

# **Inflation Monitor**

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**State Bank of Pakistan**

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## Overview

Strong inflationary pressures in the economy persisted, pushing headline inflation (YoY) to reach 25.0 percent during October 2008 compared to 9.3 percent in the same month last year. Both food and non-food components of CPI contributed to this upsurge. Food inflation (YoY) remained high reaching 31.7 percent compared to 14.7 percent in October 2007. This was mainly caused by increase in the prices of a number of major food items including, pulses, rice, wheat, wheat flour, milk (fresh and packed), vegetable ghee and cooking oil. Non-food inflation (YoY) also increased significantly reaching 19.7 percent in October 2008 compared to 5.4 percent during the same month last year. All sub-groups of CPI non-food group also witnessed higher inflation (YoY) compared to the same month last year. *Transport & communication, fuel & lighting, cleaning & laundry, recreation & entertainment and education* sub-groups witnessed more than 10 percentage point higher inflation than October 2007. Other measures of inflation i.e. Wholesale Price Index (WPI) and Sensitive Price Indicator (SPI) also showed strong growth during the month under review (see **Table 1.1**).

Table 1.1: Inflation (YoY)							percent
	CPI			Core Inflation		WPI	SPI**
	General	Food	Non-food	NFNE *	Trimmed		
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
Oct-08	25.0	31.7	19.7	18.3	21.7	28.4	30.3
* NFNE is Non-food non-energy inflation; ** SPI for all income groups combined.							

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

During October 2008, CPI month-on-month (MoM) registered 2.1 percent inflation compared to 1.2 percent in the same month last year. CPI food inflation (MoM) was recorded at 3.4 percent compared to 2.0 percent in October 2007. Non-food inflation (MoM) was also recorded higher at 1.0 percent compared to 0.6 percent in the same month last year. Long run annualized trend of inflation,

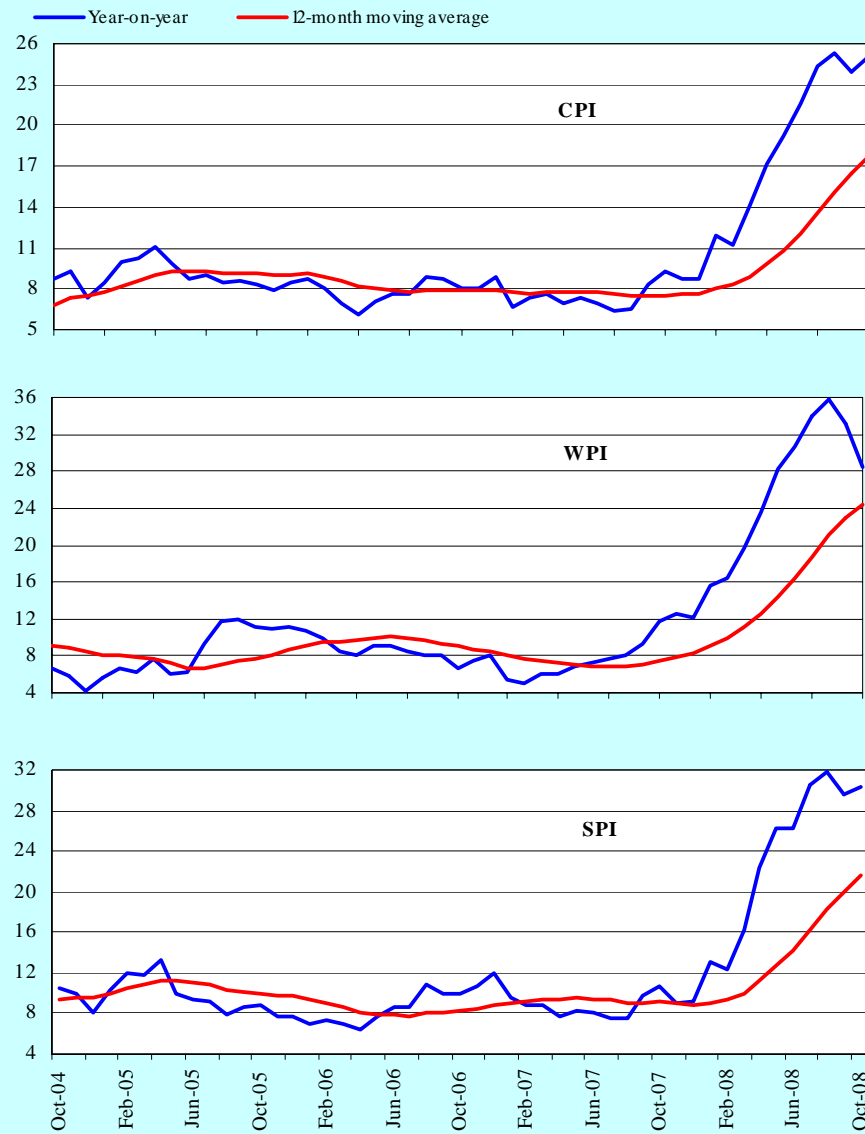
measured by 12-month moving average (12-mma) continued to move up and rose to 17.7 percent during October 2008 compared to 7.5 percent in the same month last year. In the case of CPI food, the upsurge in annualized inflation has been more pronounced (see **Table 1.2**).

Core inflation (measured by either the non-food non-energy or the 20 percent trimmed mean) moved upwards during the month. NFNE reached 18.3 percent in October 2008 compared to 6.5 percent in the same month last year. Similarly, 20 percent trimmed-mean core inflation witnessed a significant increase, reaching 21.7 percent compared to 8.3 percent in October 2007.

<b>Table 1.2: Different Dimensions of Inflation (percent)</b>				
	<b>Oct-06</b>	<b>Oct-07</b>	<b>Oct-08</b>	<b>5-year average#</b>
<b>Year-on-year (October over October)</b>				
Overall CPI	8.1	9.3	25.0	7.6
Food group	10.5	14.7	31.7	9.7
Non-food group	6.4	5.4	19.7	6.1
Core Inflation				
NFNE*	6.0	6.5	18.3	6.1
Trimmed	6.7	8.3	21.7	6.7
<b>Period average (July over October)</b>				
Overall CPI	8.4	7.6	24.6	7.2
Food group	10.1	11.2	32.3	8.9
Non-food group	7.1	5.1	18.8	6.0
Core Inflation				
NFNE*	6.4	6.2	16.7	6.0
Trimmed	6.9	7.4	20.8	6.5
<b>12-month moving average</b>				
Overall CPI	7.9	7.5	17.7	6.8
Food group	7.7	10.7	24.8	8.2
Non-food group	8.0	5.3	12.5	5.9
Core Inflation				
NFNE*	7.0	5.9	11.9	5.7
Trimmed	6.9	6.9	14.7	6.2
<b>Monthly (October over September)</b>				
Overall CPI	0.4	1.2	2.1	1.0
Food group	0.5	2.0	3.4	1.8
Non-food group	0.2	0.6	1.0	0.5
Core Inflation				
NFNE*	0.4	0.7	1.6	0.6
Trimmed	0.2	0.6	1.4	0.4
* NFNE is Non-food non-energy inflation				
# 5-year average excluding FY09				

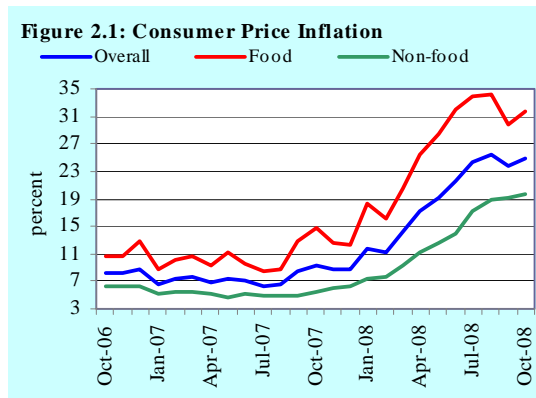
Inflation measured by Wholesale Price Index (WPI) also remained strong and was recorded at 28.4 percent compared to 11.8 percent in the same month last year. WPI food group inflation (YoY) was recorded at 32.6 percent in October 2008 compared to 15.5 percent a year earlier. WPI non-food group (YoY) registered a higher inflation of 25.2 percent compared to 9.2 percent in October 2007. Sensitive Price Indicator (SPI) also witnessed strong growth, reaching 30.3 percent (YoY) during October 2008 compared to 10.7 percent in the corresponding month last year (see **Figure 1.1**).

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

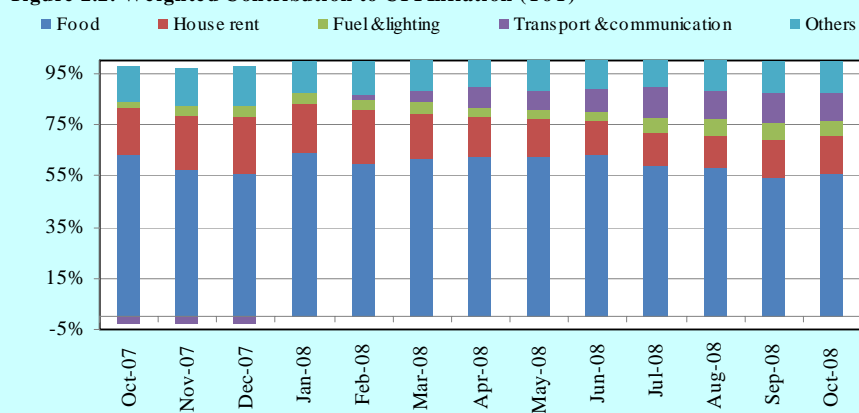


## 2. Consumer Price Index

CPI inflation (YoY) reached 25.0 percent in October 2008, registering a rise of 15.7 percentage points compared to the same month last year. Both, food and non-food inflation contributed to this upsurge. Food inflation rose to 31.7 percent compared to 14.7 percent during October 2007, while non-food inflation (YoY) increased to 19.7 percent compared to only 5.4 percent during the same month last year (see **Figure 2.1**).



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



CPI food group showed a decrease in its weighted contribution to overall inflation for second consecutive month falling to 55.9 percent during October 2008 compared to 66.3 percent in October 2007. Whereas, the weighted contribution of non-food group increased to 44.1 percent during October 2008 compared to 33.7 percent in the corresponding month last year. The sub-groups among non-food group contributing most to this increase were *house rent index* and *transport & communication*. The weighted contribution of *transport & communication* sub-group was recorded at 11.0 percent in October 2008 as compared to (-) 2.6 percent during same month last year (see **Figure 2.2**).

