul-08	24.3	33.8	17.3	14.7	19.7	34.0	30.6
Aug-08	25.3	34.1	18.7	16.4	21.0	35.7	31.8
Sep-08	23.9	29.9	19.2	17.3	21.2	33.2	29.6

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

CPI, on month-on-month (MoM) basis, registered 1.0 percent inflation compared to 2.1 percent in the same month last year. CPI food inflation (MoM) was recorded at 0.9 percent compared to 4.2 percent in September 2007. CPI non-food inflation (MoM) however, stayed higher at 1.0 percent compared to 0.6 percent in the same month last year (see **Table 1.2**).

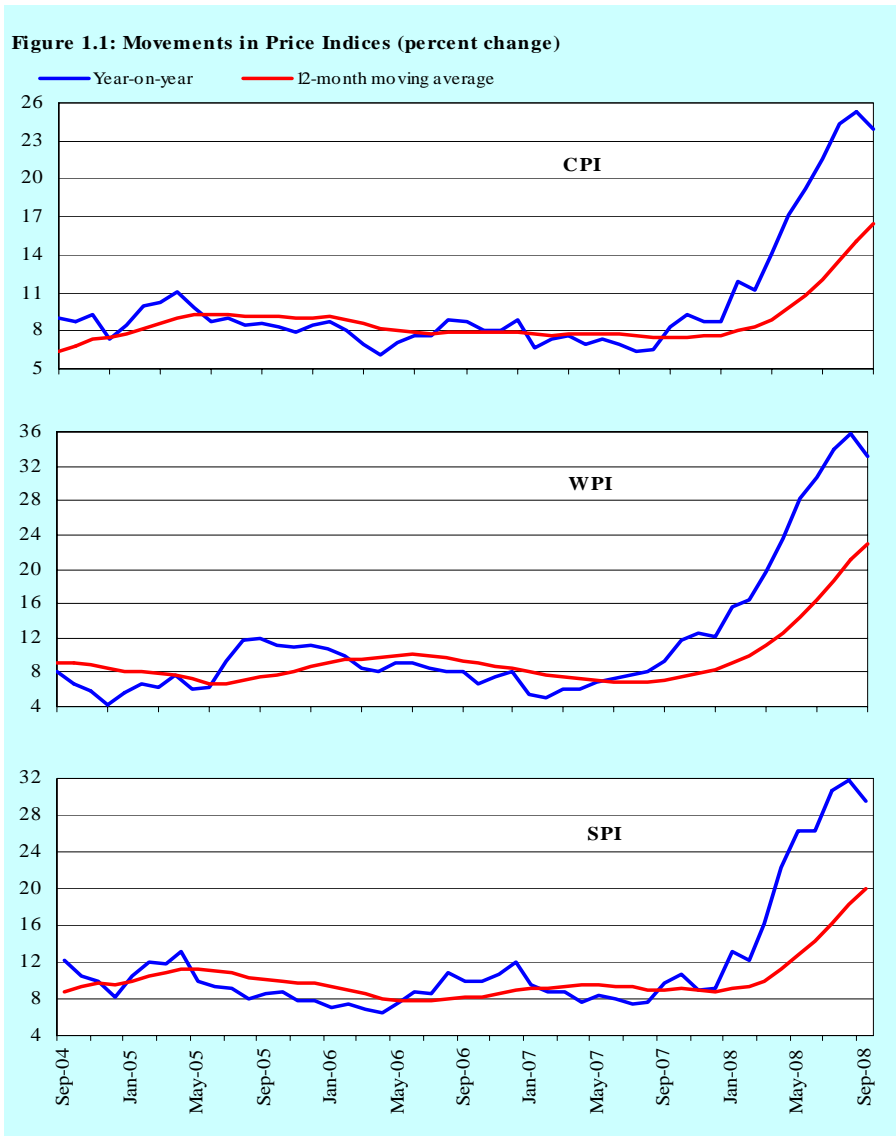
Core inflation, measured by both non-food non-energy and 20 percent trimmed mean, continued to show consistent acceleration during September 2008. Core inflation (YoY) based on NFNE reached 17.3 percent in September 2008 compared to 6.1 percent in the same month last year. Similarly core inflation (YoY) based on 20 percent trimmed-mean also witnessed significant increase reaching 21.2 percent in September 2007.

<b>Table 1.2: Different Dimensions of Inflation (percent)</b>				
	<b>Sep-06</b>	<b>Sep-07</b>	<b>Sep-08</b>	<b>5-year average#</b>
<b>Year-on-year (September over September)</b>				
Overall CPI	8.7	8.4	23.9	7.4
Food group	11.3	13.0	29.9	9.3
Non-food group	7.0	5.0	19.2	6.0
Core Inflation				
NFNE*	6.6	6.1	17.3	6.0
Trimmed	7.2	8.0	21.2	6.7
<b>Period average (July over September)</b>				
Overall CPI	8.4	7.1	24.5	7.0
Food group	9.9	10.0	32.6	8.6
Non-food group	7.4	4.9	18.4	6.0
Core Inflation				
NFNE*	6.6	6.0	16.1	5.9
Trimmed	7.0	7.1	20.5	6.4
<b>12-month moving average</b>				
Overall CPI	7.9	7.4	16.4	6.7
Food group	7.4	10.3	23.4	8.0
Non-food group	8.3	5.4	11.3	5.8
Core Inflation				
NFNE*	7.2	5.8	10.9	5.6
Trimmed	6.8	6.8	13.5	6.1
<b>Monthly (September over August)</b>				
Overall CPI	0.3	2.1	1.0	0.8
Food group	0.1	4.2	0.9	1.2
Non-food group	0.4	0.6	1.0	0.5
Core Inflation				
NFNE*	0.5	0.6	1.4	0.5
Trimmed	0.5	0.8	1.0	0.5

\* NFNE is Non-food non-energy inflation  
# 5-year average excluding FY09

Wholesale price index (WPI) recorded lower inflation (YoY) of 33.2 percent during September 2008 compared to 35.7 percent in the previous month. Both food and non-food groups of WPI also witnessed relatively low inflation during the month under review compared to the previous month. WPI food group inflation (YoY) dropped to 30.6 percent in September 2008 compared to 33.5 percent in August 2008. WPI non-food inflation (YoY) fell to 35.2 percent during September 2008 compared to 37.4 percent in August 2008.

Sensitive price indicator (SPI) also witnessed lower YoY growth during September 2008 compared to the previous month (see **Figure 1.1**).



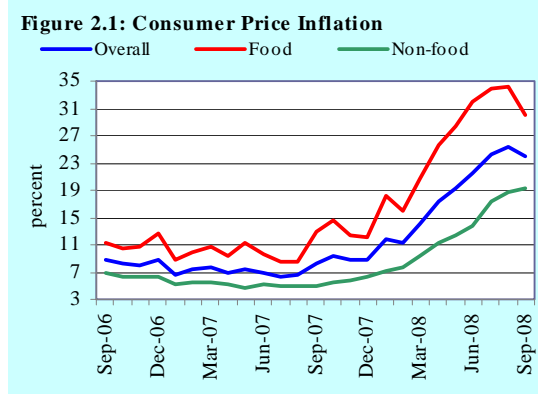
## 2. Consumer Price Index

Slight ease has been observed in CPI inflation during September 2008 compared to the previous month.

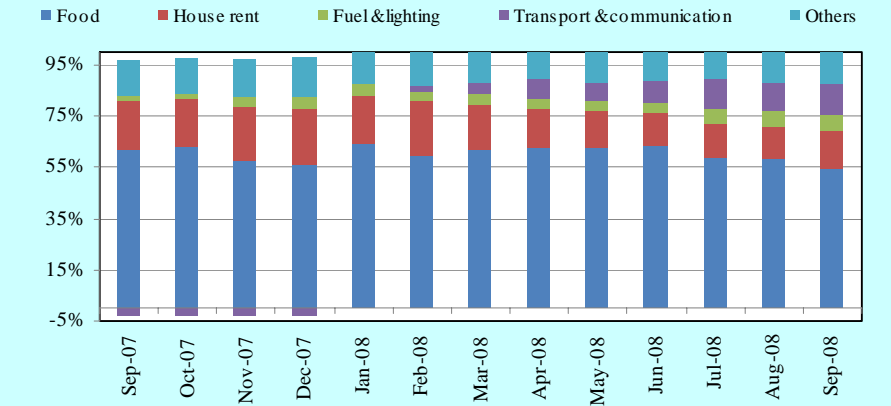
However, an increase of 15.5 percentage points was recorded compared to the same month last year. This rise was contributed by both food and non-food groups.

Food inflation increased to 29.9 percent compared to 13.0 percent during the same month

last year. Non-food inflation (YoY) also showed significant rise and reached 19.2 percent during September 2008 compared to only 5.0 percent during September 2007 (see **Figure 2.1**).



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



CPI food group witnessed a decline in weighted contribution to overall inflation and was recorded 54.8 percent in September 2008 compared to 65.1 percent during the same month last year. Whereas, the weighted contribution of non-food group showed acceleration and was recorded at 45.2 percent during September 2008 compared to 34.9 percent in September 2007. Following the trend of last seven months, the *transport & communication* sub-group's weighted contribution, showed acceleration and was recorded at 11.8 percent in September 2008 as compared to (-) 2.9 percent during September 2007 (see **Figure 2.2**).



## 2.1 Food Inflation

CPI food inflation (YoY) eased somewhat during September 2008 compared to a secular uptrend during the preceding six months. However, despite this small moderation the September 2008 figure remained 16.9 percentage points higher than in September 2007. A detailed analysis of CPI food basket showed that out of 112 items reported in the basket, 85

including pulse masoor, rice, chilli powder, wheat, mustard oil, vegetable ghee, cooking oil, etc. exhibited price change between 10 percent to 138 percent, 19 showed a price change between 0 to 10 percent and remaining 8 either declined or remained unchanged (7 declined and 1 remained unchanged). Price of four items i.e. coriander seed powder (138 percent), pulse masoor (126 percent), rice irri-6 (101 percent) and cuminseed white (101 percent), recorded significant increase during the month under review (see **Figure 2.4** and **Table A2** in Annexure A).

Similar to previous month weighted contribution, six out of top ten items of CPI basket were from the food group during September 2008 including wheat flour, fresh milk, vegetable ghee, rice, fresh fruits and readymade food. Combined weighted contribution of these food items in the overall inflation was recorded at 36.1 percent (see **Table A3** in the Annexure). Moreover, within food group, just four items i.e. wheat flour, milk fresh, vegetable ghee and rice contributed about 57.3 percent to the YoY food inflation.

