

# **Inflation Monitor**

**October 2007**



**State Bank of Pakistan**

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## **Team**

Dr. Mian Farooq Haq	<a href="mailto:mian.farooq@sbp.org.pk">mian.farooq@sbp.org.pk</a>
Mr. Saghir Pervaiz Ghauri	<a href="mailto:saghir.pervaiz@sbp.org.pk">saghir.pervaiz@sbp.org.pk</a>
Mr. Muhammad Akmal	<a href="mailto:muhammad.akmal@sbp.org.pk">muhammad.akmal@sbp.org.pk</a>
Mr. Muhammad Usman Abbasi	<a href="mailto:muhammad.usman3@sbp.org.pk">muhammad.usman3@sbp.org.pk</a>

## Overview

Headline CPI inflation, on year-on-year (YoY) basis, accelerated significantly to 9.3 percent (highest increase since May 2005) in October 2007 from 8.1 percent in the same month last year mainly on account of a surge in food inflation that muted the impact of decline in non-food inflation. Food inflation showed acceleration and was recorded at 14.7 percent (highest since May 2005) in October 2007 compared to 10.5 percent in the corresponding month last year. This was largely due to an upward pressure on the prices of some key food items including tomatoes, onion, wheat, rice, eggs, vegetable ghee, etc. However, non-food CPI inflation (YoY) witnessed a decline of 1 percentage point in October 2007 over the same month last year (see **Table 1.1**).

**Table 1.1: Inflation (YoY)**

	CPI			Core Inflation#		WPI	
	General	Food	Non-food	NFNE *	Trimmed		SPI**
Oct-06	8.1	10.5	6.4	6.0	6.7	6.7	9.9
Nov-06	8.1	10.6	6.3	5.9	6.5	7.5	10.7
Dec-06	8.9	12.7	6.2	5.7	6.3	8.0	12.0
Jan-07	6.6	8.7	5.2	5.7	6.5	5.4	9.5
Feb-07	7.4	10.0	5.6	6.0	6.8	5.1	8.8
Mar-07	7.7	10.7	5.5	5.9	6.7	6.1	8.9
Apr-07	6.9	9.4	5.2	5.6	6.6	6.0	7.7
May-07	7.4	11.3	4.7	5.2	6.2	6.8	8.3
Jun-07	7.0	9.7	5.1	5.7	6.5	7.3	8.0
Jul-07	6.4	8.5	4.9	6.0	6.6	7.6	7.5
Aug-07	6.5	8.6	4.9	6.0	6.7	8.0	7.6
Sep-07	8.4	13.0	5.0	6.1	8.0	9.3	10.2
Oct-07	9.3	14.7	5.4	6.5	8.3	11.8	10.9

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

The 12-month moving average (12-mma) CPI inflation for October 2007 showed decline as compared to the same period last year and stood at 7.5 percent in October 2007 compared to 7.9 percent in October 2006. The corresponding food inflation depicted a significant rise due to double digit rise in most of the preceding 12 months (10.7 percent in October 2007 compared to 7.7 percent in October 2006). In contrast to 12-mma food inflation, the 12-mma non-food inflation showed decline (5.3 percent October 2007 compared to 8.0 percent in October 2006).

Monthly CPI inflation showed an increase and was recorded at 1.2 percent in October 2007, which was more than the five-year average of monthly increases in October. This increase in overall monthly CPI inflation was primarily due to a one-month significant increase in food inflation which was recorded at 2.0 percent compared to the 0.5 percent inflation in October 2006. Monthly non-food inflation also showed increase and was recorded at 0.6 percent in October 2007 compared

to 0.2 percent in October 2006 and was more than the five-year average (see **Table 1.2**).

Core inflation based on NFNE (non-food non-energy) increased to 6.5 percent in October 2007 from 6.0 percent in October 2006 on YoY basis. Similarly, core inflation based on 20 percent trimmed-mean showed acceleration and was recorded at 8.3 percent in October 2007 compared to 6.7 percent in the same month last year (see **Table 1.2**). However, 12-month moving average measures of core inflation do not show any up-trend, unlike the YoY measures of core inflation.

WPI inflation accelerated sharply and witnessed a double digit YoY rise to 11.8 percent during October 2007 compared to 6.7 percent in October 2006. This rise was attributed to both WPI