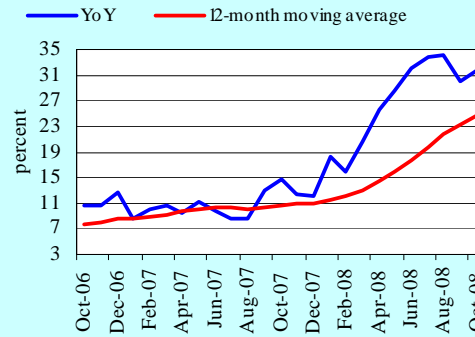


## 2.1 Food Inflation

Food inflation (YoY) increased from 14.7 percent in October 2007 to 31.7 percent during October 2008, driven mainly by increases in prices of wheat, condiments, rice, pulse masoor, spices, pulse gram, etc.

During October 2008, out of 115 commodities reported in the basket of food group, two items i.e., coriander seed powder (140.5 percent) and pulse masoor (124.0 percent) showed price change<sup>1</sup> of over 100 percent, nine showed a price change between 70 to 100 percent, 13 showed a price change between 50 to 70 percent, 72 items depicted a price change between 10 to 50 percent, 14 showed price change between 0 to 10 percent and the remaining 5 showed a decline in prices (see **Figure 2.4** and **Table A2** in **Annexure A**).

**Figure 2.3: CPI Food Inflation**



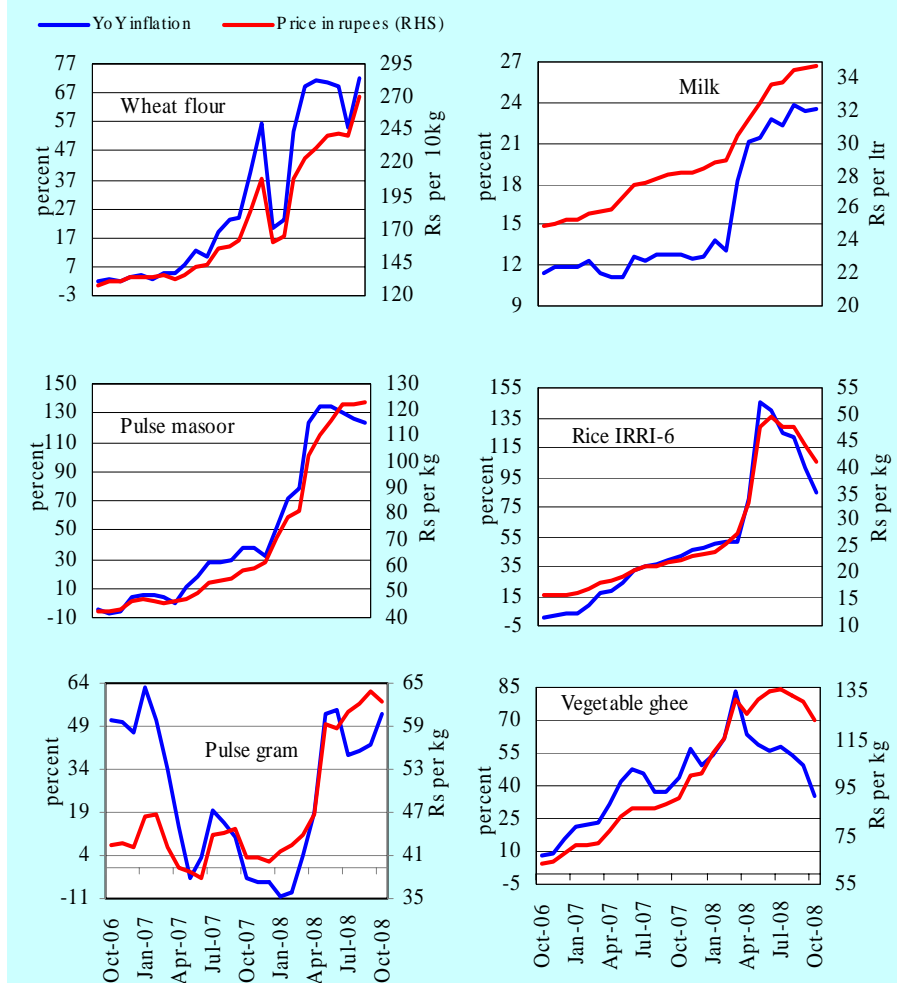
In terms of percent contribution to overall inflation (YoY), wheat flour and fresh milk were the first and third highest contributors to overall CPI inflation<sup>2</sup>, with 15.9 percent and 6.8 percent share in overall CPI inflation (see **Table A3** in the Annexure). The high contribution of wheat flour was due to high growth in its price (76.9 percent) and its high weight (5.1 percent). On the other hand, high contribution of fresh milk was primarily due to its high weight (6.7 percent) while increase in its price was lower than overall food inflation. Moreover, within food group, just four items i.e. wheat flour, milk fresh, vegetable ghee and rice contributed about 57.7 percent to the YoY food inflation in October 2008.

As compared to September 2008, there was a significant increase in average prices of food items like vegetables (23.4 percent), sugar (16.1 percent), wheat (15.0 percent), wheat flour (13.1 percent) and maida (10.9 percent) during October 2008. The significant decline in price on MoM basis was recorded in onion (6.3 percent) during the month under review.

<sup>1</sup> Price change are compared with October 2007

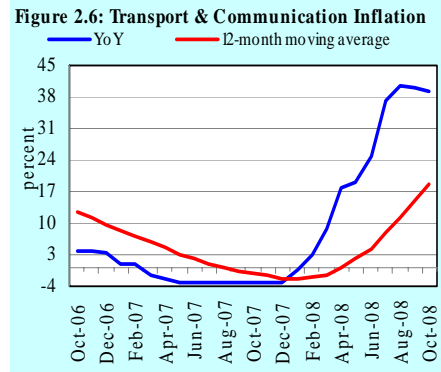
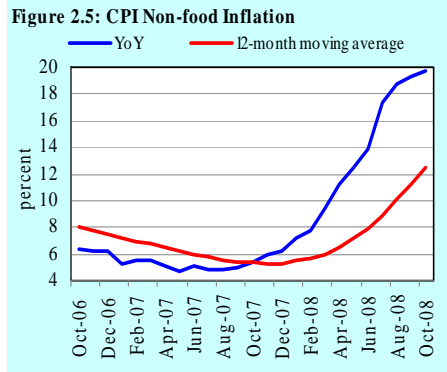
<sup>2</sup> house rent index of non-food group being the second

**Figure 2.4: Price Trends in Key Food Items**



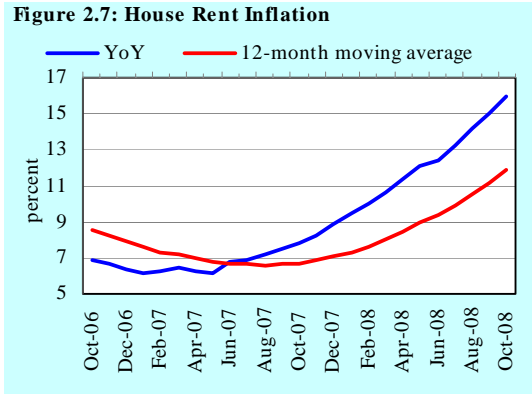
## 2.2 Non-food Inflation

CPI non-food inflation (YoY) also increased, reaching 19.7 percent during October 2008 compared to 5.4 percent in the corresponding month last year (see **Figure 2.5**). All sub-groups contributed to this increase, but rises in *transport & communication* and *fuel and lighting* sub-indices were more pronounced.



Similar to previous month, some adjustment in OGRA<sup>3</sup> administered 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 October 2008 compared to (-) 3.1 percent in the corresponding month last year (see **Figure 2.6**).

Inflation (YoY) in *house rent index* reached 16.0 percent during October 2008 compared to 7.8 percent in October 2007 (see **Figure 2.7**). The high inflation reflect increases in the prices of building materials<sup>4</sup> (40.5 percent in October 2008 compared with 9.6 percent in October 2007), such as cement, cement blocks, iron bars & sheets, timber, paints & varnishes, sanitary wares, etc.



A rising trend in inflation (YoY) was observed during October 2008 in *apparel, textile & footwear* sub-group reaching 15.8 percent compared to 8.2 percent in October 2007. Item wise analysis of this sub-group revealed that of a total of 42 items, 28 showed change in the prices between 10 to 63 percent and 14 between 0 to 10 percent.

<sup>3</sup> Oil and Gas regulatory Authority

<sup>4</sup> Building materials of WPI

Inflation (YoY) in *fuel & lighting* sub-group rose to 21.7 percent during October 2008 compared to 3.1 percent in the corresponding month last year. Out of 15 items in this sub-group, three recorded price change between 50 to 100 percent, six items saw price between 10 to 50 percent and the prices of remaining items rose between 0 to 10 percent during the month under review .

Inflation (YoY) in *household furniture & equipment* sub-index was recorded at 13.8 percent during October 2008 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 price change between 10 to 35 percent (whereas only 3 items showed price change in double digit during October 2007) and 7 items showed price change between 5 to 10 percent during October 2008.

Inflation (YoY) in *recreation & entertainment* sub-group was recorded at 12.2 percent during October 2008 compared to 0.3 percent during the corresponding month last year. Out of 16 commodities in this sub-group, price changes of six were between 16 to 50 percent, price changes of 10 commodities were between 0 to 10 percent (two showed no price change) during the month under review.

Inflation (YoY) in *cleaning, laundry & personal appearance* sub-group was recorded at 20.3 percent during October 2008 compared with 8.3 percent in same month last year. Detailed item-wise analysis of this sub-group showed that out of 36 items, 24 showed double digits price change between 10 to 57 percent and remaining 12 showed price change between 0 to 10 percent (whereas only 7 items showed double digit price change in October 2007) during the month under review.

Increasing trend in inflation (YoY) in *education* sub-group continued reaching 15.9 percent in October 2008 compared to 4.2 percent during October 2007. Analysis of this sub-group revealed that out of 24 items 14 showed price change between 10 to 77 percent (whereas only 2 items showed price change in double digits during October 2007), 9 items showed price change between 0 to 10 percent (2 commodities showed no price change) and only 1 item showed a decline in price.