A detailed analysis of food items, month-on-month (MoM) basis revealed that 8 items including guava, banana, onion, grapes etc. showed double digit growth in prices. Whereas prices of 26 items including tomatoes, ginger, arvi, apple, rice (all types), pulse moong, vegetable ghee, wheat flour, pulse masoor, etc. declined during the month under review.

**Figure 2.3: CPI Food Inflation**

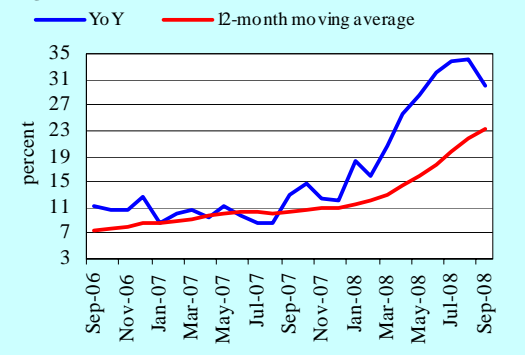
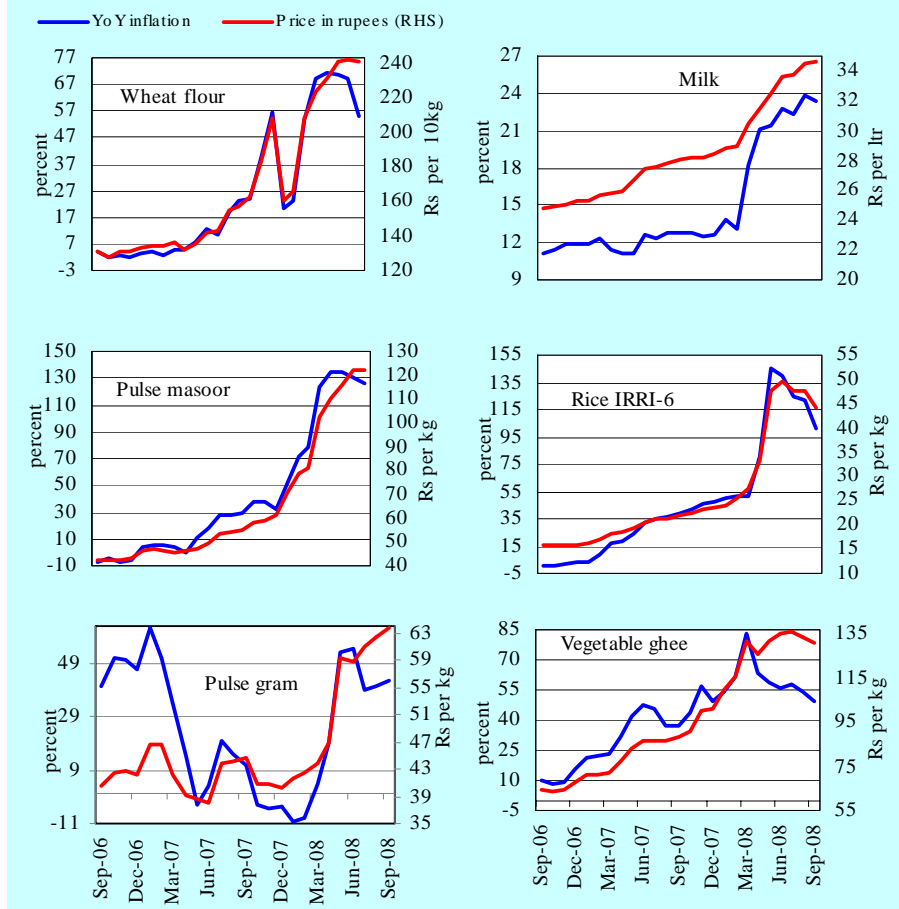


Figure 2.4: Price Trends in Key Food Items

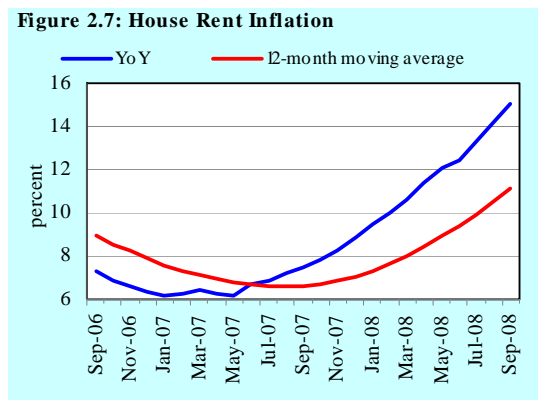
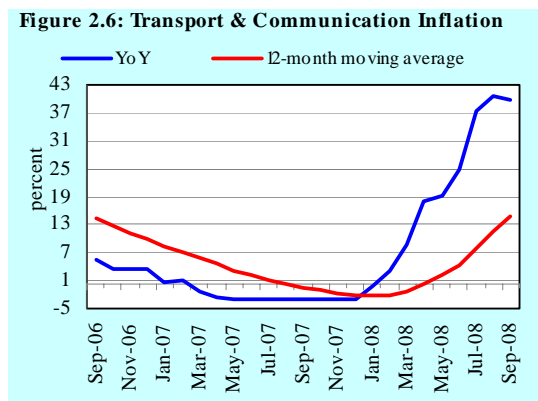
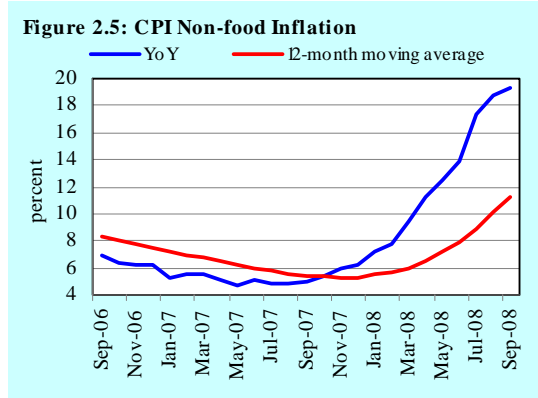


### 2.2 Non-food Inflation

Upsurge in CPI non-food inflation continued for the first three months of FY09. CPI non-food inflation (YoY) was recorded at 19.2 percent during September 2008 compared to 5.0 percent in September 2007 (see **Figure 2.5**). The upward trend in all components of non-food group continued, but among the groups the most significant change was recorded in the *transport & communication* sub-group.

A base effect and some adjustment in domestic prices of petrol, diesel and CNG were the main sources of increase in inflation (YoY) in *transport & communication* sub-group. Inflation (YoY) in this sub-group was recorded at 39.9 percent during September 2008 compared to (-) 3.1 percent in the same month last year (see **Figure 2.6**).

*House rent index* has shown acceleration in inflation (YoY) for the last seven months and reached 15.0 percent during September 2008 compared to 7.5 percent in September 2007 (see **Figure 2.7**). This upward trend was mainly due to increase in the prices of construction material, such as cement, cement blocks, iron bars & sheets, timber, paints & varnishes, sanitary wares, etc.



Inflation (YoY) in *apparel, textile & footwear* sub-group has remained in double digits since the last three months and reached 16.1 percent during September 2008 compared to 7.6 percent in same month last year. Item wise analysis of this sub-group revealed that out of 42 items, 30 items showed change in the prices between 10 to 63 percent, 9 items between 5 to 10 percent, while the remaining items recorded inflation of less than 5 percent.

Inflation (YoY) in *fuel & lighting* sub-group remained high reaching 21.5 percent during September 2008 compared to 2.7 percent in September 2007. As in the last two months, the items contributing this significant increase include match box, kerosene oil, gas charges, firewood whole, gas cylinder, etc.

*Household furniture & equipment* sub-group's inflation (YoY) remained in double digits since June 2008 to reach 12.7 percent compared to 6.3 percent in the corresponding month last year. Item wise analysis of this sub-group showed that out of 44 items, 37 exhibited double digit price change during the month under review, only 3 items showed double digit price change in September 2007, while remaining seven items recorded inflation between 5 to 10 percent.

Inflation (YoY) in *recreation & entertainment* sub-group registered double digits inflation during FY09 and was recorded at 12.2 percent in September 2008 compare to 0.02 percent during the same month last year.

*Cleaning, laundry & personal appearance* sub-group also continued to upsurge and reached 19.3 percent in September 2008 compared to 6.5 percent during September 2007. Detailed item-wise analysis of this sub-group showed that out of 36 items, 22 items showed double digits price change (between 10 to 53 percent) during the month under review, whereas only 4 items showed double digit price change in September 2007.

Inflation (YoY) in *education* sub-group also remained in double digit during FY09 and was recorded at 16.0 percent during September 2008 compared to 4.8 percent in the corresponding month last year. Detailed items-wise analysis of this sub-group showed that out of 24 items 14 showed price change in double digits whereas only 2 items showed price change in double digits during September 2007.

*Medicare* sub-group's inflation (YoY) registered double digit inflation and was recorded at 10.7 percent in September 2008 compared to 7.8 percent in the same month last year (see **Figure A1** in Annexure).

A detailed item-wise analysis reveals that out of 250 non-food items included in the CPI basket, 161 registered double digit price changes during September 2008 compared to only 24 items during September 2007. The commodities showing double digit price change include rail and road fares, kerosene oil, high speed diesel, petrol super, gold and silver tezabi, and firewood whole, etc. Further 42 commodities showed 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). The items that showed either negative or no price change included electric charges upto 50 units, some medicens, telephone charges, a number of durable goods like computer CD rom, some medicines, etc. (see **Table A4** in the Annexure).

### 2.3 City-wise Inflation

Inflation (YoY) in major cities including Islamabad, Lahore, Karachi, Quetta and Peshawar registered an increase during September 2008 to reach 21.5, 21.0, 25.2, 27.4 and 26.2 percent respectively compared with 7.6, 7.9, 8.1, 7.8 and 8.6 percent respectively in the same month last year. Inflation (YoY) in Karachi, Quetta and Peshawar remained higher than the overall CPI inflation for Pakistan during month under review (see **Table 2.1**).

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
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
Jun-08	21.5	17.7	18.0	21.1	25.3	22.3
Jul-08	24.3	20.9	21.0	23.4	26.3	26.0
Aug-08	25.3	21.3	21.9	24.8	28.6	27.0
Sep-08	23.9	21.5	21.0	25.2	27.4	26.2

City-wise inflation (YoY) based on all 35 cities indicates that 19 cities fall in the category of high inflation, while remaining 16 cities recorded inflation below average CPI inflation. During the month under review Turbat recorded the highest inflation at 33.2 percent, followed by Bannu (32.2 percent) and Loralai (31.5 percent). On the other hand, the lowest CPI (YoY) inflation was recorded in

Multan (19.1 percent). Comparison of CPI food and non-food inflation (YoY) among 35 cities revealed that, highest food inflation (YoY) was recorded in Turbat (43.6 percent) and lowest in D G Khan (19.5) percent), whereas the highest non-food inflation was also observed in Turbat (25.9 percent) and the lowest in Multan (16.5 percent) during September 2008 (see **Table 2.2**).