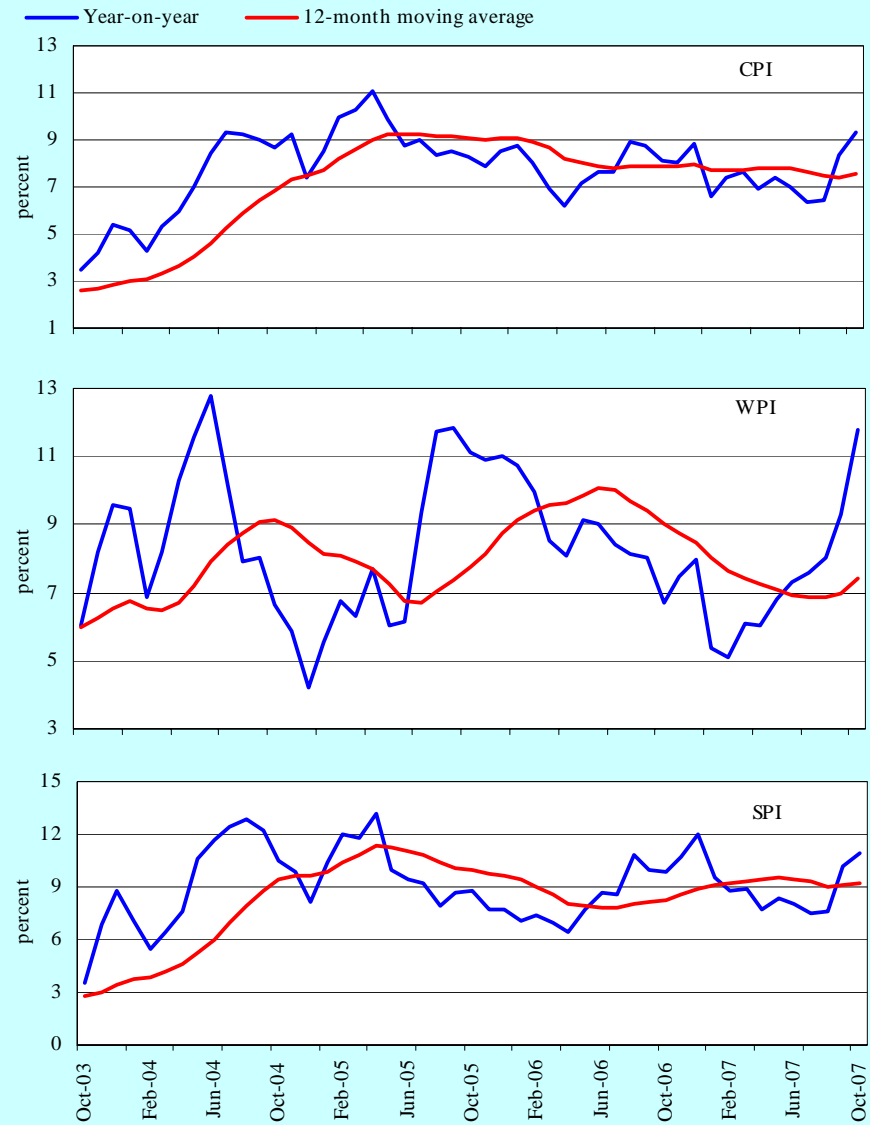
food and non-food inflation. 12-mma WPI inflation also increased to 7.4 percent in October 2007 compared to 7.0 percent during the preceding month. SPI (YoY) also showed an increase in October 2007 and was recorded at 10.9 percent compared to 9.9 percent in the corresponding month of last year (see **Figure 1.1**).

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

	Oct-05	Oct-06	Oct-07	5-year average
<b>Year-on-year (Oct over Oct)</b>				
Overall CPI	8.3	8.1	9.3	7.6
Food group	6.4	10.5	14.7	9.7
Non-food group	9.6	6.4	5.4	6.1
Core Inflation				
NFNE*	8.3	6.0	6.5	6.1
Trimmed	7.6	6.7	8.3	6.7
<b>Period average (July-Oct over July-Oct)</b>				
Overall CPI	8.5	8.4	7.6	7.2
Food group	7.9	10.1	11.2	8.9
Non-food group	9.6	7.1	5.1	6.1
Core Inflation				
NFNE*	8.0	6.4	6.2	6.0
Trimmed	7.8	6.9	7.4	6.5
<b>12-month moving average</b>				
Overall CPI	9.1	7.9	7.5	6.8
Food group	10.5	7.7	10.7	8.2
Non-food group	8.1	8.0	5.3	5.9
Core Inflation				
NFNE*	7.7	7.0	5.9	5.7
Trimmed	8.5	6.9	6.9	6.2
<b>Monthly (Oct over Sep)</b>				
Overall CPI	0.9	0.4	1.2	1.0
Food group	1.2	0.5	2.0	1.7
Non-food group	0.8	0.2	0.6	0.5
Core Inflation				
NFNE*	0.9	0.4	0.7	0.6
Trimmed	0.4	0.2	0.6	0.4

\* NFNE is Non-food non-energy inflation

**Figure 1.1: Movements in Price Indices**

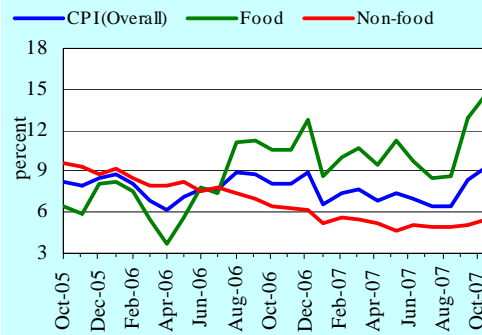


## 2. Consumer Price Inflation

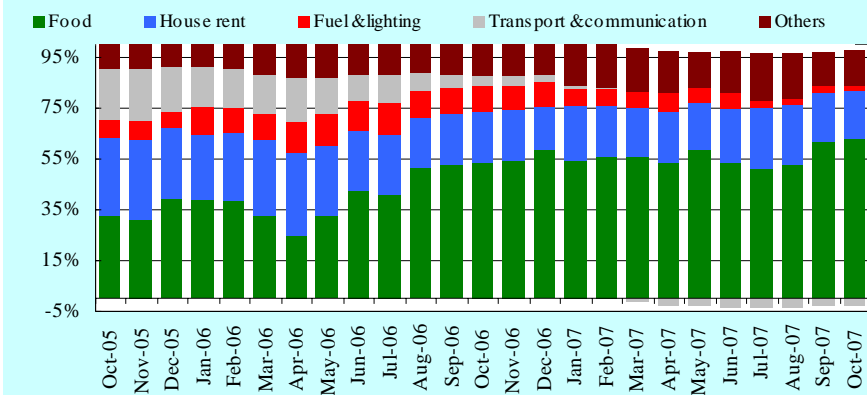
Overall CPI inflation on an year on year (YoY) basis, rose by 1.3 percentage points in October 2007. This rise was entirely on account of food inflation that depicted a sharp increase of 4.2 percentage points. By contrast, non-food inflation showed a decline of 1 percentage points in October 2007 compared to the same month last year. CPI inflation was recorded at 9.3 percent in

October 2007 – highest since May 2005 – compared to 8.1 percent in October 2006. Food inflation (YoY) was recorded at 14.7 percent during the month under review compared to 10.5 percent in the corresponding month last year. Non-food inflation (YoY) was recorded at 5.4 percent in October 2007 compared to 6.4 percent in October 2006 (see **Figure 2.1**).