Inflation (YoY) in *medicare* sub-group also increased and reached 12.5 percent during October 2008 compared with 7.9 percent in the corresponding month last year (see **Figure A1** in Annexure).

Out of 250 non-food items included in the CPI basket, 161 registered double digit price change during October 2008 compared to only 26 items during October 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 43 commodities showed price change in the range of 5 to 10 percent, 19 showed price change between 0 to 5 percent, 22 showed no change in prices and only 4 commodities showed decline in prices (25 commodities showed decline in prices in October 2007) ( see **Table A2 & A4** in the Annexure).

### 2.3 City-wise Inflation

In October 2008 city-wise inflation (YoY) largely showed an upward trend. In major cities including Islamabad, Lahore, Karachi, Quetta and Peshawar, inflation (YoY) was recorded at 21.7, 22.5, 24.2, 28.7 and 30.1 percent as compared to 8.6, 7.8, 10.0, 10.1 and 9.5 percent respectively in October 2007. Inflation (YoY) in Quetta and Peshawar was higher than the overall CPI inflation for Pakistan during October 2008 (see **Table 2.1**).

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
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
Oct-08	25.0	21.7	22.5	24.2	28.7	30.1

Out of 35 cities included in city-wise inflation (YoY) basket 18 fall in the category of high inflation, while remaining 17 cities recorded inflation below average CPI inflation during October 2008. Analysis revealed that inflation recorded in Bannu (35.5 percent) was the highest among the 35 cities, followed by Mardan (33.4 percent) and Nawabsha (31.0 percent). The lowest inflation (YoY) was recorded in Bahawalpur (19.8 percent). CPI food and non-food inflation (YoY) showed that the highest food inflation (YoY) was recorded in Bannu (51.2 percent) and lowest in D G Khan (22.5 percent), whereas the highest non-food inflation was also observed in Mardan (25.4 percent) and the lowest in Bahawalpur (17.2 percent) during October 2008 (see **Table 2.2**).

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

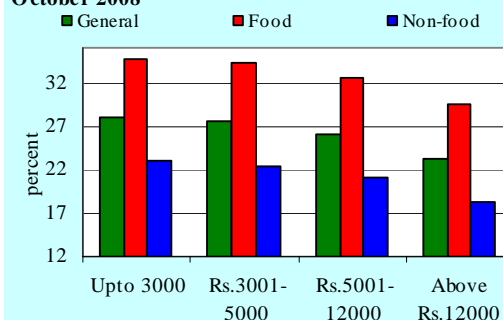
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Bannu	35.5	51.2	24.0	Jhang	24.5	26.8	22.8
Mardan	33.4	43.7	25.4	Larkana	24.4	28.6	21.0
Nawabshah	31.0	40.7	23.8	Karachi	24.2	29.5	20.0
Loralai	30.8	39.1	24.7	Bahawalnagar	23.7	27.3	20.9
Peshawar	30.1	40.3	22.0	Vehari	23.5	27.3	20.5
Shahdadpur	30.0	38.6	23.7	Rawalpindi	23.4	27.8	19.9
Khuzdar	29.6	36.7	24.3	Sialkot	23.3	29.6	18.1
D.I.Khan	28.7	39.3	20.5	D.G. Khan	23.2	22.5	23.8
Quetta	28.7	41.0	19.2	Jhelum	23.2	28.3	19.3
Mianwali	28.3	34.7	23.5	Samundari	23.2	25.1	21.7
Turbat	28.1	37.9	21.3	Attock	23.1	28.7	18.9
Mirpur Khas	27.6	33.8	22.8	Lahore	22.5	28.5	17.4
Sukkur	27.3	35.8	21.0	Gujranwala	22.1	25.1	19.7
Abbotabad	27.2	34.4	21.3	Islamabad	21.7	26.2	18.4
Kunri	26.0	31.1	21.9	Faisalabad	21.4	22.7	20.3
Sargodha	25.8	31.1	21.6	Multan	21.2	25.9	17.3
Okara	25.6	30.9	21.4	Bahawalpur	19.8	22.9	17.2
Hyderabad	25.5	32.6	19.9				

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

## 2.4 Income Group-wise Inflation

Income group wise inflation data revealed that all income groups have experienced an increase in headline inflation during October 2008. As in October 2007, inflation (YoY) in all income groups, except the highest income group, remained higher than overall CPI inflation (YoY) (see **Figure 2.8**).

**Figure 2.8 : Income Group-wise CPI Inflation (YoY) October 2008**



Highest CPI inflation (YoY) of 28.1 percent was recorded for the lowest income group earning upto Rs. 3000, followed by income group of Rs. 3001 to 5000 at 27.5 percent and income group of Rs. 5001 to 12000 at 26.1 percent. The highest income group of above Rs.

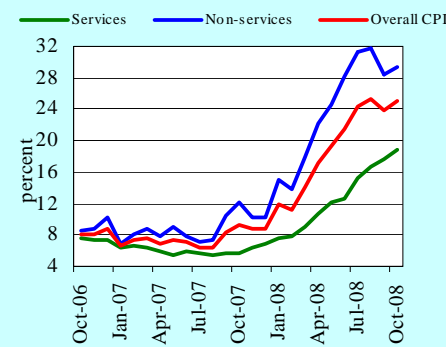
12000 experienced the lowest inflation of 23.3 percent (overall inflation during October 2008 being 25.0 percent).

City and income group wise data which covered 17 cities revealed that Bannu faced the brunt of the highest inflation from all income groups and Bahawalpur had low inflation for all income groups (see Table A5 in Annexure A).

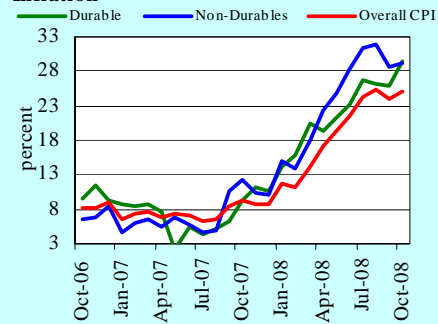
### 2.5 Services and Non-services Inflation

During October 2008 inflation (YoY) in both services<sup>5</sup> and non-services sectors showed an increase. Inflation (YoY) in services sector was recorded at 18.9 percent compared with 5.8 percent in corresponding month last year. Similarly, in the non-services sector inflation (YoY) reached 29.3 percent compared to 12.1 percent during October 2007 (see **Figure 2.9**).

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



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



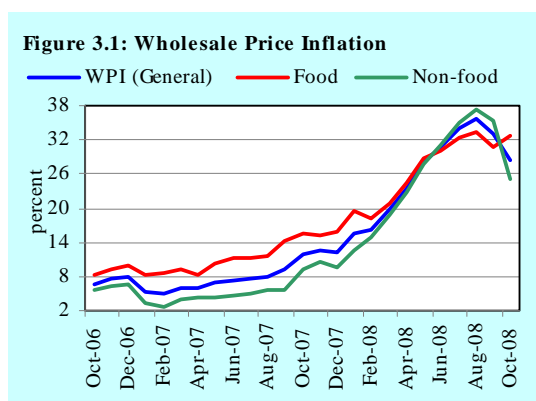
Further disaggregation of non-services sector revealed that inflation in both durable<sup>6</sup> and non-durable sub-groups increased during October 2008 compared to the corresponding month last year. Inflation (YoY) in durable goods was recorded at 29.6 percent compared to 9.3 percent in October 2007. This increase was contributed by the rising prices of all items included in this sub-group, however the most significant increase came from jewelry (48.0 percent in October 2008 compared with 18.1 percent in October 2007). Inflation (YoY) in non-durable goods was recorded at 29.3 percent compared to 12.2 percent in corresponding month last year. The contributing items to this significant increase were pulse masoor, wheat, kerosene oil, rice, diesel, pulse gram, maida, mustard oil, spices, cooking oil, petrol, and vegetable ghee, etc. (see **Figure 2.10**).

<sup>5</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.

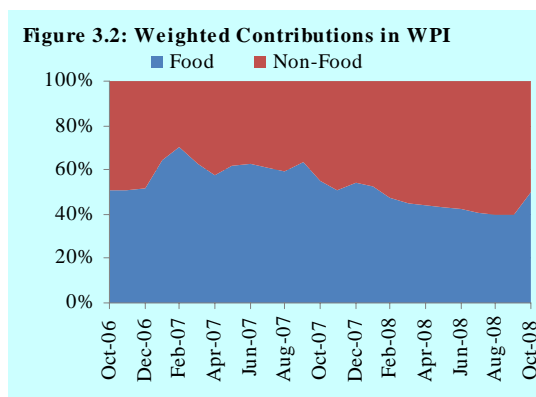
<sup>6</sup> Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewelry, etc.

### 3. Wholesale Price Index

Wholesale Price Index (WPI) inflation decelerated for the second consecutive month, dropping to 28.4 percent (YoY) during October 2008 compared to 33.2 percent in the previous month. This downtrend in WPI inflation was contributed mainly by the WPI non-food group that registered a sharp decline of 10.0 percentage points during October 2008 over the preceding month. The food group of WPI, on the other hand, witnessed a slight month-on-month increase, reaching 32.6 percent (YoY) compared to 30.6 percent in September 2008 (see **Figure 3.1**). Despite relative weakness compared to the previous month, the overall WPI inflation and non-food group inflation remained high compared to the same month last year.



Owing to a sharp fall in WPI non-food inflation, its weighted contribution in overall WPI inflation also decreased significantly to 50.3 percent in October 2008 compared to 59.9 percent in September 2008 - the first break in a nine month uptrend. Consequently, the weighted contribution of food group in overall WPI inflation registered (YoY) increase and reached 49.7 percent in October 2008 compared to 40.1 percent during the previous month (see **Figure 3.2**).



A detailed analysis of WPI basket shows that items exhibiting double digit YoY growth were dominant in the WPI basket. Out of 106 items, 76 exhibited double digit price change, ranging between 11.8 to 132.0 percent during the month under



review. The items that exhibited more than 50 percent price change include pulse masoor, maida, fertilizers, diesel oil, wheat, kerosene oil, coke, mustard/rapeseed, rice, cooking oil, etc.

Sixteen items exhibited growth between 5 to 10 percent in their wholesale prices whereas seven items showed a subdued price increase. Prices of the remaining seven items either declined or showed no change during the month under review (see **Table 3.1**).