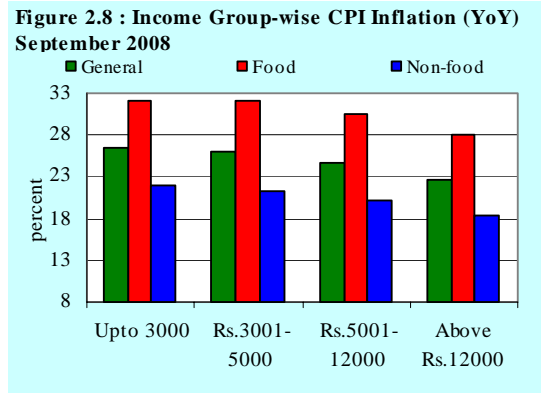
**Table 2.2: City wise Inflation in CPI (YoY), September 2008**

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Turbat	33.2	43.6	25.9	Jhang	23.6	26.5	21.5
Bannu	32.2	46.7	21.9	Hyderabad	23.6	28.6	19.7
Loralai	31.5	41.0	24.8	Sialkot	23.0	28.1	18.7
Shahdadpur	31.0	40.7	23.8	Bahawalnagar	22.6	24.6	21.0
Khuzdar	29.3	36.9	23.8	Jhelum	22.3	27.4	18.4
Nawabshah	28.5	36.4	22.7	Rawalpindi	22.2	25.3	19.9
Quetta	27.4	38.8	18.9	Samundari	22.0	24.0	20.4
Mardan	27.3	33.5	22.5	Vehari	21.7	25.4	18.8
Larkana	26.6	33.5	21.2	Attock	21.6	24.3	19.5
D.I.Khan	26.3	35.3	19.4	Islamabad	21.5	24.7	19.2
Peshawar	26.2	33.2	20.7	Lahore	21.0	25.9	17.0
Sukkur	25.3	32.8	19.7	D.G. Khan	20.6	19.5	21.4
Karachi	25.2	32.2	19.8	Faisalabad	20.4	21.6	19.4
Okara	25.1	29.8	21.4	Gujranwala	20.3	21.8	19.2
Mianwali	25.0	29.8	21.4	Bahawalpur	19.2	22.0	16.8
Mirpur Khas	24.9	29.3	21.5	Multan	19.1	22.3	16.5
Kunri	24.8	29.0	21.6				
Abbotabad	24.7	31.0	19.5				
Sargodha	24.4	29.7	20.4				

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

## 2.4 Income Group-wise Inflation

Inflation recorded for all income groups showed acceleration during September 2008 compared with corresponding month last year. Similar to September 2007, inflation (YoY) in all income groups, except the highest income group, remained higher than overall CPI inflation (YoY) (see **Figure 2.8**).



The highest CPI inflation (YoY) of 26.4 percent was recorded for the lowest income group earning upto Rs. 3000, followed by income group of Rs. 3001 to 5000 at 25.9 percent and income group of Rs. 5001 to 12000 at 24.7 percent. The highest income group of above Rs. 12000 experienced the lowest inflation of 22.6 percent (overall inflation during September 2008 was 23.9 percent).

Income group and city wise data on selected 17 cities indicates that the highest overall CPI inflation (YoY) was recorded in Khuzdar for income groups up to Rs. 3000 and Rs. 3001 to 5000 and Bannu for income groups Rs. 5001 to 12000 and above Rs. 12000. Whereas the lowest CPI inflation (YoY) was recorded in Bahawalpur for upto Rs. 3000 & Rs. 3001 to 5000 income groups and in Multan for Rs. 5001 to 12000 & above Rs. 12000 income groups during September 2008 (see **Table A5** in annexure A).

## 2.5 Services and Non-services Inflation

Inflation (YoY) in both services<sup>1</sup> and non-services sectors continued to trend upwards during September 2008. Inflation (YoY) in services sector reached 17.6 percent during the month under review compared to 5.6 percent in September 2007. Similarly, inflation (YoY) in the non-services sector was recorded at 28.5 percent compared to 10.5 percent in the same month last year (see **Figure 2.9**).

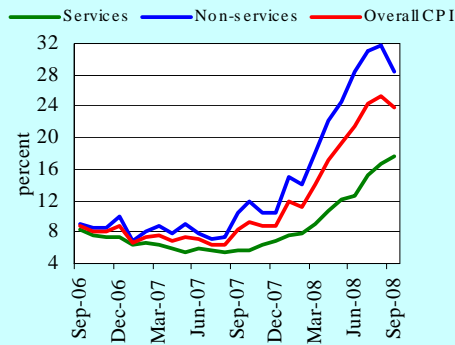
Within the non-services sector, inflation in both durable<sup>2</sup> and non-durable sub-groups also showed acceleration during September 2008 compared to the same

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

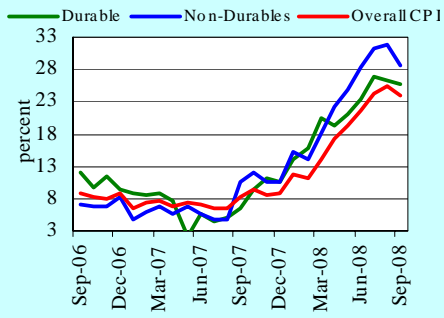
<sup>2</sup> Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewelry, etc.

month last year. Inflation (YoY) in durable goods was recorded at 25.8 percent compared to 6.4 percent in the corresponding month last year. This significant increase was attributed by the rising prices of jewelry, furniture and electric goods, etc. Inflation (YoY) in non-durable goods was recorded at 28.5 percent compared to 10.6 percent in September 2007. The contributing items for this significant increase were pulse masoor, rice, kerosene oil, wheat, diesel, pulse gram, maida, mustard oil, spices, cooking oil, petrol, and vegetable ghee, etc. (see **Figure 2.10**).

**Figure 2.9: Services & Non-services Inflation**



**Figure 2.10: Durables and Non-durables Inflation**

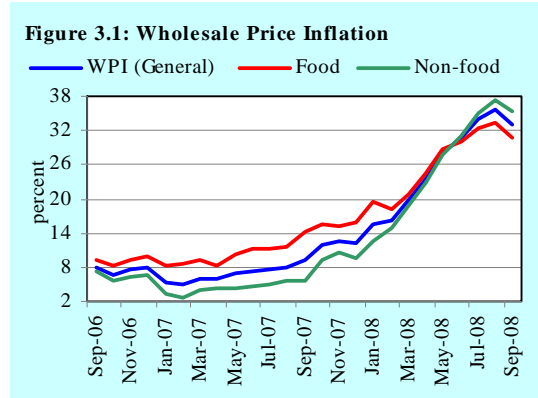




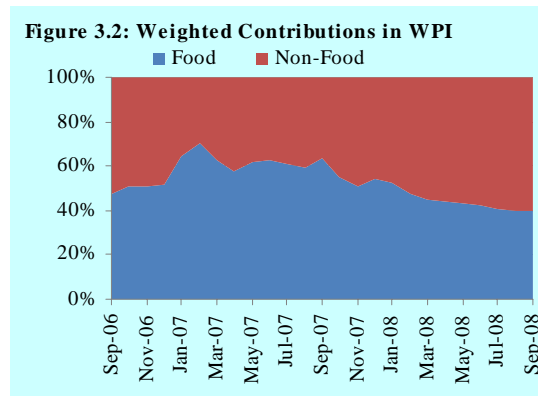
### 3. Wholesale Price Index

Inflation measured by wholesale price index (WPI) eased slightly during September 2008 and was recorded at 33.2 percent (YoY) compared to 35.7 percent during the previous month. Like the overall wholesale price index (WPI), both food and non-food groups of WPI also witnessed relative weakness during the month under review as compared to

the previous month. WPI non-food group registered YoY inflation of 35.2 percent in September 2008, compared to 37.4 percent during the previous month. The food group of WPI witnessed inflation of 30.6 percent (YoY) during the month under review compared to 33.5 percent in August 2008 (see **Figure 3.1**). Despite relative weakness compared to the previous months, the overall WPI inflation, in both food and non-food groups remained high compared to the same month last year.



In terms of weighted contribution to overall inflation, WPI non-food group contributed 59.9 percent in September 2008, compared to 36.1 percent in September 2007. The weighted contribution of food group in overall WPI inflation came down to 40.1 percent in September 2008 compared to 63.9 percent in the same month last year (see **Figure 3.2**).



A disaggregated analysis of WPI basket reveals that out of 106 items, more than 70 percent items exhibited double digit YoY growth in prices, ranging between 10.1 to 132.0 percent, during the month under review. The major items that exhibited more than 50 percent YoY inflation include pulse masoor, fertilizers, coke, diesel oil, kerosene oil, mustard/rapeseed, rice, maida, wheat, furnace oil, etc. Seventeen items exhibited growth between 5 to 10 percent in their wholesale

prices whereas nine items showed subdued increase. Prices of the remaining five items either declined or showed no change during the month under review (see **Table 3.1**).

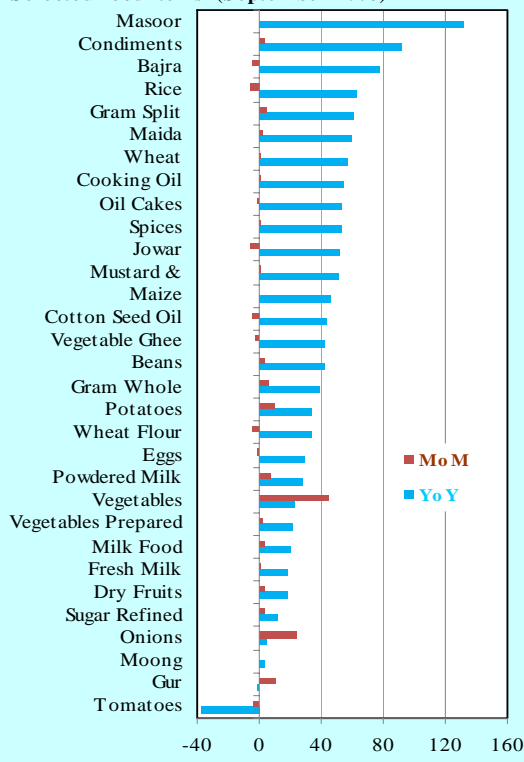
WPI food group recorded 30.6 percent (YoY) inflation during September 2008 compared to 14.2 percent in September 2007. Within the WPI food group the major items recording high inflation include pulse masoor, condiments, bajra, rice, maida, wheat, besan, gram split, etc. In particular, pulse masoor continued to register strong YoY growth and recorded an increase of more than 100 percent for the fifth consecutive month. On the other hand, two food items showed YoY deflation in their wholesale prices including tomatoes (-37.1 percent), and gur (-0.8 percent) (see **Table A7 & Figure 3.3**).