**Figure 2.1: Consumer Price Inflation**



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



As a result of high food inflation, its contribution in overall inflation increased to 66.3 percent in October 2007, higher than the 53.5 percent contribution during the corresponding month last year. Accordingly, the contribution of the non-food group in overall inflation dropped to 33.7 percent in October 2007 from 46.5 percent in October 2006. This was mainly on account of a decline in weighted contributions of *fuel & lighting*, *house rent* and *transport & communication* in overall inflation. The contribution of house rent index (the largest item of the CPI basket) dropped to 19.5 percent in October 2007 from 20 percent during the



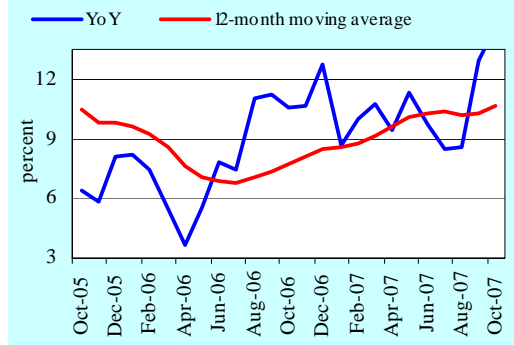
corresponding month last year (see **Figure 2.2**). The decline in *house rent* inflation mainly reflected a relative slowdown in construction activities during the past two months due to Ramadan and wedding season.

## 2.1 Food Inflation

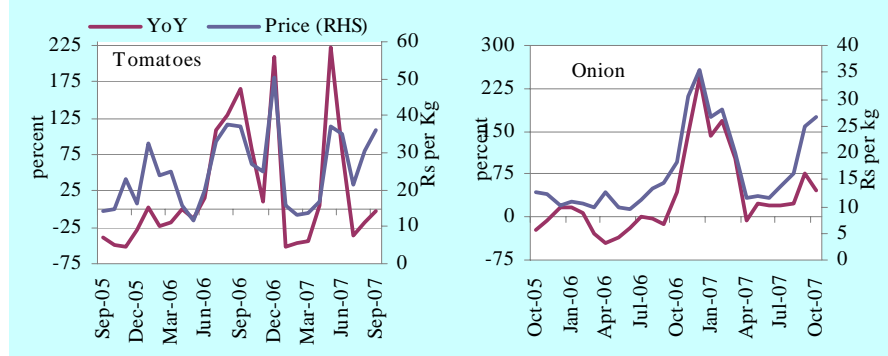
Food inflation (YoY) was recorded at 14.7 percent in October 2007 – highest since May 2005 – from 10.5 percent in October 2006. This sharp (4.2 percentage points) increase is mainly due to an increase in the prices of some food items such as onion, tomatoes, edible oil, different types of rice, wheat, eggs, fresh milk and maida, etc. Out of the total 124

commodities included in the food group, 53 commodities including tomatoes, onion, eggs, some fruits, cooking oil, different types of rice and vegetable ghee exhibited YoY inflation in the range of 10 to 100 percent in October 2007. The combined weight of food items with double digit inflation was about 60 percent of the food group. Of the four types of

**Figure 2.3: CPI Food Inflation**



**Figure 2.4: Most volatile item CPI food**

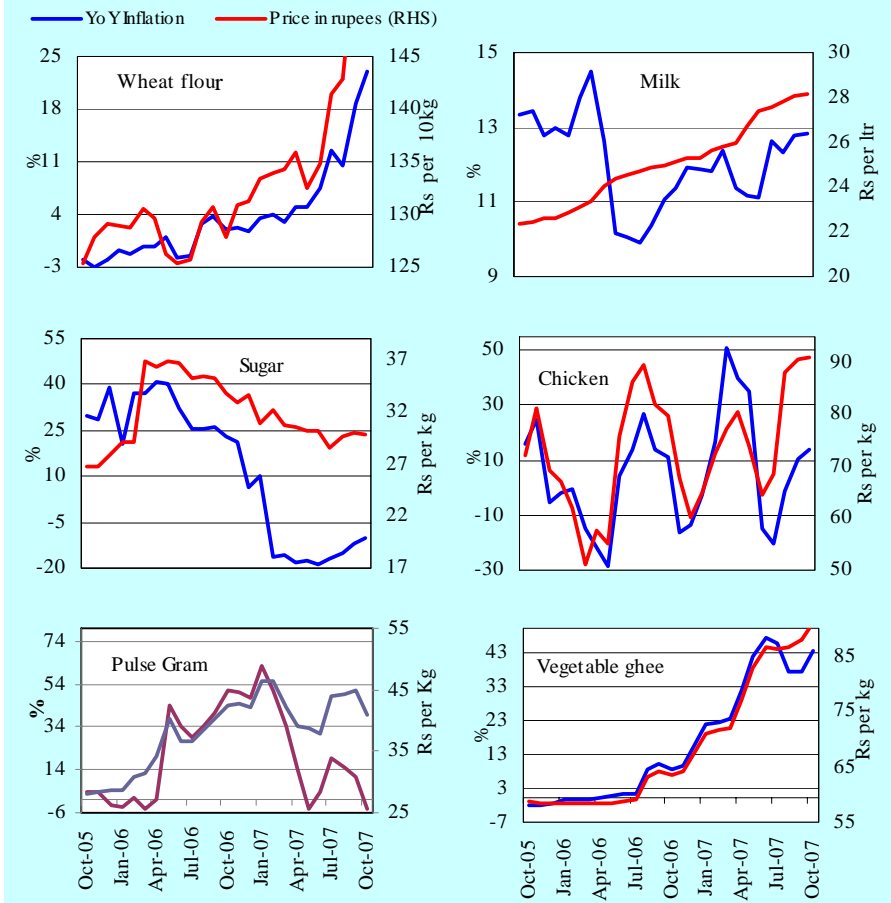


rice in the CPI basket, three showed significant increase in YoY inflation of over 55 percent while one type showed 41 percent increase. The recent increase in the prices of rice was due to increased demand of Pakistani rice in the international market. On the other hand, YoY inflation of 19 commodities including key staples such as potatoes, sugar, ginger, besan, pulse moong, etc. either declined or remained unchanged during the month. The rest of the items, having an aggregate

weight of 17.8 percent in the food group, exhibited subdued or moderate inflation (see **Table A2** in Annexure A).