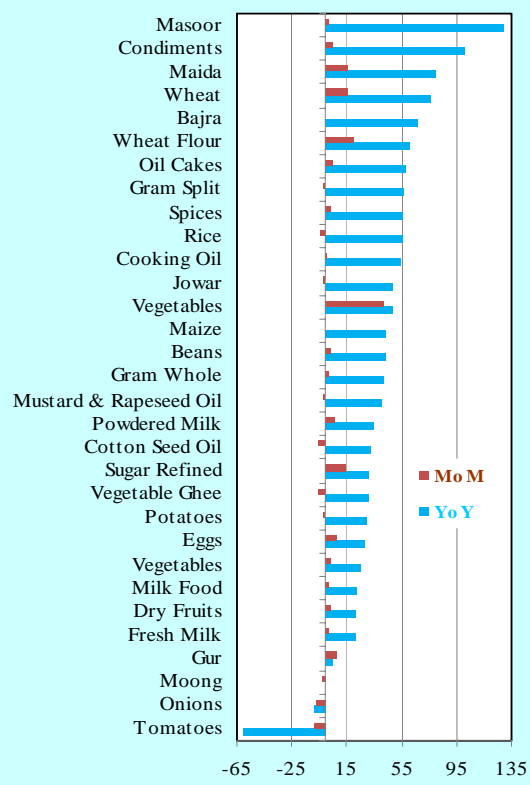
Inflation measured by the WPI food group remained strong as it reached 32.6 percent (YoY) during October 2008 compared to 15.5 percent in October 2007. Within the WPI food group the major items recording high growth include pulse masoor, condiments, maida, wheat, bajra, besan, gram split, rice, etc. As in the previous month, pulse masoor continued to register strong YoY growth and recording price change of more than 100 percent for the sixth consecutive month. On the other hand, three food items showed negative price change including tomatoes (-61.5 percent), onions (-9.5 percent) and pulse moong (-0.8 percent) (see **Table A7 & Figure 3.3**).

WPI non-food group inflation eased during October 2008 and was recorded at 25.2 percent (YoY) during the month under review compared to 35.7

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

No. of Items					
Groups	Decrease or no change	Up to 5%	5%-10%	More than 10%	Total
<b>A. Food</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>35</b>	<b>43</b>
<b>B. Non-Food</b>	<b>4</b>	<b>4</b>	<b>14</b>	<b>41</b>	<b>63</b>
Raw material	1		2	6	9
Fuel, lighting & lubricant	1		1	9	11
Manufactures	1	3	11	17	32
Building material	1	1		9	11
<b>Total</b>	<b>7</b>	<b>7</b>	<b>16</b>	<b>76</b>	<b>106</b>

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

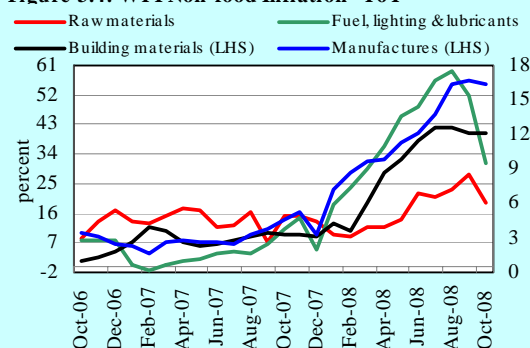


percent in September 2008. All sub-groups of the non-food group, except *building material*, witnessed lower YoY inflation in October 2008 compared to the previous month (see **Figure 3.4**). WPI non-food inflation during October 2008 is, however, still relatively high compared to the same month last year.

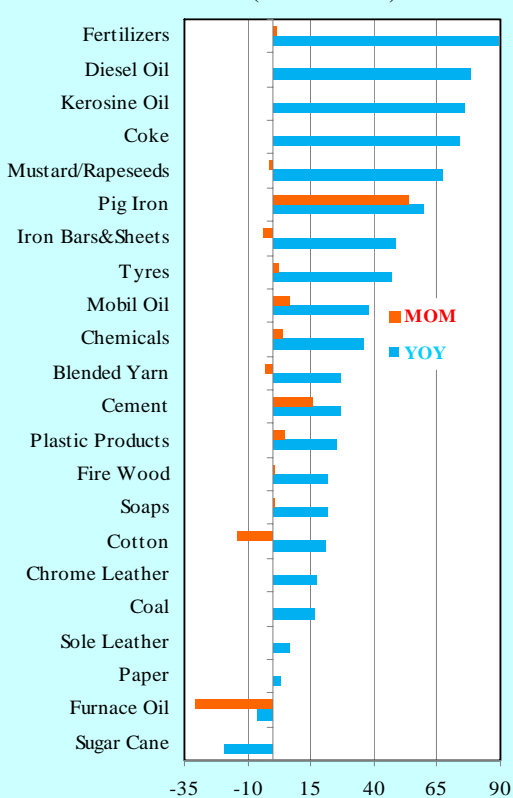
Within the WPI non-food group, more than 65 percent of the items exhibited double digit YoY inflation including fertilizers, diesel, coke, kerosine oil, iron bars & sheets, etc. Conversely, prices of 4 non-food items, including sugarcane, tiles etc., either declined or showed no change during October 2008 (see **Figure 3.5**).

The weighted contribution of *fuel, lighting & lubricant* sub-group to WPI non-food inflation dropped to 53.8 percent in October 2008 compared to 62.8 percent in the previous month (**Table 3.2**). This relatively lower weighted contribution on a month-on-month basis of the sub-group reflects the impact of downward revision of domestic oil prices followed by ease in international crude oil prices during the last three months.

**Figure 3.4: WPI Non-food Inflation -YoY**



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



Analysis of YoY inflation of various sub-indices of non-food group shows that the *fuel, lightning & lubricants* sub-group recorded strong growth of 31.1 percent during October 2008 compared to 11.3 percent during same month last year.

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

	Oct-07	Jun-08	Sep-08	Oct-08
Raw materials	20.0	9.5	10.4	9.9
Fuel, lighting & lubricants	52.6	65.8	62.8	53.8
Manufactures	18.7	14.2	17.0	23.0
Building materials	8.7	10.5	9.7	13.4

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 kerosene oil recording more than 70 percent inflation during the month under review (see **Table A7** in Annexure A).

Inflation (YoY) in *raw material* sub-group saw a break in the uptrend seen since August 2008 recording 19.3 percent inflation (YoY) during October 2008 compared to 28.0 percent in September 2008. Within the sub-group, the wholesale prices of sugarcane declined while the prices of mustard/rapeseed, pig iron and cotton seed recorded more than 45 percent YoY price growth during the month under review.

Inflation (YoY) in *manufactures* sub-group slightly eased during the month under review at 16.4 compared to 16.7 during previous month. Within the sub-group, items including fertilizers, nylon yarn, tyres, tubes, and chemicals, etc. recorded more than 35 percent price growth. On the other hand, inflation recorded by the *building material* sub-group remained strong as it reached 40.5 percent during the month under review compared to 9.6 percent during the same month last year. Within the sub-group more than eighty percent of the items recorded double digit YoY price change with items such as iron bars & sheets, wires & cables and cement blocks, etc. registering more than 30 percent price change (see **Table A7** in Annexure A).

#### 4. Global Commodity Prices

Global commodity prices eased further during October 2008, as reflected by the price indices of food, energy, non-fuel and metals. This downtrend was observed mainly due to weakening global demand (see **Table 4.1**). A disaggregated analysis of individual commodities also showed a significant MoM decline in the prices of edible oil (palm and soybean), metals and crude oil (see **Figure 4.1**).

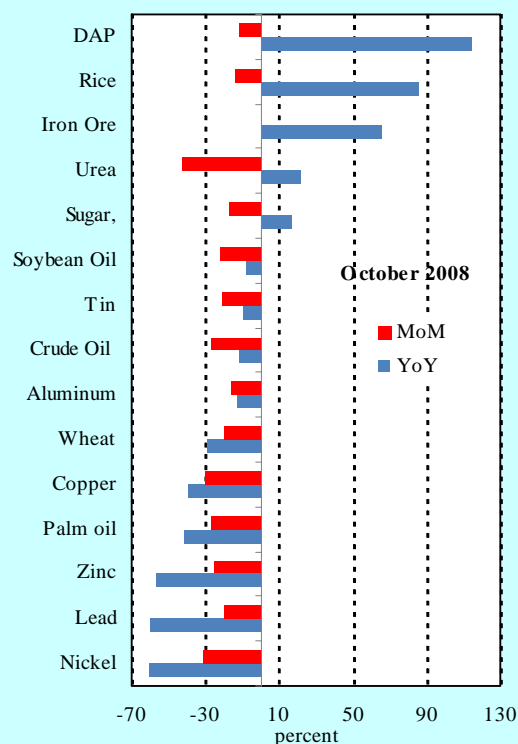
In energy group, average crude oil<sup>7</sup> prices dropped to US\$ 72.7 per barrel during October 2008, showing a decline of 26.8 percent compared to the previous month. This slump was mainly due to falling demand and an expected rise in non-OPEC supplies over the next year<sup>8</sup>. On daily basis average WTI crude oil price fluctuated between US\$ 61.9 and US\$ 98.2 per barrel during the month under review (see **Figure 4.2**). The weakening of crude oil prices was also reflected in IMF energy index, which declined by 22.9 percent compared to the previous month.