The wholesale prices of WPI non-food group remained strong, recording 35.2 percent (YoY) inflation during the month under review compared to 5.7 percent in September 2007. All sub-groups of the non-food group witnessed significantly higher YoY inflation in September 2008 compared to same month last year (see **Figure 3.4**).

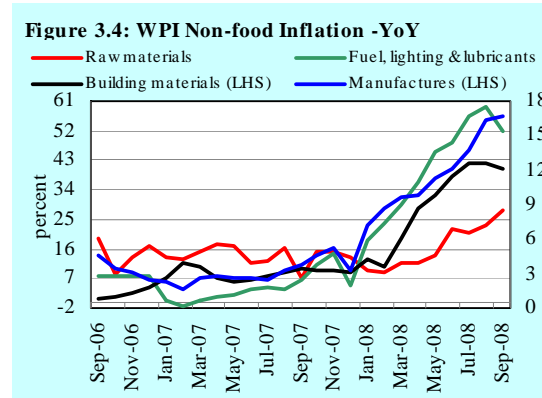
**Table 3.1: WPI Price Distribution of YoY Changes (September 2008)**

Groups	No. of Items				Total
	Decrease or no change	Up to 5%	5%-10%	More than 10%	
<b>A. Food</b>	2	4	2	35	43
<b>B. Non-Food</b>	3	5	15	40	63
Raw material	1	1	2	5	9
Fuel, lighting & lubricant			1	10	11
Manufactures	1	3	11	17	32
Building material	1	1	1	8	11
<b>Total</b>	<b>5</b>	<b>9</b>	<b>17</b>	<b>75</b>	<b>106</b>

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



The major items that contributed to the significant rise in WPI inflation include fertilizers, coke, diesel, kerosine oil, furnace oil, iron bars & sheets, etc. Within the WPI non-food group, highest inflation was recorded in fertilizers reaching 87.2 percent (YoY) in September 2008 reflecting high DAP<sup>3</sup> prices in the international market. Conversely, prices of three non-food items, including sugarcane, tiles etc., either declined or showed no change during September 2008 (see **Figure 3.5**).



Within WPI non-food group, the *fuel, lightning & lubricant* sub-group continued to register high weighted contribution to WPI non-food inflation, as it reached 62.8 percent in September 2008 compared to 47.0 percent in the same month last year (see **Table 3.2**). This significantly high weighted contribution of the sub-group reflects the combined impact of high international crude oil prices as well as exchange rate depreciation witnessed during the last few months<sup>4</sup>.

	Sep-07	Dec-07	Aug-08	Sep-08
Raw materials	15.5	13.2	8.6	10.4
Fuel, lighting & lubricants	47.0	56.5	66.0	62.8
Manufactures	23.8	22.1	15.7	17.0
Building materials	14.1	8.2	9.7	9.7

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 growth of 52.0 percent during September 2008 compared to 11.3 percent during same month last year. All items included in the sub-group, except electricity agriculture tariff-D, recorded double digit YoY inflation with prices of items like coke; diesel and kerosine oil recording more than 75 percent inflation during the month under review (see **Table A7** in Annexure A).

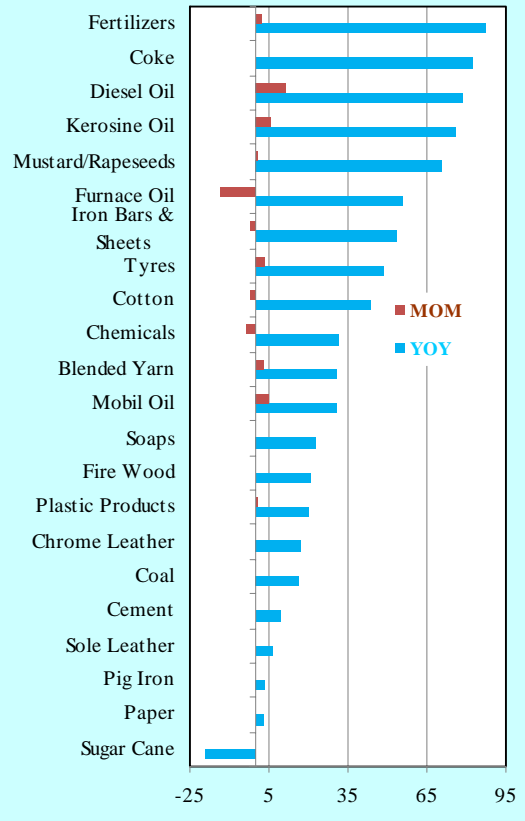
<sup>3</sup> DAP: Diammonium Phosphate

<sup>4</sup> Despite an ease in international oil prices during the last two months, these remain significantly high relative to a year earlier. For details see chapter on Global Commodity Prices.

The *raw material* sub-group inflation (YoY) continued on its uptrend seen since August 2008 and reached 28.0 percent during September 2008 compared to 6.9 percent in the same month last year. Within the sub-group, the wholesale prices of sugarcane declined while the wholesale prices of mustard/rapeseed, cotton and cotton seed, etc. recorded double digit YoY inflation during the month under review.

The *manufactures* sub-group also registered uptrend in YoY inflation during September 2008 and reached 16.7 percent, highest since February 1995. The major items contributing in this surge in inflation of the sub-group include fertilizers, nylon yarn, tyres, tubes, and chemicals etc. Similarly inflation of *building material* sub-group remained strong as it reached 40.1 percent in September 2008 compared to 9.8 percent during the same month last year. Within the sub-group more than seventy percent of the items recorded double digit YoY inflation with items such as iron bars & sheets, wires & cables and cement blocks etc. registering more than 25 percent inflation (see **Table A7** in Annexure A).

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



#### 4. Global Commodity Prices

Commodity prices in international markets eased further during September 2008 compared to the preceding month. This is clearly reflected by the price indices of food, energy, non-fuel and metals that plunged due to weakening global demand (see **Table 4.1**). The slump in energy prices was mainly due to sharply declining demand in the US and Europe, and expectations of slowing demand in developing countries on the back of slow down of global economy. Decline in metal prices was also due to the concerns about global demand. This is evident from the fact that most of the base metals have plunged one-third or more since July 2008, as metal prices are mostly linked to the industrial output<sup>5</sup>.

As regards the individual commodities a significant MoM decline was witnessed in the prices of edible oil (palm and soybean), maize and crude oil (see **Figure 4.1**).

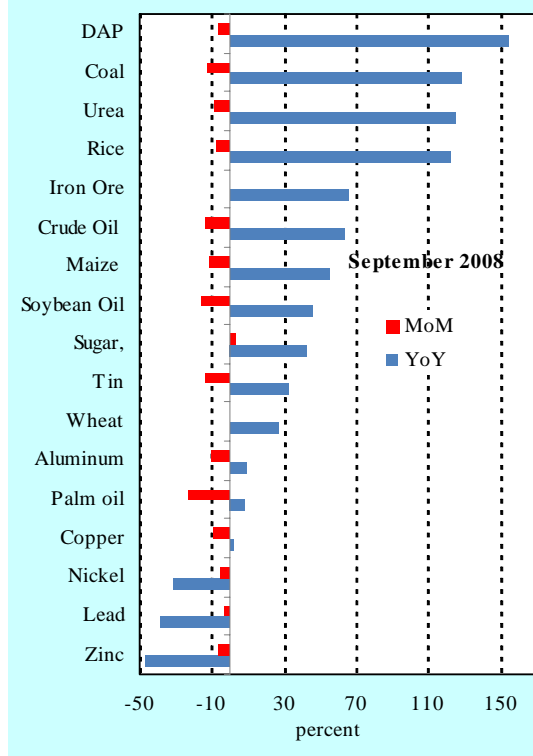
Crude oil price<sup>6</sup> declined 13.3 percent and was recorded at US\$ 99.3 per barrel due to deceleration in its demand in the OECD imminent jump in

**Table 4.1: Commodity Price Indices (September 2008)**

	YoY	MoM
All Commodities	47.0	-10.6
Non-Fuel	14.7	-6.0
Food	28.2	-7.7
Metals	-2.8	-6.9
Energy	67.2	-12.5

Source: IMF and World Bank

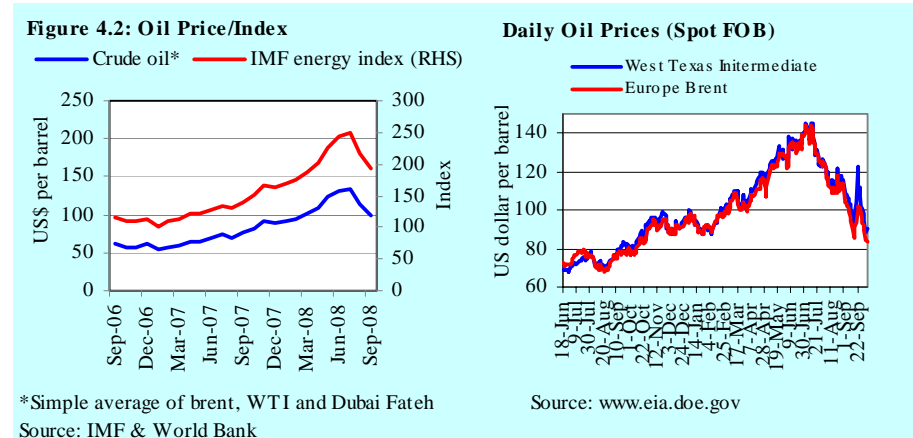
**Figure 4.1: Percent Change in Price**



<sup>5</sup> WB Commodity Markets Review (October 9, 2008)

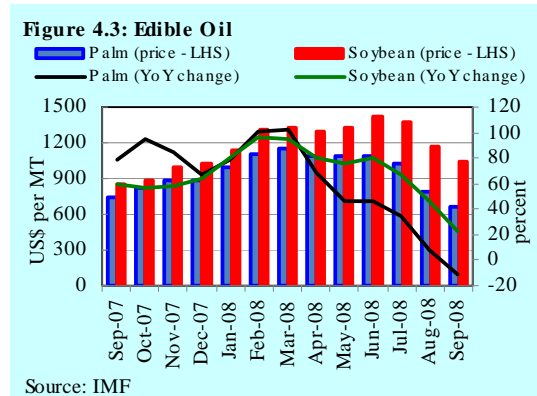
<sup>6</sup> Simple average of Brent, WTI and Dubai Fateh

non-OPEC supplies that will extend over the next year<sup>7</sup>.