There was an increase in the average price of food items such as wheat flour, fresh milk, beef, pulse gram, onion, vegetable ghee, tomatoes and chicken during October 2007 compared to September 2007; whereas the price of sugar declined. Among the selected food items, onion and tomatoes continued to be the most volatile<sup>1</sup> items over the last two years (see **Figure 2.4 & 2.5**).

**Figure 2.5: Price Trends in Key Food Items**



<sup>1</sup> Volatility is measured by standard deviation over the last two years.

In terms of contribution to the overall YoY Inflation, 8 out of top10 items were from the food group and contributed above 50 percent in overall inflation. These eight include wheat flour, vegetable ghee, fresh milk, rice, tomatoes, onion and meat (see **Table A3** in the annexure). The high contribution of wheat flour was due to a continual increase in its price after August 2006. On the other hand, the high contribution of fresh milk was primarily due to its high weight in the CPI basket (6.66 percent).

## 2.2 Non-food Inflation

Non-food (YoY) inflation increased by 0.4 percentage points to 5.4 percent in October 2007 as compared to 5.0 percent in September 2007 (see **Figure 2.6**).

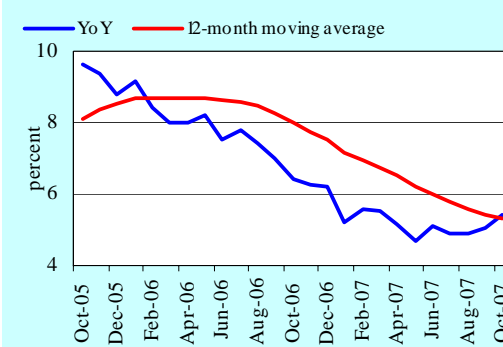
In case of sub-groups of non-food group, inflation (YoY) in *apparel, textile & footwear* sub-group was recorded higher at 8.2 percent in October 2007, depicting a rise of 0.6

percentage points compared to the previous month. This significant increase in the sub-group was mainly due to an increase in the price of almost all kinds of footwear as compared to October 2006.

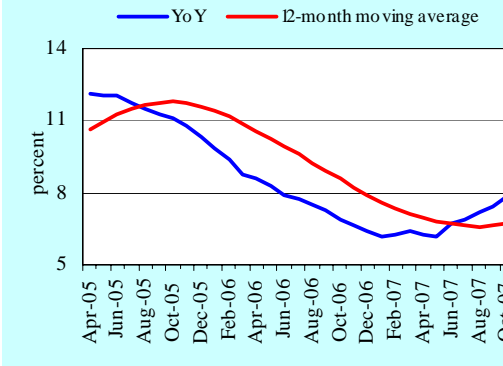
The *house rent index* sub-group maintained its rising trend that started in May 2007 and depicted a higher YoY inflation of 7.8 percent in October 2007 compared to 6.9 percent in the same month last year. The rise in house rent index is primarily on account of increased metal and cement prices as well as higher wages of construction workers (see **Figure 2.7**).

*Fuel & lighting* sub-group inflation witnessed an increase of 0.4 percentage points and was recorded at 3.1 percent in October 2007 compared to 2.7 percent in September 2007. While there was a decline of 8.2 percentage points compared to

**Figure 2.6: CPI Non-food Inflation**



**Figure 2.7: House Rent**



October 2006 which was mainly due to the lower price of all types of gas charges and gas cylinder that partially offset the impact of an increase in electricity charges (YoY decline of 7.8 percent in October 2007 in contrast to 25.3 percent increase in October 2006 in gas charges).

Inflation (YoY) in *household furniture & equipment* sub-group remained almost stagnant at 6.3 percent in October 2007 compared to the preceding month. *Transport & communication* sub-group witnessed disinflation and fell by 3.1 percent in October 2007 in contrast to a rise of 3.7 percent in the same month last year.

Inflation in *recreation & entertainment* sub-groups showed acceleration of 0.3 percentage points in October 2007 compared to the preceding month. YoY inflation in the *education* sub-group was recorded at 4.2 percent in October 2007 compared to that of 7.1 percent during the corresponding month last year.

YoY inflation in the *cleaning, laundry & personal appearance* sub-group, that started rising in May 2007, further accelerated to 8.3 percent in October 2007 compared to that of 3.5 percent during the corresponding month last year. YoY inflation showed a decline in the *medicare* sub-group and was recorded at 7.9 percent in October 2007 compared to that of 9.9 percent during the corresponding month last year (see **Figure A1** in annexure).

Out of the 250 non-food commodities included in the CPI basket, 26 commodities witnessed double digit inflation. These include items such as firewood, different units of electric charges, gold tezabi and doctors clinic fee, etc. There were 74 commodities that showed moderate inflation in the range of 5 to 10 percent; all other commodities witnessed either YoY deflation or inflation of less than 5 percent ( see **Table A2** in the annexure). The commodities showing deflation included petrol super, a number of durable goods like telephone charges, computer CD rom, etc. A significant YoY deflation was recorded in telephone charges outside the city (33.9 percent) in October 2007 ( see **Table A4** in the annexure).