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

	YoY	MoM
All Commodities	-5.8	-20.9
Non-Fuel	-12.9	-16.5
Food	-4.8	-15.3
Metals	-26.9	-19.9
Energy	-1.9	-22.9

Source: IMF

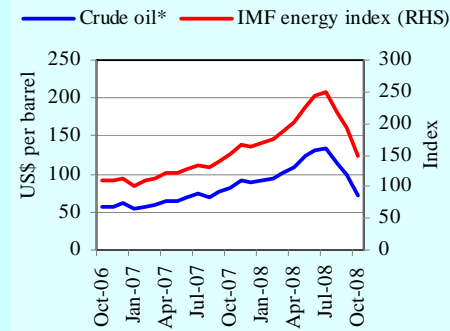
**Figure 4.1: Percent Change in Price**



<sup>7</sup> Simple average of brent, WTI and Dubai Fateh

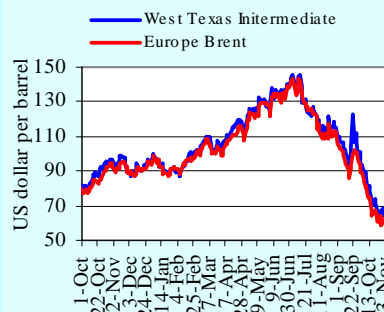
<sup>8</sup> WB Commodity Markets Review (November 12, 2008)

**Figure 4.2: Oil Price/Index**



\*Simple average of brent, WTI and Dubai Fateh  
Source: IMF & World Bank

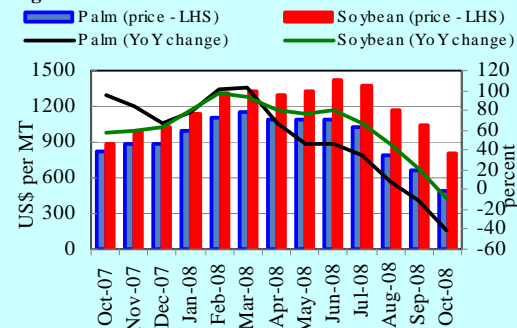
**Daily Oil Prices (Spot FOB)**



Source: www.eia.doe.gov

Within the food group, edible oil prices continued on the downtrend seen since July 2008. Palm and soybean oil prices fell by 55.6 and 42.8 percent respectively during October 2008 compared to June 2008. The recent slump in the edible oil prices can be attributed to good supply prospects and weak demand, especially from China<sup>9</sup> (see **Figure 4.3**).

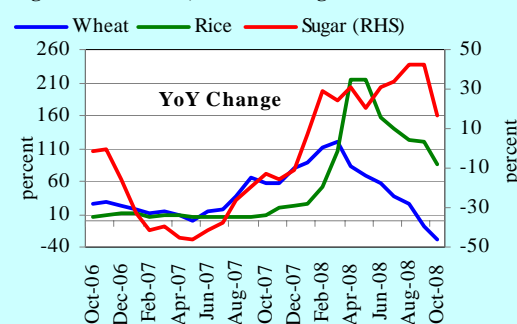
**Figure 4.3: Edible Oil**



Source: IMF

Among food grains, wheat prices declined 10.3 percent on speculation that a global recession will slash demand for food, livestock feed and fuel made from the crops. Wheat prices also fell on speculation that rains in Australia will enhance prospects for grain yields after drought devastated crops in the past two years<sup>10</sup>.

**Figure 4.4: Wheat, Rice and Sugar Prices**



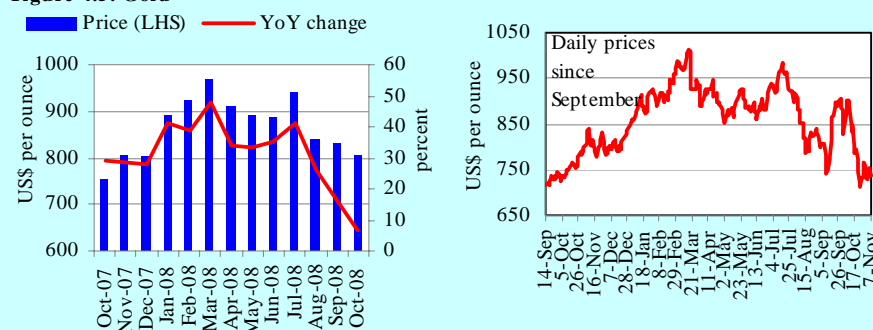
Source: IMF

<sup>9</sup> WB Commodity Markets Review (November 12, 2008)

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

Moreover, wheat prices also declined as global production is projected to increase by 11 percent pushing up ending stocks by 21 percent according to recently published World Bank's Commodity Market Review. Sugar and rice prices also showed decline on YoY basis during October 2008 compared to previous month. Sugar prices fell mainly on speculation that a slumping global economy will reduce demand for commodities<sup>11</sup> (see **Figure 4.4**).

**Figure 4.5: Gold**

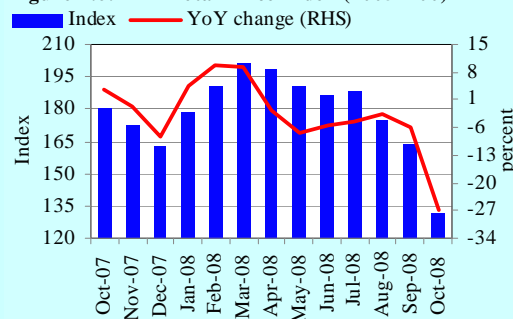


Source: [www.gold.org](http://www.gold.org)

Gold prices continued to ease in the international markets to reach US\$ 806.6 per ounce during October 2008. Gold prices fell mainly due to decline in crude-oil prices, reducing demand for the metal as a hedge against inflation<sup>12</sup>. On daily basis, gold price fluctuated and remained between US\$ 712.5 and US\$ 903.5 per ounce during the month under review (see **Figure 4.5**).

Metal prices have witnessed a fall in the recent past as reflected by IMF metal price index that plunged by 26.9 percent on YoY basis – negative growth for seven consecutive months (see **Figure 4.6**). Almost all industrial metals, including nickel, copper, zinc, tin, lead and aluminum witnessed a decrease in prices during the month under review. This

**Figure 4.6: IMF Metal Price Index (2005=100)**



Source: IMF

<sup>11</sup> [www.bloomberg.com](http://www.bloomberg.com)

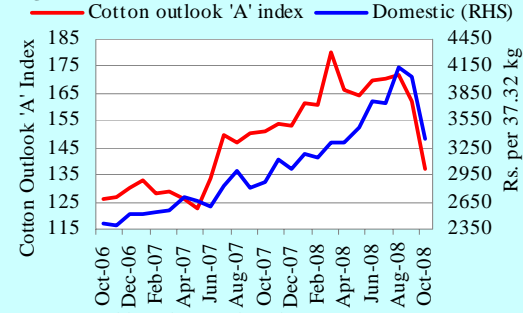
<sup>12</sup> [www.bloomberg.com](http://www.bloomberg.com)

slump in the metal prices was mainly due to weak global demand, rising inventories and improved supply prospects.

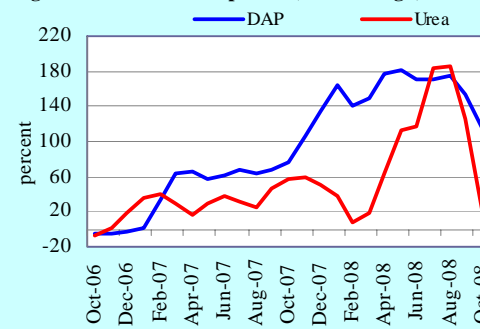
Cotton prices continued to decline in international market during the month under review as reflected by the World Bank Cotton Outlook 'A' Index. Cotton outlook 'A' index depicted YoY growth of (-) 8.9 percent during October 2008—first negative YoY growth since April 2007. This fall is mainly on account of its declining demand as a result of global slowdown. Following the trend in international markets, the domestic cotton prices also weakened during the month under review (see **Figure 4.7**).

The prices of DAP and Urea continued to slow down in the international markets during the month under review. In particular Urea prices exhibited MoM decline of 42.6 percent. This MoM decline in Urea prices was mainly due to a sharp fall in demand and buildup of inventories (see **Figure 4.8**).

**Figure 4.7: Cotton Prices**



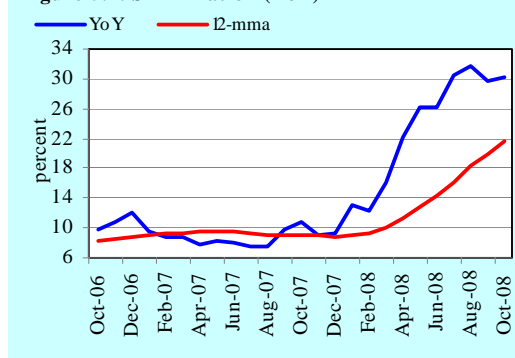
**Figure 4.8 : Fertilizer prices (YoY change)**



## 5. Sensitive Price Indicator

Strong inflationary pressures are also evident from the sensitive price indicator (SPI). After showing slight deceleration in September 2008, SPI inflation (YoY) remained higher at 30.3 percent during October 2008. As a result of continued strong YoY growth in SPI, its long-run trend, indicated by 12-month moving average, accelerated reaching 21.6 percent during the month (see **Figure 5.1**).

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



Analysis of items in SPI basket shows that out of 53 items, prices of 5 showed either decline or no change, only 1 item saw a price change between 0 to 5 percent, 6 items recorded price change between 5 to 10 percent and 41 items having price change more than 10

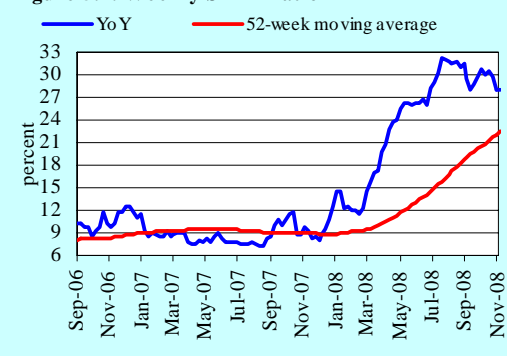
**Table 5.1: Distribution of Price Changes of SPI Basket (YoY)**

Percent Change	Number of items			
	Oct-07	Dec-07	Sep-08	Oct-08
0 or less	13	14	3	5
0 to 5	8	7	2	1
5 to 10	11	8	4	6
10 or above	21	24	44	41
Minimum	19.6	-48.8	-13.1	-36.6
Maximum	59.9	59.4	121.6	124.6

percent (see **Table 5.1**). The items mainly contributing to the significant increase in SPI inflation are pulse masoor (124.6 percent), rice irri-6 (78.3 percent), kerosene (88.8 percent), diesel (80.9 percent), and wheat (74.8 percent).

SPI inflation measured by month over month (MoM) basis also witnessed a strong upward movement and was recorded at 1.8 percent compared to 0.3 percent in September 2008. This rise in SPI inflation (MoM) is mainly attributed to the rise in the prices of wheat flour (15.7 percent), wheat (15.5 percent),

**Figure 5.2: Weekly SPI Inflation**





sugar (11.7 percent), eggs (7.7 percent) and milk (6.7 percent) (see **Table A8** in Annexure A).