The weakening of crude oil prices was also reflected in IMF energy index that declined by 11.5 percent compared to the August 2008 price. On daily basis average WTI crude oil price fluctuated between US\$ 91.5 and US\$ 122.6 per barrel during September 2008 (see **Figure 4.2**).

As regards the food group, edible oil prices continued to slide. Palm and soybean oil prices fell by 41.8 and 26.3 percent from their highest point. The drop in palm oil prices was mainly due to the impact of weakening demand and a reduction in the palm oil export tax by Indonesia (that improved the supply conditions in the world). The reduction in soybean oil prices can be

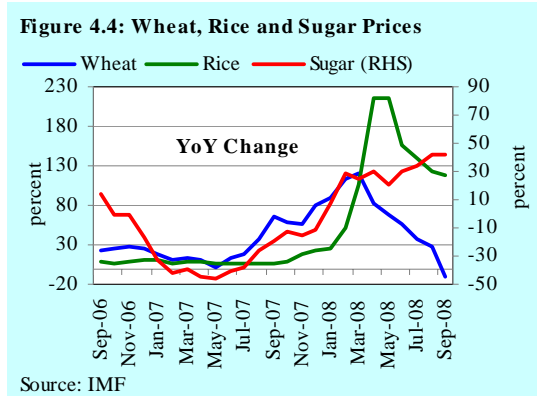


attributed to the expected lower demand from China – the largest importer of the commodity – and fact that the global production is expected to rise as a result of increased planting<sup>8</sup> (see **Figure 4.3**).

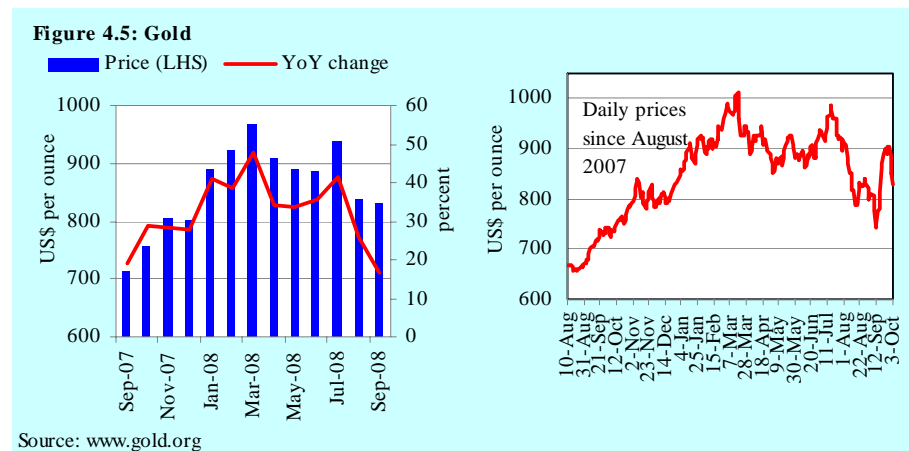
<sup>7</sup> WB Commodity Markets Review (October 9, 2008)

<sup>8</sup> [www.blommborg.com](http://www.blommborg.com)

In food grains, wheat prices declined 10.3 percent as global production is projected to increase by 10 percent and stocks are expected to rise by 18 percent according to recently published World Bank's Commodity Market Review. According to US Department of Agriculture (USDA), world production may rise 9.9 percent to a record 670.8 million metric tons in the year. Wheat prices have dropped 32.8 percent since March 2008 after global growers planted more to take advantage of higher prices. Output in Australia has been projected to rise to 25 million tons from 13 million last year and 10.8 million in 2006<sup>9</sup>.



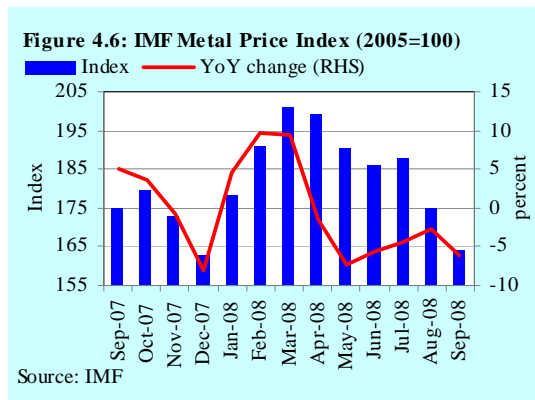
Sugar prices rose moderately during the month under review on news that India – the world's second largest producer – would export less as its cane harvest declines. The reason for the decline in India's sugar output is inadequate rainfall in Maharashtra state, the country's biggest producer of the sweetener. Sugar prices also gained as signs appeared that supplies might fall short of demand. Brazil is turning more cane to ethanol limiting the production of sugar<sup>10</sup> (see **Figure 4.4**).



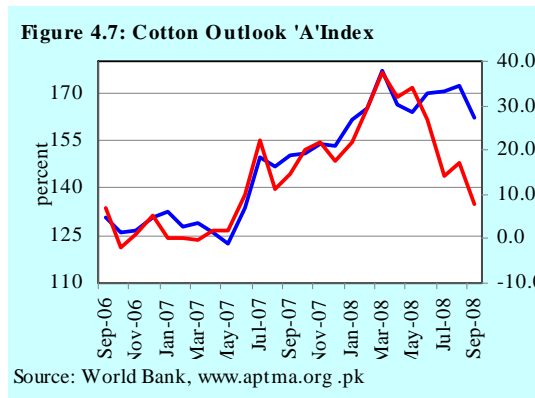
<sup>9</sup> [www.bloomberg.com](http://www.bloomberg.com) and [www.reuters.com](http://www.reuters.com)

Daily gold prices fluctuated during the month and remained between US\$ 740.7 per ounce and US\$ 905 per ounce during September 2008. Average monthly gold price decelerated on YoY basis. The strengthening of US dollar and a drop in oil price reduced the metal’s demand as an alternative to the US currency and as a hedge against fuel-led inflation (see **Figure 4.5**).

Metal prices remained under pressure due to the concerns about global demand as metal prices are linked to the industrial output. IMF metal price index plunged by 6.1 percent on YoY basis – biggest drop in four months (see **Figure 4.6**). The prices of tin, copper and aluminum fell mainly due to the weakening global demand, higher inventories and continued growth in Chinese aluminum production and exports<sup>11</sup>.



Cotton prices decelerated in international market during September 2008 as reflected by the World Bank Cotton Outlook ‘A’ Index that continued the rising trend and witnessed a YoY increase in the international market during June 2008. Cotton outlook ‘A’ index depicted a lower YoY growth of 8.0 percent compared to 17.2 percent growth during August 2008 (see **Figure 4.7**). This deceleration is mainly on account of its declining demand as a result of global slowdown.



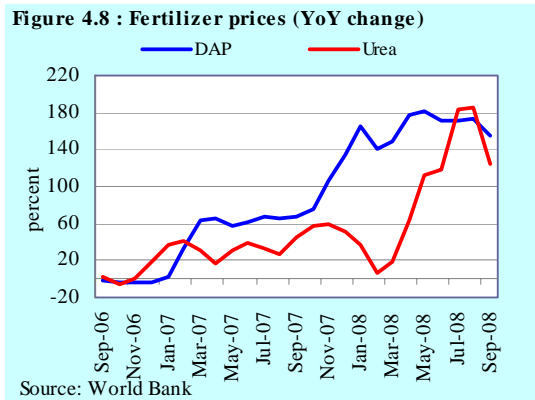
Fertilizer prices exhibited YoY deceleration in international market. Both DAP and Urea prices fell 6.6 and 8.3 percent compared with the preceding month. This

<sup>10</sup> [www.bloomberg.com](http://www.bloomberg.com)

<sup>11</sup> WB Commodity Markets Review (October 9, 2008)



MoM decline in fertilizer prices can be attributed to the weakening of demand in commodity markets in response to lower grain prices and export competition intensified as companies lower price expectations (see **Figure 4.8**).



### 5. Sensitive Price Indicator

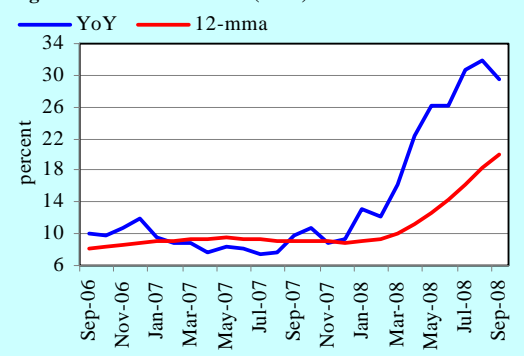
Inflation measured by Sensitive Price Indicator (SPI) eased slightly on YoY basis recorded at 29.6 percent during September 2008 compared to 31.8 percent during the previous month. This is, however, still higher than the 9.8 percent inflation recorded during September 2007. The long-run trend in SPI, indicated by 12-month moving average (12mma), continued on its uptrend reaching 19.9 percent during the month under review (see **Figure 5.1**).

An item-wise breakup of the SPI basket reveals that the number of items showing double digit inflation (YoY) more than doubled during the month under review as

compared to the same month last year (44 as compared to 21) (see **Table 5.1**). The individual items that mainly contributed to the significant increase in SPI inflation (YoY) during September 2008 include pulse masoor (121.6 percent), rice irri-6 (89.0 percent), kerosene (86.7 percent), diesel (77.1 percent), rice basmati (60.4 percent), and wheat (58.0 percent).

SPI inflation measured on month over month (MoM) basis showed relative weakness during September 2008 and was recorded at 0.3 percent compared to 2.9 percent during August 2008. This can be attributed to deflation shown by items such as red chillies (-11.3 percent), rice irri-6 (-6.5 percent), tomatoes (-5.8 percent), rice basmati (-4.2

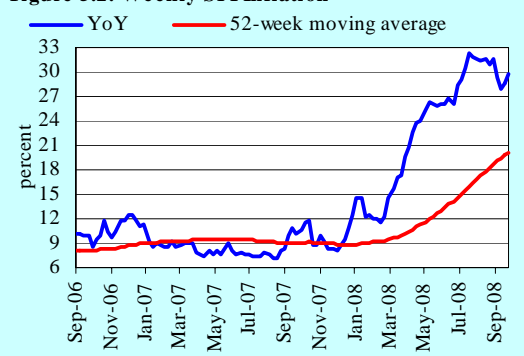
**Figure 5.1: SPI Inflation (YoY)**



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

Percent Change	Number of items			
	Sep-07	Dec-07	Aug-08	Sep-08
0 or less	15	14	4	3
0 to 5	6	7	3	2
5 to 10	11	8	3	4
10 or above	21	24	43	44
Minimum	-20.0	-48.8	-18.1	-13.1
Maximum	56.4	59.4	124.4	121.6

**Figure 5.2: Weekly SPI Inflation**



percent), etc. (see **Table A8** in Annexure A).