### 2.3 City-wise Inflation

City-wise inflation data indicates that 26 cities out of 35 were found in the category of high inflation<sup>2</sup> cities. Inflation recorded for all cities depicted a higher level of YoY CPI inflation compared to their relative positions in general and food categories. Out of five selected cities<sup>3</sup>, all cities except Lahore showed an increase in YoY inflation compared to the previous month. City-wise inflation in Islamabad, Karachi, Quetta and Peshawar was recorded at 8.6, 10, 10.1 and 9.5 percent respectively in October 2007. In October 2007 Islamabad and Lahore were among the category of low inflation cities, whereas Karachi, Quetta and Peshawar were among the category of high inflation cities (see **Table 2.1**).

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
Oct-06	8.1	10.1	8.7	8.7	8.1	9.3
Nov-06	8.1	9.9	8.9	7.6	8.9	8.4
Dec-06	8.9	10.5	7.9	9.0	10.2	9.3
Jan-07	6.6	9.4	5.9	6.8	8.0	5.6
Feb-07	7.4	9.6	7.4	7.5	7.4	6.3
Mar-07	7.7	9.0	7.9	7.2	7.5	5.9
Apr-07	6.9	8.1	7.2	6.5	7.9	5.8
May-07	7.4	8.2	7.5	7.6	8.7	7.1
Jun-07	7.0	7.8	6.9	7.4	7.6	7.7
Jul-07	6.4	7.3	6.1	6.9	6.4	5.9
Aug-07	6.5	7.8	6.5	7.7	7.1	5.7
Sep-07	8.4	7.6	7.9	8.1	7.8	8.6
Oct-07	9.3	8.6	7.8	10.0	10.1	9.5

The highest level of YoY inflation was recorded in Nawabshah (14.1 percent) followed by Samundari (13.5 percent) and Khuzdar (12.7 percent) during October 2007. On the other hand the lowest YoY inflation was recorded in Okara (7.2 percent) in the month under review (see **Table 2.2**).

<sup>2</sup> High inflation refers to above average CPI (which is 6.4 percent in July 2007 YoY) inflation, and low inflation refers to below average CPI inflation.

<sup>3</sup> Federal & provincial capitals.

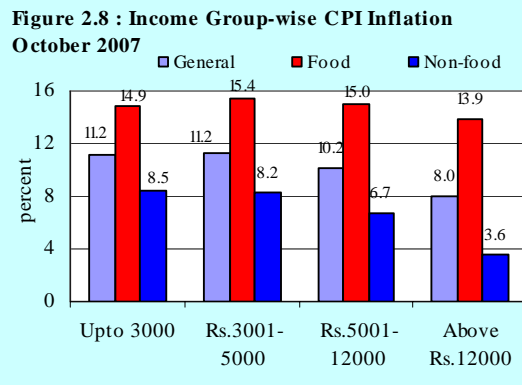
**Table 2.2: City wise Inflation in CPI (YoY), October 2007**

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Nawabshah	14.1	19.4	10.4	Loralai	8.8	10.5	7.5
Samundari	13.5	22.2	7.4	Mianwali	8.7	12.3	6.2
Khuzdar	12.7	15.4	10.7	Sialkot	8.7	15.5	3.7
Gujranwala	12.6	17.9	8.7	Rawalpindi	8.7	13.0	5.6
Bahawalnagar	12.2	15.7	9.6	Islamabad	8.6	13.4	5.3
Hyderabad	12.0	16.7	8.5	Sargodha	8.5	13.2	5.1
Vehari	11.5	17.4	7.2	D.I.Khan	8.2	12.5	5.1
Turbat	11.4	13.0	10.3	Lahore	7.8	13.3	3.7
Jhelum	11.3	16.8	7.3	Okara	7.2	11.0	4.4
Mardan	11.2	15.6	8.0				
Sukkur	11.1	16.3	7.5				
D.G. Khan	10.8	15.6	7.2				
Bannu	10.6	11.2	10.2				
Bahawalpur	10.4	17.7	5.1				
Abbotabad	10.4	17.4	5.2				
Multan	10.4	17.4	5.3				
Larkana	10.2	15.0	6.7				
Jhang	10.2	14.7	7.0				
Mirpur Khas	10.2	13.5	7.7				
Shahdadpur	10.2	11.8	8.9				
Quetta	10.1	17.1	5.2				
Faisalabad	10.1	20.2	2.6				
Karachi	10.0	17.1	5.1				
Kunri	9.7	13.3	7.0				
Attock	9.6	14.5	6.2				
Peshawar	9.5	15.8	4.9				

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

## 2.4 Income Group-wise Inflation

The effect of higher CPI inflation was also visible in the incidence of inflation on all income groups. The impact of higher CPI inflation was recorded for all income groups showing an increase in their YoY CPI inflation compared to the corresponding months. The data also revealed that YoY CPI inflation for groups earning less than Rs. 12000 per month was more than the average inflation for the month of October 2007 (see **Figure 2.8**).

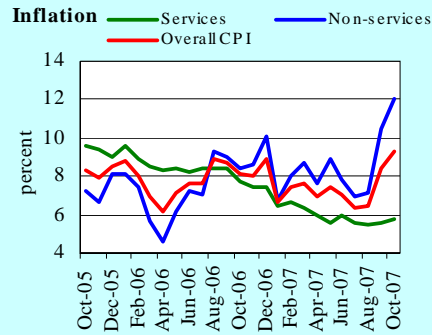
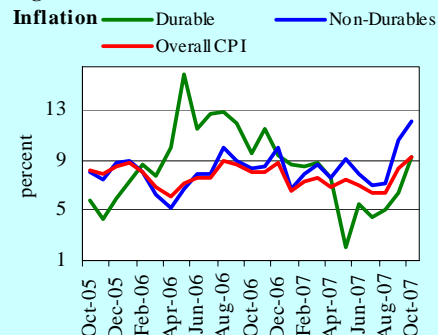


As in the previous month, the highest YoY CPI inflation was recorded for the income groups of up to Rs. 3000 & Rs. 3001-5000 (11.2 percent each), followed by income group of Rs. 5001 to 12000, while the highest income group of above Rs. 12000 experienced the lowest inflation in all categories. City-wise data reveals that the lowest YoY inflation was recorded in Rawalpindi for income groups up to Rs. 3000 and in Sargodha for income groups Rs. 3001 to 5000 and Rs. 5001 to 12000 and above 12000. While the highest YoY inflation was recorded in Gujranwala for all income groups, except for the lowest income group, wherein Hyderabad recorded the highest incidence of inflation (see **Table A5** in annexure A).