Weekly SPI data showed mixed trends in YoY inflation during the month under review and fluctuated within the range of 29.8 percent to 30.7 percent. The long run trend indicated by 52-week moving average has also shown increase during October 2008 (see **Figure 5.2**).

Income group-wise SPI data showed significant increase in SPI inflation (YoY) for all income groups during October 2008 compared to the preceding month as well as compared to the same month last year. The SPI inflation (YoY) was the highest in the lowest income group because of the fact that low income people spent more on food items. The income group-wise SPI inflation further revealed that all income groups, except the highest income group, experienced higher SPI inflation than the average SPI inflation for the month of October 2008 (see **Table 5.2**).

	percent			
	Oct-07	Dec-07	Sep-08	Oct-08
Up to Rs. 3000	12.7	11.8	31.1	32.7
Rs. 3001-5000	12.6	11.5	29.9	31.4
Rs. 5000-12000	11.6	10.4	29.7	30.9
Above Rs. 12000	8.2	7.1	29.8	30.1
<b>All income groups</b>	10.7	9.2	29.6	30.3

## Annexure A

Table A1: CPI Inflation (YoY) by Groups						
	Weights	Oct-04	Oct-05	Oct-06	Oct-07	Oct-08
<b>I. Food Group</b>	<b>40.3</b>	<b>12.3</b>	<b>6.4</b>	<b>10.5</b>	<b>14.7</b>	<b>31.7</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>6.3</b>	<b>9.6</b>	<b>6.4</b>	<b>5.4</b>	<b>19.7</b>
Apparel, textile, etc.	6.1	2.5	4.3	3.8	8.2	15.8
House rent	23.4	10.8	11.1	6.9	7.8	16.0
Fuel & lighting	7.3	2.2	7.6	11.3	3.1	21.7
Household furniture & equipment	3.3	6.2	5.5	6.5	6.3	13.8
Transport & com.	7.3	5.2	22.7	3.7	-3.1	39.3
Recreation & entertainment	0.8	0.1	-0.4	0.3	0.3	12.2
Education	3.5	2.7	6.6	7.1	4.2	15.9
Cleaning, laundry, etc.	5.9	4.7	2.8	3.5	8.3	20.3
Medicare	2.1	1.0	1.6	9.8	7.9	12.5
<b>Headline</b>	<b>100</b>	<b>8.7</b>	<b>8.3</b>	<b>8.1</b>	<b>9.3</b>	<b>25.0</b>

Table A2: Distribution of Price Changes of CPI Basket, October 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>31.7</b>	<b>115</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>96</b>
<b>II. Non-Food Group</b>	<b>19.7</b>	<b>250</b>	<b>27</b>	<b>19</b>	<b>43</b>	<b>161</b>
Apparel, textile, etc.	15.8	42	1	2	11	28
House rent	16.0	1				1
Fuel & lighting	21.7	15	1		5	9
Household furniture & equipment	13.8	44			7	37
Transport & com.	39.3	43	3	2	1	37
Recreation & entertainment	12.2	16	2	5	3	6
Education	15.9	24	3	2	5	14
Cleaning, laundry, etc.	20.3	36	1	3	8	24
Medicines	12.5	29	16	5	3	5
<b>Overall</b>	<b>25.0</b>	<b>365</b>				

Note: Prices of 9 seasonal items were not reported during the month.

**Table A3: Top Ten Contribution to YoY CPI Inflation in October 2008**

Items	weights	YoY change		Weighted Contribution	
		Oct-07	Oct-08		
A. Ranked by Weighted Contribution					
1	Wheat Flour	5.11	22.85	72.87	15.93
2	House Rent Index	23.43	7.81	15.96	14.66
3	Milk Fresh	6.66	12.98	23.39	6.80
4	Vegetable Ghee	2.67	36.82	39.29	5.20
5	Transport Fare/Charges	2.12	1.74	53.83	5.16
6	Rice	1.34	55.85	62.37	4.29
7	Natural Gas	2.05	-5.90	32.18	3.58
8	Petrol	1.73	-6.91	43.09	3.40
9	Readymade Food	1.68	7.60	31.78	2.27
10	Meat	2.70	6.36	13.19	2.05
Total		49.48			63.35
B. Ranked by Percentage Change					
1	Pulse Masoor	0.22	29.31	123.95	1.08
2	Match Box	0.13	0.00	100.00	0.34
3	Kerosene	0.14	0.00	92.00	0.77
4	Condiments	0.34	8.28	83.76	0.90
5	Wheat	0.48	23.09	76.92	1.62
6	Wheat Flour	5.11	22.85	72.87	15.93
7	Diesel	0.21	-2.56	70.24	0.90
8	Maida	0.11	21.26	68.23	0.30
9	Rice	1.34	55.85	62.37	4.29
10	Spices	0.60	22.31	57.48	1.18
		8.67			27.31
C. Ranked by Weights					
1	House Rent Index	23.43	7.81	15.96	14.66
2	Milk Fresh	6.66	12.98	23.39	6.80
3	Wheat Flour	5.11	22.85	72.87	15.93
4	Electricity	4.37	10.07	6.44	0.88
5	Bakery & Confectionary	2.98	3.97	14.34	1.36
6	Meat	2.70	6.36	13.19	2.05
7	Vegetable Ghee	2.67	36.82	39.29	5.20
8	Tution Fees	2.36	4.84	12.38	1.11
9	Transport Fare/Charges	2.12	1.74	53.83	5.16
10	Natural Gas	2.05	-5.90	32.18	3.58
		54.45			56.74
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 25.0 percent in October 2008.					

Table A4: Distribution of Price Changes - Selected CPI Items, October 2008				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Chowkelate Candy (Small Size) Onion Tomatoes Chillies Green Garlic Arvi	Tomato (Hilal) Apple Pulse Moong (Washed) Biscuits-Packed	Cigarettes Capstan 10'S Cigarettes K-2 10'S Pulse Mash (Washed) Radish Jam Ahmed/Mitchelles Rooh Afza Squash-Mitchelles Gur Av.Qlty Cauliflower	Milk Fresh ,Wheat Flour Bag, Sugar Refined, Pulse Masoor ,Vegetable Ghee ,Cuminseed White National Rice Basmati Sup. Qlty., Mutton, Chicken Farm Broiler
<b>Apparel &amp; Textile</b>	Gents Sandal Bata	Pullover (Gents) Others Pullover Ladies Oxford/Bon.	School Uni. Kameez, Shal. Girl, Tailoring Coat-Pant Suit, School Uni. Paint, Shirt Boys	Lawn Av.Qlty. Long Cloth Av.Qlty. Ladies Spoung Chappal Bata
<b>House Rent Index</b>	--	--	--	House Rent Index
<b>Fuel &amp; Lighting</b>	Elect.Charges Upto 50 Units	--	Elect.Charges Above 1000 Uni Elect.Charges 301 - 1000 Uni Gas Chrg 3.3719 - 6.7438 Mmb	Gas Chrg 6.7438 - 10.1157Mmb Gas Cylinder Stand. Size, Kerosene Oil Firewood Whole
<b>Household Furniture</b>	--	--	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
<b>Transport &amp; Communication.</b>	Platform Ticket Postal Envelope Domestic Aerogram For Saudi Arabia	Car Tax For 800CC To 1300CC Telephone Charges Local Call	Tel Charges Out Side City	Petrol Super, A/C Bus Fare Outside City, U.M.S. Reg Charges Min., High Speed Diesel HSD
<b>Recreation &amp; Entertainment</b>	Weekly "Akhbar-E-Jahan" Tv.Licence Feedomestic	Tape Recorder Cassette Blan, V.C.P. Panasonic/Lg/Nat Vid. Cassette Blk. Tdk/Sony	T.V. 20" Colored With R/Cont Cinema A/C. Highest Class	Cinema Non-A/C High Class, Daily "Dawn", Dry Cell 1.5 Volt(Local)
<b>Education</b>	Govt. College Fee Ist. Year, Govt. College Fee 4Th. Year Com. C.D. (TDK/Imation)	Govt. Engg. Coll. Fee I Year, Comp. With Printer & Speaker	Urdu Book Class V (T.B.Bord), Govt. University Fee Msc. Govt. Med. College Fee Mbbs	School Fee 2nd-Ry Eng.Med., School Fee Primary ,Eng. Med., Paper Foolschap
<b>Cleaning &amp; Laundry</b>	Toothpaste Macklines 70 Grm	Lipstick S.Miss/Medora Brylcreem 210 Ml. Hair-Colour Begin (6 Gms)	Talc Powder Vice Roay, B.Cat, Cleanser Powder Vim 1000 Gm Toothbrush Sheild A/Plauque,Toothpowder Dentonic 90 Grm	Haircut Charges For Men, Washing Soap Nyl, Gold Tezabi 24 Ct Silver Tezabi 24 ct
<b>Medicare</b>	Dettol (Medium) Jouhar Joshanda Cac. 1000 Tab	Entox Tab. Flagyl Tab. 200 Mg. Septran Tablets	Brufen Tabs 200-Mg. O.R.S. (Nimcol) Cotton Bandage 2" - 4"	Doctor (MBBS) Clinic Fee Gripe-Water Woodwards Galxos-D