Weekly SPI inflation witnessed mixed trends during the month under review. Thus after registering 30.9 percent inflation during the last week of August 2008, weekly SPI inflation increased to 31.5 percent during the first week of September 2008 before easing down to 27.9 percent during the third week of the month under review (see **Figure 5.2**). By the end of the month again a slight increase was witnessed in it, reaching 29.8.

The long run trend in weekly SPI inflation indicated by 52 week moving average, however, remained strong and reached 20.1 percent during the last week of September 2008 compared to 9.0 percent during the same period last year.

	percent			
	Sep-07	Dec-07	Aug-08	Sep-08
Up to Rs. 3000	11.6	11.8	33.9	31.1
Rs. 3001-5000	11.5	11.5	32.7	29.9
Rs. 5000-12000	10.6	10.4	32.1	29.7
Above Rs. 12000	7.3	7.1	31.6	29.8
<b>All income groups</b>	9.8	9.2	31.8	29.6

Income group-wise SPI data for September 2008 indicates strong inflation (YoY) for all income groups compared to September 2007. The income group-wise SPI data further reveals that the incidence of SPI inflation (YoY) remained highest for the lowest income group (see **Table 5.2**).

**Annexure A**

	Weights	Sep-04	Sep-05	Sep-06	Sep-07	Sep-08
<b>I. Food Group</b>	<b>40.3</b>	<b>13.1</b>	<b>7.5</b>	<b>11.3</b>	<b>13.0</b>	<b>29.9</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>6.3</b>	<b>9.3</b>	<b>7.0</b>	<b>5.0</b>	<b>19.2</b>
Apparel, textile, etc.	6.1	2.4	3.9	4.0	7.6	16.1
House rent	23.4	10.2	11.3	7.3	7.5	15.0
Fuel & lighting	7.3	2.8	6.9	12.1	2.7	21.5
Household furniture & equipment	3.3	5.7	5.6	6.7	6.3	12.7
Transport & com.	7.3	6.8	20.7	5.3	-3.1	39.9
Recreation & entertainment	0.8	-0.2	-0.3	0.2	0.0	12.2
Education	3.5	2.9	5.4	7.2	4.8	16.0
Cleaning, laundry, etc.	5.9	4.2	2.9	4.1	6.5	19.3
Medicare	2.1	1.0	1.6	9.8	7.8	10.7
<b>Headline</b>	<b>100</b>	<b>9.0</b>	<b>8.5</b>	<b>8.7</b>	<b>8.4</b>	<b>23.9</b>

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>29.9</b>	<b>112</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>85</b>
<b>II. Non-Food Group</b>	<b>19.2</b>	<b>250</b>	<b>31</b>	<b>16</b>	<b>42</b>	<b>161</b>
Apparel, textile, etc.	16.1	42	1	2	9	30
House rent	15.0	1				1
Fuel & lighting	21.5	15	1		5	9
Household furniture & equipment	12.7	44			7	37
Transport & com.	39.9	43	6		1	36
Recreation & entertainment	12.2	16	2	5	2	7
Education	16.0	24	3	2	5	14
Cleaning, laundry, etc.	19.3	36	1	3	10	22
Medicines	10.7	29	17	4	3	5
<b>Overall</b>	<b>23.9</b>	<b>362</b>				

Note: Prices of 12 seasonal items were not reported during the month.

<b>Table A3: Top Ten Contribution to YoY CPI Inflation in September 2008</b>					
<b>Items</b>	<b>weights</b>	<b>YoY change</b>		<b>Weighted Contribution</b>	
		<b>Sep-07</b>	<b>Sep-08</b>		
<b>A. Ranked by Weighted Contribution</b>					
1	House Rent Index	23.43	7.46	15.03	14.48
2	Wheat Flour	5.11	18.75	55.47	12.59
3	Milk Fresh	6.66	12.98	23.15	7.09
4	Vegetable Ghee	2.67	33.32	47.50	6.49
5	Rice	1.34	52.84	72.69	5.21
6	Transport Fare/Charges	2.12	1.80	48.93	4.96
7	Petrol	1.73	-6.91	52.37	4.37
8	Natural Gas	2.05	-6.56	31.36	3.71
9	Fresh Fruits	1.62	14.05	35.80	2.65
10	Readymade Food	1.68	7.05	27.62	2.08
<b>Total</b>		<b>48.40</b>			<b>63.63</b>
<b>B. Ranked by Percentage Change</b>					
1	Pulse Masoor	0.22	28.15	125.58	1.14
2	Match Box	0.13	0.00	100.00	0.36
3	Kerosene	0.14	-0.06	92.52	0.82
4	Condiments	0.34	6.80	83.58	0.94
5	Diesel	0.21	-2.56	80.43	1.09
6	Rice	1.34	52.84	72.69	5.21
7	Wheat	0.48	18.33	61.05	1.30
8	Mustard Oil	0.05	34.26	59.79	0.13
9	Spices	0.60	20.66	59.35	1.26
10	Maida	0.11	17.02	56.25	0.25
		<b>3.61</b>			<b>12.51</b>
<b>C. Ranked by Weights</b>					
1	House Rent Index	23.43	7.46	15.03	14.48
2	Milk Fresh	6.66	12.98	23.15	7.09
3	Wheat Flour	5.11	18.75	55.47	12.59
4	Electricity	4.37	10.07	6.44	0.93
5	Bakery & Confectionary	2.98	3.86	13.33	1.33
6	Meat	2.70	6.89	11.81	1.95
7	Vegetable Ghee	2.67	33.32	47.50	6.49
8	Tuition Fees	2.36	6.10	12.18	1.15
9	Transport Fare/Charges	2.12	1.80	48.93	4.96
10	Natural Gas	2.05	-6.56	31.36	3.71
		<b>54.45</b>			<b>54.67</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 23.9 percent in September 2008.					

Table A4: Distribution of Price Changes - Selected CPI Items, September 2008				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
Food Group	Chowkelate Candy (Small Size)	Toffee (Hilal)	Sugar Refined	Milk Fresh (Unboiled)
	Apple	Cigarettes K-2 10'S	Mutton, Cigarettes	Wheat Flour Bag
	Tomatoes	Pulse Moong (Washed)	Capstan, Lady Finger	Beef With Bone
	Chillies Green	Biscuits-Packed	Pulse Mash, Radish	Vegetable Ghee
	Garlic	Tinda	Jam Ahmed / Mitchelles,	Wheat Flour., Rice
	Karaila	Brinjal	Bottlegourd, Rooh Afza	Irri-6 ,Chicken Farm Broiler, Cooking Oil, Pulse Masoor
	Apparel & Textile		Pullover Ladies Oxford/Bon.	Pullover Gents Oxford/Bon. School Uni.,
Gents Sandal Bata		Pullover (Gents) Others A.Qt	Kameez,Shal.Girl Tailoring Coat-Pant Suit	Long Cloth Av.Qlty. Shirting Av.Qlty.
House Rent Index	--	--	--	House Rent Index
Fuel & Lighting			Elect.Charges Above 1000 Uni	Gas Chrg 6.7438 - 10.1157Mmb
	Elect.Charges Upto 50 Units		Elect.Charges 301 - 1000 Uni Gas Chrg 3.3719 - 6.7438 Mmb	Gas Chrg10.1157 - 13.4876Mmb Elect.Charges 101 - 300 Unit Firewood Whole
Household Furniture	--	--	Household Servant Female P/T Blanket (90" X 54") Farshi Dari 12'X9' Av.Qlty	Quilt (Lihaf) 3 Kg. Cotton, Tea Set Pak. Chinaware 21 Pc Bedsheet Single Bed Sup.Qlty
Transport & Communication.	Telephone Charges Local Call & Out Side City, Car Tax For 800CC To 1300CC Plateform Ticket	--	Motorcycle Yamaha 100CC.	Petrol Super High Speed Diesel Hsd, CNG Filling Charges, U.M.S. Reg Charges Min.
	Tape Recorder Cassette Blan Tv.Licence Feedomestic	T.V. 20" Colored With R/Cont, Video Game Sega 16 Byte, Cinema A/C. Highest Class		Daily "Jang" Daily "Nawa-E-Waqt" Daily "Dawn"
Education	Govt. College Fee Ist. Year, Govt. College Fee 4Th. Year Com. C.D.	Comp. With Printer & Speaker, Govt. Engg. Coll. Fee I Year	Urdu Book Class V Govt. University Fee MSc, Govt. Med. College Fee MBBS	School Fee 2 <sup>nd</sup> year Eng.Med., School Fee Primary, Eng .Med, Paper Foolscape
Cleaning & Laundry		Hair-Colour Begin (6 Gms)	Perfume Med.Size Medora/Broa Talc Powder Vice Roay.B.Cat Cleanser Powder Vim	Haircut Charges For Men, Washing Soap Nyl(135-160Gms) Toilet Soap Lux 95 Grams, Shampoo Plain Medora 200 ML.
	Toothpaste Macklines 70 Grm	Lipstick S.Miss/Medora Brylcreem 210 ML.	1000 Gm, Nail Polish S.Miss/Medora	
Medicare	Dettol (Medium) Jouhar Joshanda Cac. 1000 Tab	Flagyl Tab. 200 Mg. Septran Tablets, Panadol Tab. Extra/Plain	Cotton Bandage 2" - 4", O.R.S. (Nimcol) Brufen Tabs 200-Mg.	Doctor (MBBS) Clinic Fee, Gripe- Water Woodwards Galxos-D (450 Grms)