## 2.5 Services and Non-services Inflation

Services<sup>4</sup> sector YoY inflation was recorded at 5.8 percent during October 2007 as compared to 7.7 percent in October 2006. By contrast, the non-services sector witnessed a significant rise in YoY inflation and stood higher at 12.1 percent during the month under study compared to 8.4 percent in the corresponding month last year. In comparison to the preceding month, YoY inflation in the services sector showed a marginal increase (from 5.6 to 5.8 percent), while inflation recorded in the non-services sector showed an increase of 1.6 percentage points (from 10.5 to 12.1 percent) (see **Figure 2.9**).

<sup>4</sup> The services group of the CPI basket includes items like house rent index, electricity charges, marriage hall, household servant, transport fare, communication, recreation, tuition fees, laundry charges, hair cut & beauty parlor charges, doctor's fee, tailoring charges etc.

**Figure 2.9: Services & Non-services****Figure 2.10: Durables and Non-durables**

Within the non-services sector, YoY inflation in both durable<sup>5</sup> and non-durable goods increased in October 2007 compared to the preceding month. YoY inflation in the durable and non-durable goods was recorded at 9.3 and 12.2 percent respectively in October 2007 compared to 6.4 and 10.6 percent in the previous month. The significant rise in durable goods is due to the accelerated prices of jewelry. Jewelry has the highest weight among durable items and recorded YoY inflation of 18.1 percent in October 2007 (see **Figure 2.10**).

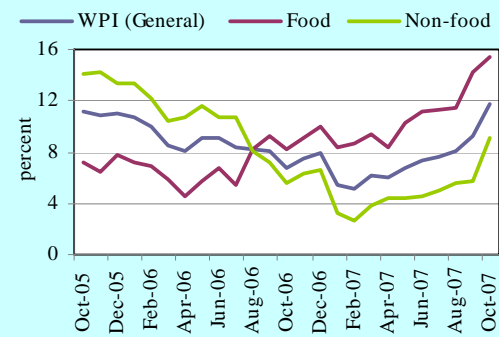
<sup>5</sup> Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewelry, etc.



### 3. Wholesale Price Inflation

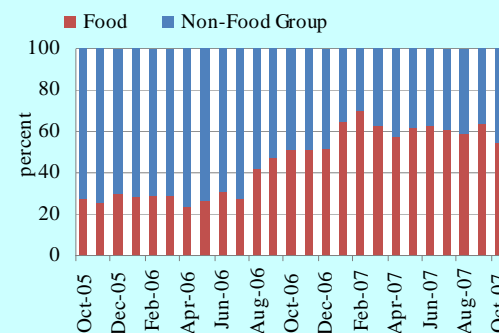
WPI inflation exhibited a sharp increase and was recorded at 11.8 percent in October 2007—the highest level since October 2005. This rise was attributed to both food and non-food groups of WPI inflation. WPI food inflation was recorded at 15.5 percent during October 2007 compared to 8.2 percent last year; whereas non-food inflation stood higher at 9.2 percent in October 2007 compared to 5.6 percent in October 2006 (see **Figure 3.1**).

**Figure 3.1: Wholesale Price Inflation (YoY)**



High WPI food prices over the last six months have increased food groups weighted contribution in WPI inflation to 54.9 percent in October 2007 from 50.6 percent in October 2006. The share of non-food group also increased as its contribution to overall WPI inflation reached to 45.1 percent in October 2007 compared to 36.1 percent in the previous month (see **Figure 3.2**).

**Figure 3.2: Weighted Contributions in WPI**



While analyzing overall WPI inflation, item-wise break-up shows that the prices of onion, rice, vegetable ghee and oil, fresh milk, spices, hides, sugarcane, chemicals, foot wear, wires and cables, etc. showed a positive growth of more than 10 percent. The prices of another 39 items also depicted a growth of more than 10 percent with 9 items showing growth between 5 to 10 percent in their wholesale prices whereas 19 items showed subdued inflation.

The item-wise breakup of WPI food inflation exhibited that the wholesale prices of 20 out of 43 food items witnessed a rise of more than 10 percent during October 2007. While 3 items recorded moderate inflation of 5 to 10 percent, the other 8

items recorded subdued inflation of up to 5 percent. The wholesale prices of the remaining 12 food items declined or remained stable (see **Table 3.1**).

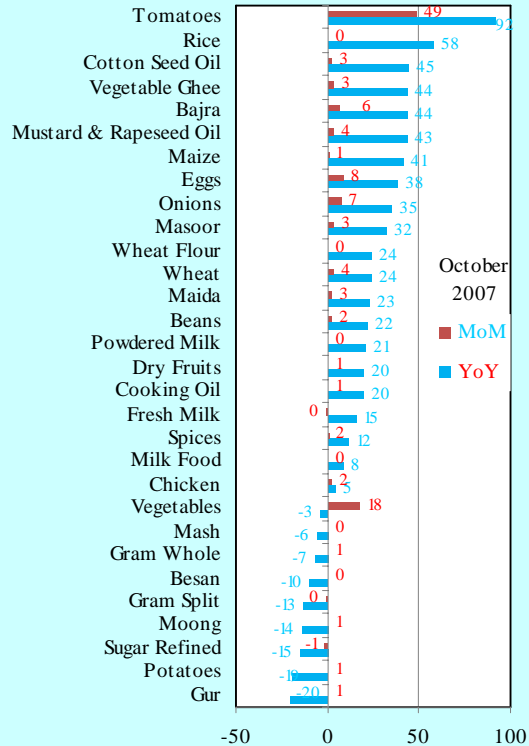
**Table 3.1: WPI Price Distribution of YoY Changes (October 2007)**