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

		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	24.8	29.9	21.4	24.3	29.9	20.5
2	Faisalabad	22.2	23.3	21.5	22.9	23.9	22.2
3	Rawalpindi	24.8	29.1	21.9	24.7	30.1	21.1
4	Multan	22.3	27.7	18.6	22.2	27.8	18.4
5	Gujranwala	23.6	26.7	21.4	23.8	27.2	21.5
6	Islamabad	23.3	28.8	19.6	22.3	28.7	17.9
7	Sargodha	26.6	32.1	22.8	26.3	32.6	22.1
8	Sialkot	24.0	29.9	19.9	24.0	30.7	19.4
9	Bahawalpur	19.9	23.0	17.9	20.5	24.0	18.2
10	Karachi	26.7	30.9	23.8	26.5	31.5	23.1
11	Hyderabad	26.9	34.6	21.7	25.5	32.4	20.8
12	Sukkur	27.9	37.3	21.5	28.3	37.7	21.9
13	Larkana	24.3	28.8	21.2	23.1	26.6	20.7
14	Peshawar	29.4	36.6	24.4	34.3	44.6	27.4
15	Bannu	36.8	49.1	28.5	36.1	50.5	26.4
16	Quetta	32.1	41.6	25.6	29.1	40.7	21.3
17	Khuzdar	32.9	39.8	28.3	33.4	40.1	28.9
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	23.3	29.4	19.2	21.3	27.2	17.4
2	Faisalabad	22.3	23.6	21.4	20.4	21.4	19.7
3	Rawalpindi	23.8	28.7	20.5	22.8	26.4	20.3
4	Multan	22.0	27.1	18.5	20.1	23.9	17.5
5	Gujranwala	22.6	25.7	20.5	20.1	22.6	18.4
6	Islamabad	22.8	28.7	18.9	21.2	25.5	18.3
7	Sargodha	26.2	31.6	22.6	24.9	29.3	22.0
8	Sialkot	23.7	30.1	19.4	22.9	29.0	18.8
9	Bahawalpur	19.5	22.6	17.4	18.9	20.6	17.9
10	Karachi	25.8	30.5	22.5	22.5	27.9	18.9
11	Hyderabad	26.0	33.3	21.0	24.2	30.3	20.1
12	Sukkur	27.4	36.0	21.6	26.1	33.4	21.1
13	Larkana	24.3	28.6	21.4	25.7	30.3	22.6
14	Peshawar	31.6	42.7	24.2	27.8	36.6	21.9
15	Bannu	34.4	49.7	24.1	33.8	48.5	23.9
16	Quetta	29.1	41.6	20.6	28.3	40.0	20.4
17	Khuzdar	30.2	39.0	24.2	28.8	35.9	24.0

Table A6 : Income Group-wise Inflation (YoY)								percent
	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08
<u>Up to Rs. 3000</u>								
General	17.0	20.2	23.2	25.3	27.2	28.5	26.4	28.1
Food	22.5	27.4	31.5	34.7	36.4	37.3	32.2	34.7
Non-food	13.0	15.1	17.1	18.6	20.6	22.0	21.9	23.0
<u>Rs. 3001-5000</u>								
General	16.6	19.9	22.6	24.8	26.9	28.0	25.9	27.5
Food	22.6	27.6	31.4	34.8	36.6	37.2	32.0	34.2
Non-food	12.4	14.5	16.3	17.8	19.8	21.3	21.4	22.4
<u>Rs. 5000-12000</u>								
General	14.9	18.1	20.4	22.6	25.3	26.4	24.7	26.1
Food	21.3	26.3	29.5	33.0	34.8	35.2	30.6	32.5
Non-food	10.2	12.2	13.7	14.9	18.2	19.8	20.2	21.0
<u>Above Rs. 12000</u>								
General	12.8	15.7	17.4	19.8	22.8	23.7	22.6	23.3
Food	18.8	23.6	26.1	29.8	31.4	31.4	28.1	29.5
Non-food	8.2	9.7	10.8	12.4	16.5	17.8	18.3	18.4
<u>All income groups</u>								
General	14.1	17.2	19.3	21.5	24.3	25.3	23.9	25.0
Food	20.6	25.5	28.5	32.0	33.8	34.1	29.9	31.7
Non-food	9.4	11.2	12.5	13.8	17.3	18.7	19.2	19.7

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

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

Table A8: SPI Item-wise Price Movements					
S.No	Items	Unit	Price Oct-08	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	25.5	74.8	15.5
2	Wheat flour average quality.	Kg.	27.7	70.4	15.7
3	Rice basmati broken	Kg.	50.2	53.6	-2.7
4	Rice irri-6	Kg.	42.1	78.3	-5.5
5	Masur pulse washed	Kg.	125.6	124.6	2.7
6	Moong pulse washed	Kg.	52.1	3.1	-3.3
7	Mash pulse washed	Kg.	74.5	5.9	-0.2
8	Gram pulse washed	Kg.	61.9	52.6	-2.4
9	Beef	Kg.	140.6	16.2	2.8
10	Mutton	Kg.	254.9	9.5	1.2
11	Egg Hen (farm)	Doz.	61.0	24.6	7.7
12	Bread plain	Each	23.5	36.3	3.6
13	Sugar	Kg.	37.4	26.5	11.7
14	Gur	Kg.	39.8	8.1	6.7
15	Milk fresh	Litr	35.8	22.3	1.1
16	Milk powdered Nido	400g	170.0	17.2	5.5
17	Curd	Kg.	42.7	23.7	0.8
18	Veg.ghee tin	2.5k	385.0	39.9	-2.5
19	Veg.ghee loose	Kg.	118.7	30.3	-7.4
20	Mustard oil	Kg.	149.3	48.6	-0.9
21	Cooking oil	2.5L	392.3	42.5	-1.4
22	Potatoes	Kg.	26.7	42.8	1.9
23	Onions	Kg.	23.8	-2.2	-16.0
24	Tomatoes	Kg.	28.2	-36.6	-16.1
25	Bananas	Doz.	36.1	13.4	-30.5
26	Salt powdered	Kg.	5.9	19.1	1.9
27	Red chillies (powder)	Kg.	148.5	21.4	-6.4
28	Garlic	Kg.	46.0	-11.5	1.9
29	Tea packet	250g	95.5	46.9	1.6
30	Tea (prepared)	Cup	8.3	26.6	3.5
continued					



Table A8 (continued)

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

S.No	Items	Unit	Price Oct-08	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	39.5	24.3	1.8
32	Cooked dal plate	Each	25.1	31.4	1.5
33	Cigarettes K-2	10's	8.9	6.9	0.9
34	Coarse latha	Mtr.	45.1	17.6	1.7
35	Lawn (avg.+s.qlty)	Mtr.	89.9	11.1	-0.3
36	Voil printed	Mtr.	45.5	17.2	0.0
37	Shirting	Mtr.	78.3	11.0	1.1
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	74.6	88.8	1.3
42	Firewood	40kg	256.5	23.1	1.3
43	Elec. Bulb 60-wats	Each	13.5	9.1	0.4
44	Match box	Each	1.0	17.6	0.0
45	Washing soap	Cake	12.7	43.6	1.6
46	Bath soap lifebuoy	Cake	21.7	30.3	2.0
47	Chicken (farm)	Kg.	105.2	20.8	-0.4
48	Gas chrg. All clb. Comb	D.mmbt	273.7	21.8	0.0
49	LPG.(cylinder 11kg.)	Each	942.4	45.5	-2.9
50	Elec.chrg.all slabs com	Bd. Unit	5.5	8.2	0.0
51	Petrol	Litr	82.1	52.5	-2.3
52	Diesel	Litr	68.5	80.9	2.1
53	Telephone local	Call	2.3	0.0	0.0
<b>Maximum</b>				<b>124.6</b>	<b>15.7</b>
<b>Median</b>				<b>23.7</b>	<b>0.8</b>
<b>Minimum</b>				<b>-36.6</b>	<b>-30.5</b>

Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities			
Item and Specification	Weights	Index	
		Oct-07	Oct-08
<b>GENERAL.</b>	<b>100.0010</b>	<b>153.66</b>	<b>192.08</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3416</b>	<b>168.18</b>	<b>221.44</b>
1 WHEAT	0.4830	167.31	296.00
2 WHEAT FLOUR	5.1122	164.11	283.69
3 MAIDA	0.1059	157.22	264.49
4 BESAN	0.1320	147.95	219.85
5 RICE	1.3369	197.27	320.31
6 PULSE MASOOR	0.2214	151.22	338.66
7 PULSE MOONG	0.2230	170.18	174.17
8 PULSE MASH	0.2017	155.43	166.39
9 PULSE GRAM	0.4272	140.78	215.45
10 GRAM WHOLE	0.1491	135.81	181.89
11 MUSTARD OIL	0.0456	176.75	267.76
12 COOKING OIL	0.6858	172.82	250.00
13 VEGETABLE GHEE	2.6672	190.31	265.08
14 SUGAR	1.9467	107.31	136.69
15 GUR	0.0735	138.91	148.44
16 TEA	1.2559	108.76	152.07
17 MILK FRESH	6.6615	167.49	206.66
18 MILK POWDER	0.1105	169.41	202.90
19 MILK PRODUCTS	0.5607	153.79	191.05
20 HONEY	0.0358	130.17	158.66
21 CEREALS	0.0878	146.01	219.48
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	135.19	158.25
23 BEVERAGES	0.7286	137.51	165.30
24 CONDIMENTS	0.3392	121.14	222.61
25 SPICES	0.6008	130.61	205.69
26 DRY FRUIT	0.2760	224.53	281.52
27 BAKERY & CONFECTIONARY	2.9837	122.05	139.55
28 CIGARETTES	0.9527	157.83	173.18
29 BETEL LEAVES & NUTS	0.1851	142.14	163.37
30 READYMADE FOOD	1.6833	162.76	214.48
31 SWEETMEAT & NIMCO	0.3846	165.39	218.28
32 FISH	0.2703	147.28	165.89
33 MEAT	2.6981	221.47	250.68
34 CHICKEN FARM	0.9158	172.94	214.02
35 EGGS	0.4119	178.95	225.42
36 POTATOES	0.5542	208.10	285.35
37 ONIONS	0.5973	262.58	257.06
38 TOMATOES	0.4569	317.75	154.39
39 VEGETABLES	1.9165	208.36	246.58
40 FRESH FRUITS	1.6160	169.49	210.70
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>130.97</b>	<b>151.62</b>
41 COTTON CLOTH	1.6197	134.93	155.09
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	131.44	149.67
43 TAILORING CHARGES	0.8636	134.03	155.41
44 HOSIERY	0.1528	140.51	161.39
45 READYMADE GARMENTS	1.2038	125.57	138.80
46 WOOLEN READYMADE GARMENTS	0.1485	138.52	163.03
47 FOOTWEAR	1.5327	127.45	154.55
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>150.43</b>	<b>174.44</b>
<b>48 HOUSE RENT INDEX (Combined)</b>	<b>23.4298</b>	<b>150.43</b>	<b>174.44</b>