**Table A5: City-wise Inflation (YoY) by Income Groups, September 2008**

		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	23.1	27.5	20.2	22.4	26.7	19.4
2	Faisalabad	21.5	23.2	20.4	22.1	23.4	21.2
3	Rawalpindi	23.1	26.5	20.8	22.8	26.9	20.0
4	Multan	19.6	23.7	16.8	19.4	23.4	16.7
5	Gujranwala	21.0	22.7	19.9	21.6	23.4	20.3
6	Islamabad	22.1	27.1	18.6	21.1	26.3	17.6
7	Sargodha	25.4	30.9	21.6	24.9	31.1	20.8
8	Sialkot	23.5	28.5	20.2	23.1	28.4	19.4
9	Bahawalpur	19.3	22.3	17.3	19.9	23.3	17.6
10	Karachi	27.4	32.4	24.0	27.7	34.0	23.4
11	Hyderabad	23.7	28.6	20.4	23.3	28.2	20.0
12	Sukkur	24.7	32.0	19.8	26.0	34.1	20.5
13	Larkana	27.1	34.5	22.1	26.6	33.2	22.2
14	Peshawar	24.9	29.8	21.6	28.2	35.1	23.6
15	Bannu	34.3	46.2	26.2	33.1	46.7	23.8
16	Quetta	33.3	45.9	24.8	27.9	39.3	20.1
17	Khuzdar	37.5	48.3	30.2	36.2	45.5	29.9
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	21.5	26.3	18.2	20.4	25.1	17.2
2	Faisalabad	21.3	22.7	20.3	19.4	20.0	19.1
3	Rawalpindi	22.2	25.8	19.7	22.2	24.4	20.7
4	Multan	19.4	22.8	17.1	18.6	20.7	17.2
5	Gujranwala	20.6	22.0	19.7	18.8	19.5	18.4
6	Islamabad	21.7	26.1	18.7	21.5	24.3	19.6
7	Sargodha	24.5	29.8	21.0	24.0	28.6	21.0
8	Sialkot	23.1	28.4	19.6	22.8	27.8	19.4
9	Bahawalpur	19.1	22.3	16.9	18.7	20.5	17.5
10	Karachi	26.8	32.8	22.7	23.3	31.1	18.0
11	Hyderabad	23.9	29.0	20.4	23.0	27.5	19.9
12	Sukkur	25.5	33.1	20.4	24.4	30.9	19.9
13	Larkana	26.4	33.2	21.8	27.3	34.8	22.2
14	Peshawar	26.8	34.5	21.7	25.2	31.2	21.2
15	Bannu	32.1	47.4	21.7	31.3	45.5	21.7
16	Quetta	27.5	39.5	19.4	27.2	37.8	20.1
17	Khuzdar	31.7	43.2	23.8	27.6	37.1	21.2

<b>Table A6 : Income Group-wise Inflation (YoY)</b>								percent
	<b>Feb-08</b>	<b>Mar-08</b>	<b>Apr-08</b>	<b>May-08</b>	<b>Jun-08</b>	<b>Jul-08</b>	<b>Aug-08</b>	<b>Sep-08</b>
<u>Up to Rs. 3000</u>								
General	13.4	17.0	20.2	23.2	25.3	27.2	28.5	26.4
Food	17.2	22.5	27.4	31.5	34.7	36.4	37.3	32.2
Non-food	10.7	13.0	15.1	17.1	18.6	20.6	22.0	21.9
<u>Rs. 3001-5000</u>								
General	13.0	16.6	19.9	22.6	24.8	26.9	28.0	25.9
Food	17.2	22.6	27.6	31.4	34.8	36.6	37.2	32.0
Non-food	10.0	12.4	14.5	16.3	17.8	19.8	21.3	21.4
<u>Rs. 5000-12000</u>								
General	12.0	14.9	18.1	20.4	22.6	25.3	26.4	24.7
Food	16.5	21.3	26.3	29.5	33.0	34.8	35.2	30.6
Non-food	8.7	10.2	12.2	13.7	14.9	18.2	19.8	20.2
<u>Above Rs. 12000</u>								
General	10.1	12.8	15.7	17.4	19.8	22.8	23.7	22.6
Food	15.0	18.8	23.6	26.1	29.8	31.4	31.4	28.1
Non-food	6.6	8.2	9.7	10.8	12.4	16.5	17.8	18.3
<u>All income groups</u>								
General	11.3	14.1	17.2	19.3	21.5	24.3	25.3	23.9
Food	16.0	20.6	25.5	28.5	32.0	33.8	34.1	29.9
Non-food	7.8	9.4	11.2	12.5	13.8	17.3	18.7	19.2



**Table A7: Distribution of Price Change (YoY) - WPI Items: September 2008**

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

S.No	Items	Unit	Price Sep-08	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	22.1	58.0	1.6
2	Wheat flour average quality.	Kg.	23.9	47.6	-0.4
3	Rice basmati broken	Kg.	51.6	60.4	-4.2
4	Rice irri-6	Kg.	44.5	89.0	-6.5
5	Masur pulse washed	Kg.	122.3	121.6	0.2
6	Moong pulse washed	Kg.	53.9	5.3	-3.0
7	Mash pulse washed	Kg.	74.7	5.7	-0.1
8	Gram pulse washed	Kg.	63.4	55.7	0.0
9	Beef	Kg.	136.7	13.2	1.1
10	Mutton	Kg.	251.8	8.3	0.3
11	Egg Hen (farm)	Doz.	56.7	23.5	-3.5
12	Bread plain	Each	22.7	33.8	0.8
13	Sugar	Kg.	33.5	12.2	4.6
14	Gur	Kg.	37.3	1.7	8.3
15	Milk fresh	Litr	35.4	21.2	0.6
16	Milk powdered Nido	400g	161.2	11.4	0.4
17	Curd	Kg.	42.3	22.8	0.9
18	Veg.ghee tin	2.5k	395.0	43.5	0.0
19	Veg.ghee loose	Kg.	128.1	44.4	-3.4
20	Mustard oil	Kg.	150.7	57.4	-0.3
21	Cooking oil	2.5L	398.0	44.6	0.0
22	Potatoes	Kg.	26.2	44.0	2.7
23	Onions	Kg.	28.3	28.6	16.3
24	Tomatoes	Kg.	33.6	26.4	-5.8
25	Bananas	Doz.	52.0	62.5	23.4
26	Salt powdered	Kg.	5.7	16.9	1.6
27	Red chillies (powder)	Kg.	158.6	30.4	-11.3
28	Garlic	Kg.	45.1	-13.1	6.0
29	Tea packet	250g	94.0	44.6	4.1
30	Tea (prepared)	Cup	8.0	22.3	0.6

**continued**

Table A8 (continued)

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

S.No	Items	Unit	Price Sep-08	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	38.8	22.1	1.1
32	Cooked dal plate	Each	24.7	29.7	0.2
33	Cigarettes K-2	10's	8.9	3.8	0.3
34	Coarse latha	Mtr.	44.3	19.0	1.4
35	Lawn (avg.+s.qlty)	Mtr.	90.2	11.2	-0.2
36	Voil printed	Mtr.	45.5	17.5	0.2
37	Shirting	Mtr.	77.4	11.6	2.5
38	Sandel gents bata	Pair	499.0	0.0	0.0
39	Sandel ladies bata	Pair	379.0	26.8	0.0
40	Chappal spng. Bata	Pair	129.0	30.3	0.0
41	Kerosene	Litr	73.6	86.7	2.4
42	Firewood	40kg	253.2	23.2	1.3
43	Elec. Bulb 60-wats	Each	13.5	10.6	0.9
44	Match box	Each	1.0	17.6	0.0
45	Washing soap	Cake	12.5	42.3	2.1
46	Bath soap lifebuoy	Cake	21.2	37.8	5.2
47	Chicken (farm)	Kg.	105.6	19.7	1.6
48	Gas chrg. All clb. Comb	D.mmbt	273.7	21.8	0.0
49	LPG.(cylinder 11kg.)	Each	970.3	58.5	7.7
50	Elec.chrg.all slabs com	Bd. Unit	5.5	8.2	0.0
51	Petrol	Litr	84.0	56.1	-3.4
52	Diesel	Litr	67.1	77.1	3.3
53	Telephone local	Call	2.3	0.0	0.0
<b>Maximum</b>				<b>121.6</b>	<b>23.4</b>
<b>Median</b>				<b>23.4</b>	<b>0.3</b>
<b>Minimum</b>				<b>-13.1</b>	<b>-11.3</b>

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

Item and Specification	Weights	Index	
		Sep-07	Sep-08
<b>GENERAL</b>	<b>100.0010</b>	<b>151.80</b>	<b>188.10</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3416</b>	<b>164.83</b>	<b>214.13</b>
1 WHEAT	0.4830	159.81	257.37
2 WHEAT FLOUR	5.1122	161.27	250.72
3 MAIDA	0.1059	152.60	238.43
4 BESAN	0.1320	148.94	223.33
5 RICE	1.3369	194.77	336.35
6 PULSE MASOOR	0.2214	149.05	336.22
7 PULSE MOONG	0.2230	171.30	178.52
8 PULSE MASH	0.2017	155.08	164.90
9 PULSE GRAM	0.4272	140.99	220.22
10 GRAM WHOLE	0.1491	135.61	178.27
11 MUSTARD OIL	0.0456	170.18	271.93
12 COOKING OIL	0.6858	171.48	250.00
13 VEGETABLE GHEE	2.6672	186.08	274.46
14 SUGAR	1.9467	108.11	117.75
15 GUR	0.0735	137.55	138.10
16 TEA	1.2559	108.70	150.03
17 MILK FRESH	6.6615	166.84	205.47
18 MILK POWDER	0.1105	167.78	197.10
19 MILK PRODUCTS	0.5607	153.91	189.50
20 HONEY	0.0358	130.17	154.75
21 CEREALS	0.0878	142.82	206.83
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	134.55	154.37
23 BEVERAGES	0.7286	137.67	168.13
24 CONDIMENTS	0.3392	119.99	220.28
25 SPICES	0.6008	128.73	205.13
26 DRY FRUIT	0.2760	224.31	277.39
27 BAKERY & CONFECTIONARY	2.9837	121.56	137.77
28 CIGARETTES	0.9527	158.07	172.42
29 BETEL LEAVES & NUTS	0.1851	143.22	160.83
30 READYMADE FOOD	1.6833	162.19	206.99
31 SWEETMEAT & NIMCO	0.3846	164.12	215.24
32 FISH	0.2703	142.03	160.38
33 MEAT	2.6981	221.73	247.91
34 CHICKEN FARM	0.9158	172.20	197.79
35 EGGS	0.4119	165.72	210.61
36 POTATOES	0.5542	201.44	287.12
37 ONIONS	0.5973	246.59	274.44
38 TOMATOES	0.4569	211.55	155.98
39 VEGETABLES	1.9165	197.94	199.77
40 FRESH FRUITS	1.6160	166.25	225.76
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>129.74</b>	<b>150.58</b>
41 COTTON CLOTH	1.6197	132.89	154.92
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	129.10	147.71
43 TAILORING CHARGES	0.8636	132.67	152.95
44 HOSIERY	0.1528	139.53	160.21
45 READYMADE GARMENTS	1.2038	124.27	137.07
46 WOOLEN READYMADE GARMENTS	0.1485	138.52	161.08
47 FOOTWEAR	1.5327	127.45	154.39
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>149.26</b>	<b>171.70</b>
48 HOUSE RENT INDEX (Combined)	23.4298	149.26	171.70