Groups		No. of Items				Total
		Decrease or no change	Up to 5%	5%-10%	More than 10%	
A.	<b>Food</b>	12	8	3	20	<b>43</b>
B.	<b>Non-Food</b>	<b>21</b>	<b>18</b>	<b>5</b>	<b>19</b>	<b>63</b>
	Raw Material	1	2	1	5	9
	Fuel, lighting and Lubricant	5	0	0	6	11
	Manufactures	11	13	3	5	32
	Building Material	4	3	1	3	11
<b>Total</b>		<b>33</b>	<b>26</b>	<b>8</b>	<b>39</b>	<b>106</b>

With the increase in WPI non-food inflation the prices of 19 items saw a rise of more than 10 percent, 18 items showed growth up to 5 percent, 21 items experienced decrease or no change and the remaining 5 items showed moderate inflation, i.e. 5 to 10 percent (see **Table 3.1**).

WPI food inflation maintained its strong growth by rising to 15.5 percent during October 2007 – the highest jump in the last 2 years. In the food group, the wholesale prices of tomatoes exhibited a significant increase of 92.1 percent, while onions, rice, vegetable ghee and cotton seed oil recorded an increase of more than 35 percent each

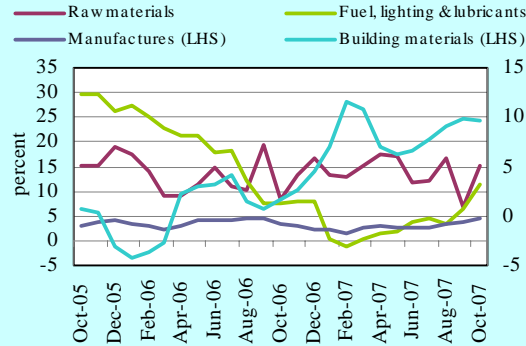
**Figure 3.3: Wholesale Price Inflation (%) in Selected Food Items**



during October 2007. On the other hand, gur, potatoes, sugar refined, pulse moong, gram split and beans witnessed a YoY deflation ranging from 20.3 to 10.4 percent in October 2007 (see **Figure 3.3**).

WPI non-food inflation (YoY) showed a sharp increase and was recorded at 9.2 percent in October 2007 compared to 5.6 percent during the same month last year. All sub-groups of the non-food group showed high (YoY) WPI inflation in October 2007 compared to the same month last year (see **Figure 3.4**).

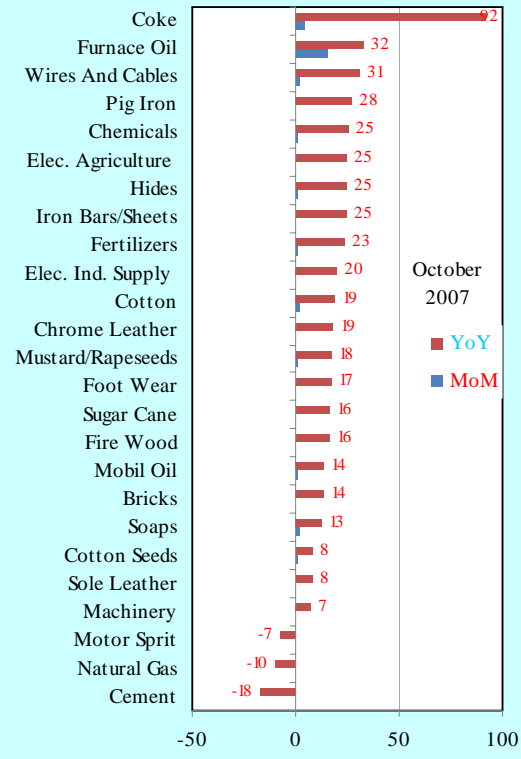
**Figure 3.4: YoY Inflation in WPI Non-food**



Prices of coke, furnace oil, wires and cables, pig iron, chemicals, electricity tariff-B, hides, iron bars, fertilizers, soaps, bricks, displayed YoY growth between 10 to 92 percent in October 2007. Whereas YoY deflation was recorded in the prices of cement, gas and motor spirit during October 2007 (see **Figure 3.5**).

The wholesale prices of the *raw material* sub-group accelerated sharply and recorded a growth of 15.0 percent on YoY basis during the month under review. This rise is significantly higher than the 8.4 percent inflation in the same month last year. Cotton and cottonseed showed a considerable increase in their prices during October 2007 compared to the same month

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



last year. The prices of sugarcane, pig iron, hides, cotton and rapeseeds exhibited double digit YoY growth during October 2007, while tobacco showed a YoY deflation of 4.0 percent in the same month.

The wholesale prices of *fuel, lightning & lubricants* sub-group also witnessed a sharp YoY growth of 11.3 percent during October 2007 compared to 7.7 percent growth in the corresponding month last year. Within this group, 6 items (mobil oil, furnace oil, fire wood, coke, electricity industrial supply tariff-B and electricity agriculture tariff-D) witnessed double digit (YoY) growth during October 2007. The remaining 5 items (natural gas, motor spirit, diesel oil, coal and kerosene oil) either decreased or saw no change in their wholesale prices during the month under review (see **Table A7** in Annexure A).

The wholesale prices of *manufactures* sub-group had a growth of 4.6 percent in October 2007 compared to 3.4 percent in October 2006. In this sub-group chemical, footwear, fertilizers, soaps and chrome leather experienced a strong growth in their prices. Out of the 32 items in the *manufactures* sub-group, 11 recorded decline or no change, the other 13 items exhibited subdued growth of up to 5 percent and the remaining 8 items recorded a YoY growth of more than 5 percent in their prices during the month under review (see **Table A7** in Annexure A).