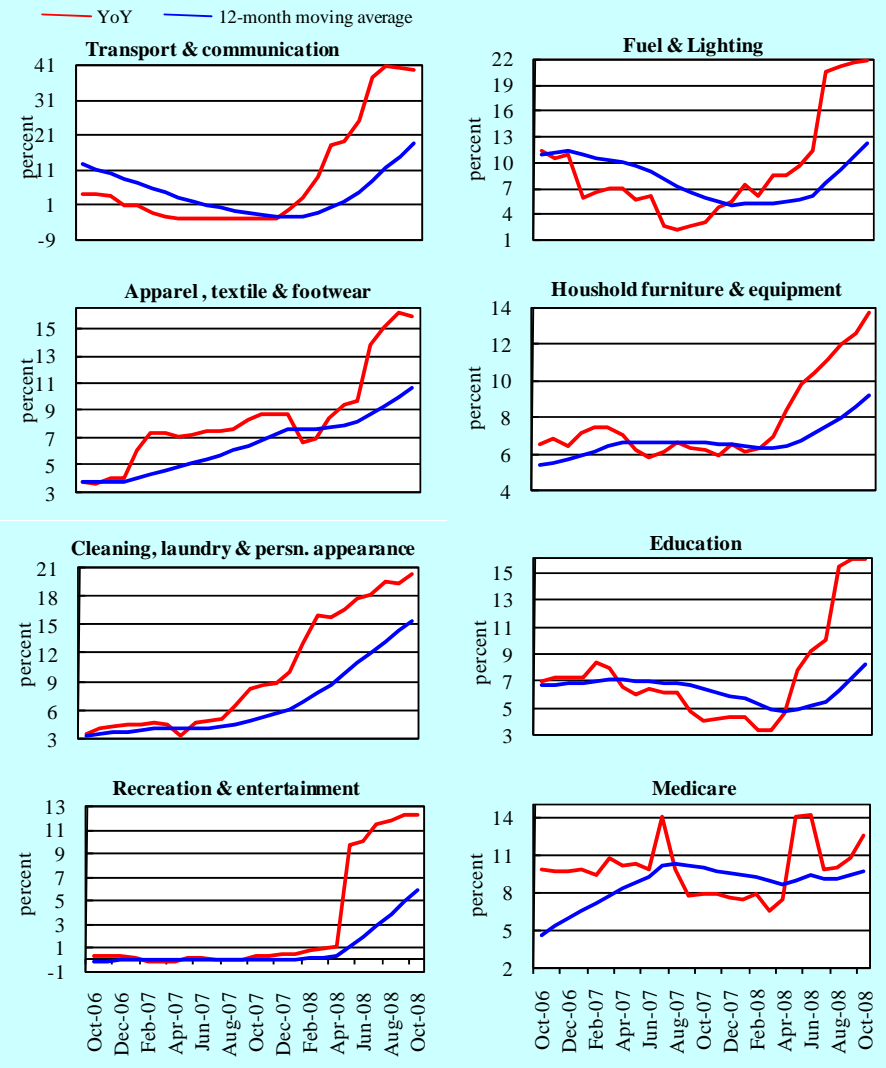
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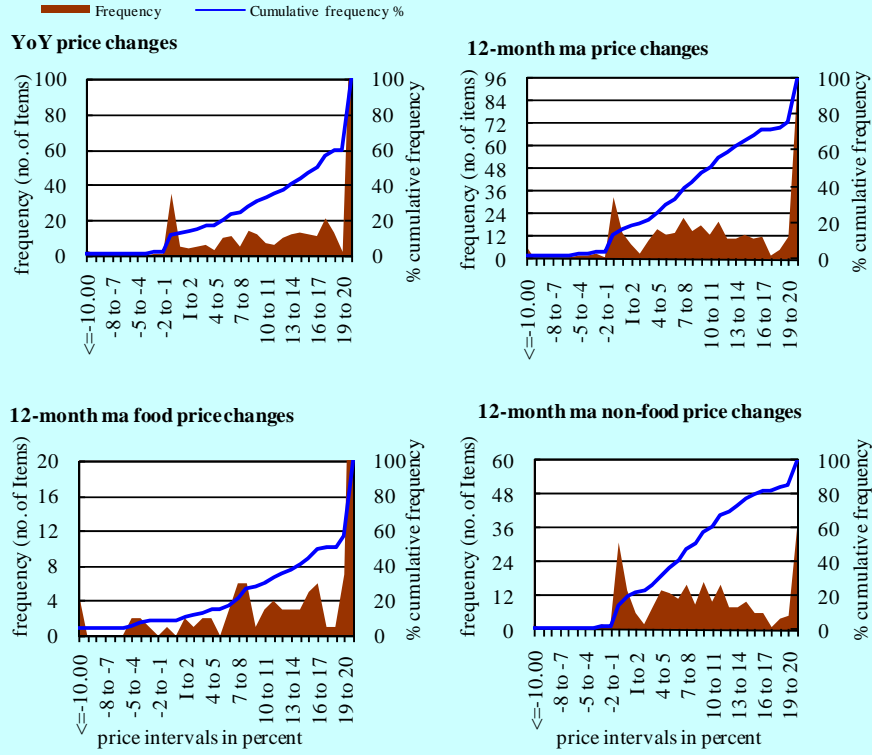
Table A9: Consumer Price Index Numbers by Major Groups and Selected Commodities

Item and Specification	Weights	Index	
		Oct-07	Oct-08
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>152.76</b>	<b>185.90</b>
49 KEROSENE	0.1366	235.87	452.86
50 FIREWOOD	0.4778	225.03	280.20
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	208.92	276.15
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>	<b>3.2862</b>	<b>137.99</b>	<b>156.97</b>
55 UTENSILS	0.3690	123.33	141.82
56 PLASTIC PRODUCTS	0.1055	143.70	181.99
57 SUITCASE	0.0470	127.02	145.32
58 HOUSE HOLD EQUIPMENTS	0.0953	123.40	144.39
59 FURNITURE (Ready Made)	0.3054	138.93	168.24
60 FURNISHING	0.6362	132.95	150.42
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	125.99	154.53
62 SEWING MACHINE,CLOCK AND NEEDLES	0.1270	118.90	133.78
63 REFRIGERATOR & AIRCONDITIONER	0.1756	100.68	123.46
64 MARRIAGE HALL	0.0445	151.24	178.65
65 HOUSE HOLD SERVANT	1.1918	155.02	168.51
<b>TRANSPORT &amp; COMMUNICATION.</b>	<b>7.3222</b>	<b>146.76</b>	<b>204.43</b>
66 PETROL	1.7253	175.59	251.25
67 DIESEL	0.2070	238.74	406.43
68 CNG. FILLING CHARGES	0.1649	142.87	189.14
69 SERVICE CHARGES	0.3835	134.39	158.72
70 VEHICLES	0.2596	101.16	119.34
71 TYRE & TUBE	0.2831	125.40	149.42
72 TRANSPORT FARE/CHARGES	2.1236	173.29	266.57
73 TRAIN FARE	0.1514	170.01	253.24
74 AIR FARE	0.0983	253.00	342.93
75 COMMUNICATION	1.9255	86.60	91.28
<b>RECREATION &amp; ENTERTAINMENT.</b>	<b>0.8259</b>	<b>106.21</b>	<b>119.17</b>
76 RECREATION	0.3399	101.91	128.36
77 ENTERTAINMENT	0.4860	109.22	112.74
<b>EDUCATION.</b>	<b>3.4548</b>	<b>138.74</b>	<b>160.80</b>
78 TUTION FEES	2.3629	145.17	163.14
79 STATIONERY	0.3500	128.57	160.11
80 TEXT BOOKS	0.6894	126.17	159.08
81 COMPUTER & ALLIED PRODUCTS	0.0525	82.10	82.67
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>	<b>5.8788</b>	<b>132.77</b>	<b>159.76</b>
82 WASHING SOAP & DETERGENT	1.5535	121.68	148.23
83 TOILET SOAP	0.7436	144.11	183.82
84 TOOTH PASTE	0.4036	108.20	112.26
85 SHAVING ARTICLES	0.3480	117.30	139.74
86 COSMETICS	1.4272	126.84	140.95
87 WATCHES	0.0552	121.56	136.23
88 JEWELLERY	0.3936	212.47	314.48
89 LAUNDRY CHARGES	0.2207	147.49	173.27
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	130.84	146.73
<b>MEDICARE.</b>	<b>2.0728</b>	<b>129.75</b>	<b>145.96</b>
91 DRUGS & MEDICARES	1.0752	107.05	113.23
92 DOCTOR'S FEE	0.9976	154.20	181.22

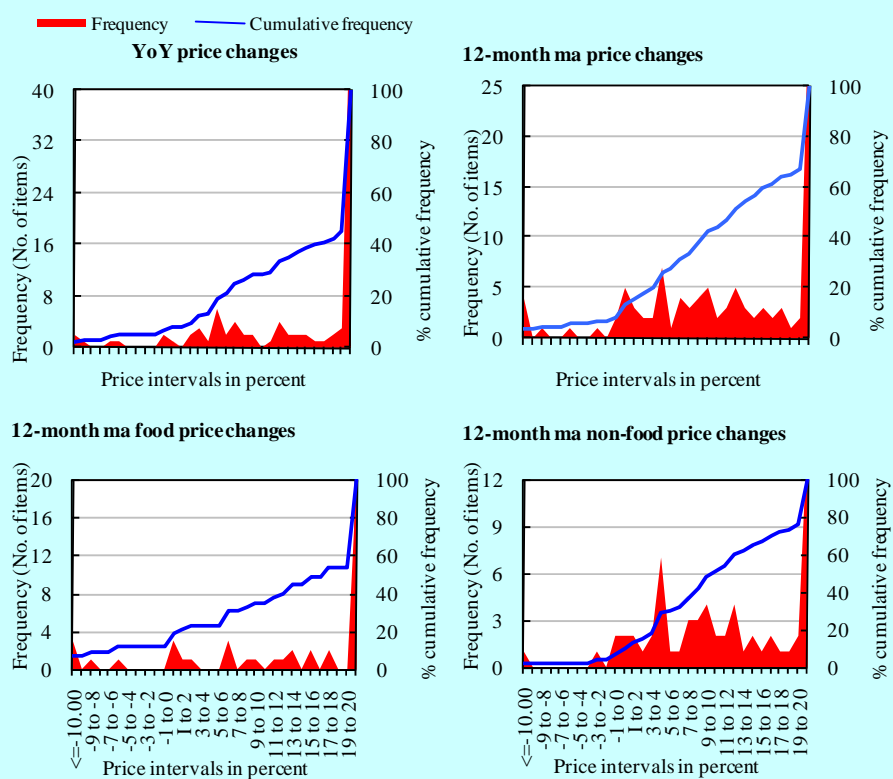
**Figure A1: CPI Non-food Inflation**



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



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