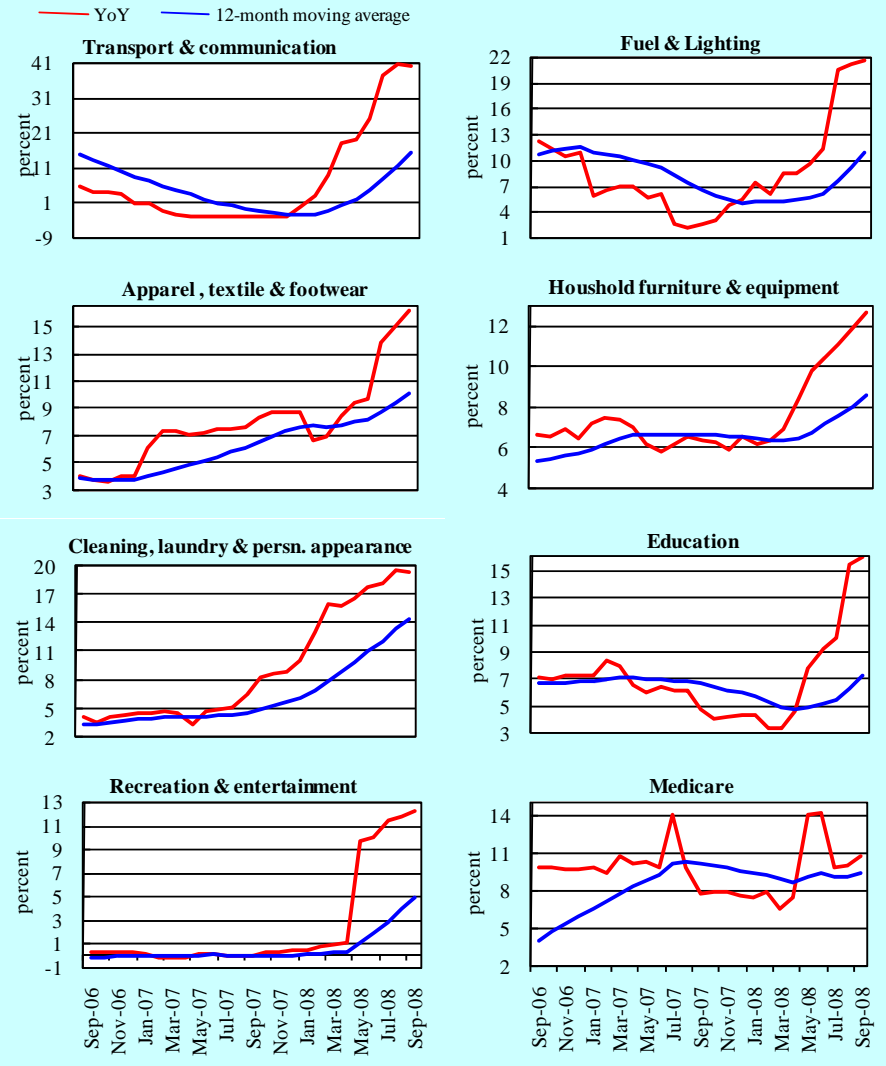
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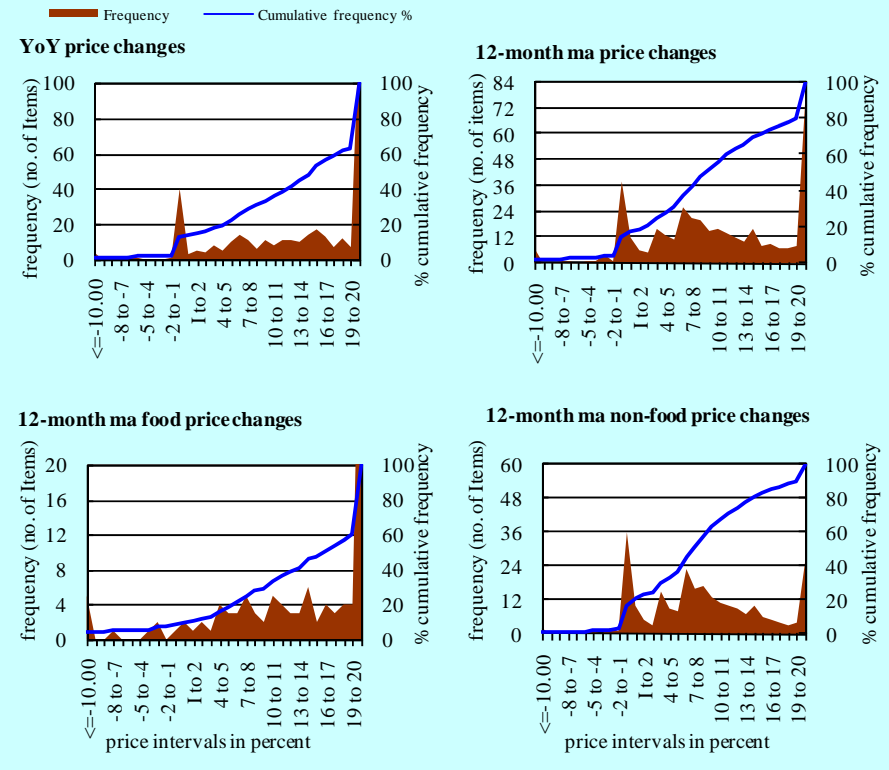
Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities

Item and Specification	Weights	Index	
		Sep-07	Sep-08
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>152.74</b>	<b>185.55</b>
49 KEROSENE	0.1366	235.87	454.10
50 FIREWOOD	0.4778	220.66	276.66
51 MATCH BOX	0.1301	100.00	200.00
52 BULB & TUBE	0.1311	86.73	97.10
53 ELECTRICITY	4.3698	119.53	127.23
54 NATURAL GAS	2.0458	209.86	275.67
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>	<b>3.2862</b>	<b>137.58</b>	<b>155.01</b>
55 UTENSILS	0.3690	122.93	139.95
56 PLASTIC PRODUCTS	0.1055	143.32	177.73
57 SUITCASE	0.0470	126.60	142.55
58 HOUSE HOLD EQUIPMENTS	0.0953	123.19	143.44
59 FURNITURE (Ready Made)	0.3054	138.21	166.27
60 FURNISHING	0.6362	132.14	148.19
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	125.99	150.66
62 SEWING MACHINE,CLOCK AND NEEDLES	0.1270	118.74	132.28
63 REFRIGERATOR & AIRCONDITIONER	0.1756	100.63	121.24
64 MARRIAGE HALL	0.0445	150.56	177.08
65 HOUSE HOLD SERVANT	1.1918	154.72	167.10
<b>TRANSPORT &amp; COMMUNICATION.</b>	<b>7.3222</b>	<b>146.74</b>	<b>205.24</b>
66 PETROL	1.7253	175.59	267.55
67 DIESEL	0.2070	238.74	430.77
68 CNG. FILLING CHARGES	0.1649	142.87	189.14
69 SERVICE CHARGES	0.3835	133.72	157.91
70 VEHICLES	0.2596	101.19	117.33
71 TYRE & TUBE	0.2831	125.15	143.48
72 TRANSPORT FARE/CHARGES	2.1236	173.24	258.01
73 TRAIN FARE	0.1514	170.01	253.24
74 AIR FARE	0.0983	253.00	342.93
75 COMMUNICATION	1.9255	86.77	87.91
<b>RECREATION &amp; ENTERTAINMENT.</b>	<b>0.8259</b>	<b>105.86</b>	<b>118.80</b>
76 RECREATION	0.3399	100.97	128.36
77 ENTERTAINMENT	0.4860	109.28	112.12
<b>EDUCATION.</b>	<b>3.4548</b>	<b>138.21</b>	<b>160.26</b>
78 TUTION FEES	2.3629	144.78	162.42
79 STATIONERY	0.3500	127.54	158.94
80 TEXT BOOKS	0.6894	125.38	159.44
81 COMPUTER & ALLIED PRODUCTS	0.0525	82.10	82.29
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>	<b>5.8788</b>	<b>130.71</b>	<b>155.94</b>
82 WASHING SOAP & DETERGENT	1.5535	121.33	146.66
83 TOILET SOAP	0.7436	135.80	179.77
84 TOOTH PASTE	0.4036	108.18	111.74
85 SHAVING ARTICLES	0.3480	115.78	138.16
86 COSMETICS	1.4272	126.16	137.63
87 WATCHES	0.0552	121.56	135.69
88 JEWELLERY	0.3936	203.18	287.09
89 LAUNDRY CHARGES	0.2207	147.30	172.18
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	130.52	146.07
<b>MEDICARE.</b>	<b>2.0728</b>	<b>129.51</b>	<b>143.40</b>
91 DRUGS & MEDICARES	1.0752	106.90	112.87
92 DOCTOR'S FEE	0.9976	153.87	176.30

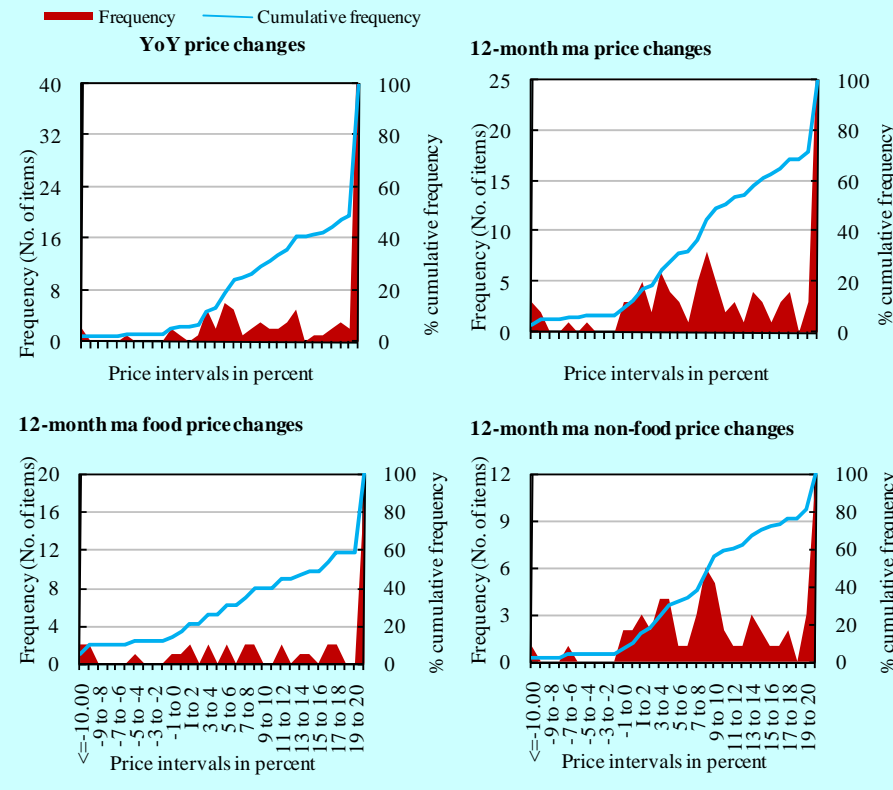
Figure A1: CPI Non-food Inflation



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



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