The growth of 9.6 percent in the wholesale prices of *building material* sub-group during October 2007 is significantly higher compared to 1.6 percent inflation during the same month last year. This was primarily due to the double digit rise in the wholesale prices of bricks, iron bars and sheets, and wires and cables during the month under review (see **Table A7** in Annexure A).

#### 4. Global Commodity Prices

Commodity prices showed strength in the international market in October 2007 compared to the same month last year as well as to the preceding month. This rise in the global commodity prices was a result of an increase in the prices of food and energy groups. Strong energy prices, reflected by crude oil, as well as the IMF and World Bank energy indices, showed strong upward movements (see **Figure 4.1**) due to weather-related shutdowns in Mexico and the North Sea, and increased fears of supply disruption in oil exporting countries<sup>6</sup>. In the food group, prices of most of the major staples including wheat, sugar and edible oils (soybean and palm) showed higher YoY growth in October 2007. In non-food non-energy group, cotton, steel and DAP prices remained stable in October 2007 (see **Table 4.1**).

**Table 4.1: International Commodity Prices/Indices**

	Oct 06	Aug 07	Sep 07	Oct 07
<b>Energy</b>				
Crude Oil (US\$ per barrel)	58.0	70.1	76.9	82.2
IMF Energy Index (1995=100)	317.3	379.8	412.7	441.3
WB Energy Index (1990=100)	253.1	306.5	335.5	358.3
Coal (\$/MT)	47.2	74.3	73.3	80.2
<b>Food (\$/MT)</b>				
Rice	309.6	331.5	330.0	335.3
Wheat	212.1	259.7	326.5	335.1
Sugar	11.5	9.6	9.9	10.0
Palm Oil	422.3	729.6	745.2	824.1
Soybean Oil	559.7	797.1	852.7	879.9
Sunflower Oil	673.0	673.0	673.0	673.0
<b>Non-Food Non-Energy</b>				
Cotton Outlook 'A' Index <sup>#</sup>	125.8	146.8	150.2	150.9
WB Steel Products Index (1990=100)	133.7	132.6	135.3	139.8
DAP (\$/MT)	255.6	429.4	431.9	451.3
Urea (\$/MT)	211.8	269.0	314.0	333.7

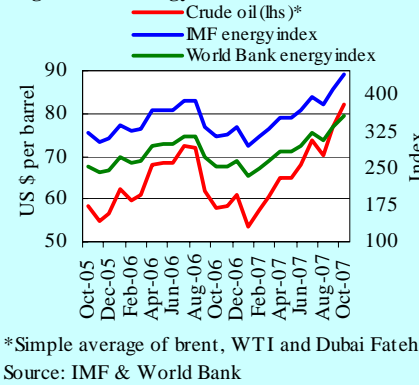
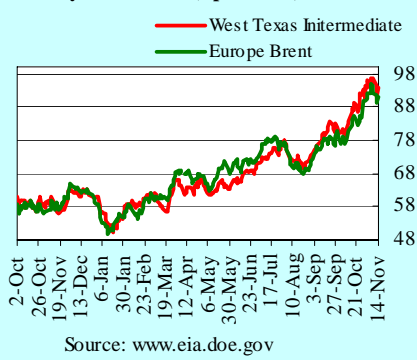
\$/MT = US\$ per metric tonne.

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

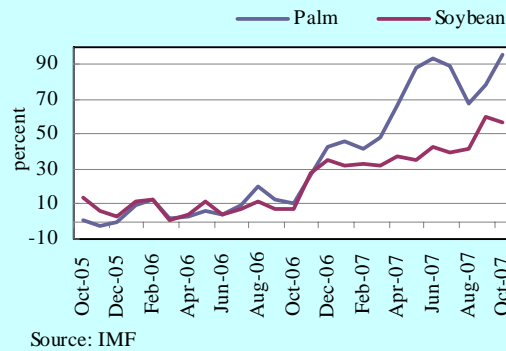
Source: IMF and World Bank.

According to World Bank report, in October 2007, the crude oil prices touched daily highs of above US\$ 94 per barrel largely on expectations of continued market tightening and increasing fears of disruption of supply from some oil exporting countries. Spot crude oil price in the international market fluctuated between the ranges of US\$ 79 – US\$ 94.2 per barrel during October 2007 compared to US\$ 75.1 – US\$ 83.9 per barrel during the previous month.

<sup>6</sup> World Bank Commodity Market Review, November 8, 2007.

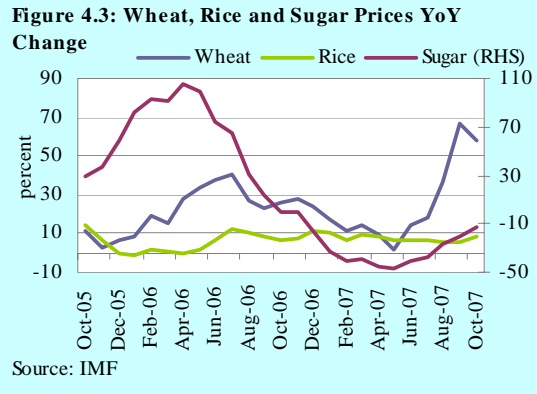
**Figure 4.1: Energy Prices****Daily Oil Prices (Spot FOB)**

In case of edible oils, palm and soybean oil prices continued to reflect strong YoY growth registering steep rises of 93.5 and 57.1 percent respectively in October 2007 compared to 10.2 and 7.0 percent in the same month last year. The high rise in edible oil prices is the result of unusually low production leading to stock depletion, amid strong demand exacerbated by a reduction in tariffs by a number of importers<sup>7</sup>. In addition, according to World Bank commodity markets review, soybean meal and soybean oil prices increased due to very low warehouse stocks in Rotterdam and strong import demand. On a month-on-month basis, the palm and soybean oil prices increased by 10.6 and 3.2 percent respectively (see **Figure 4.2**).

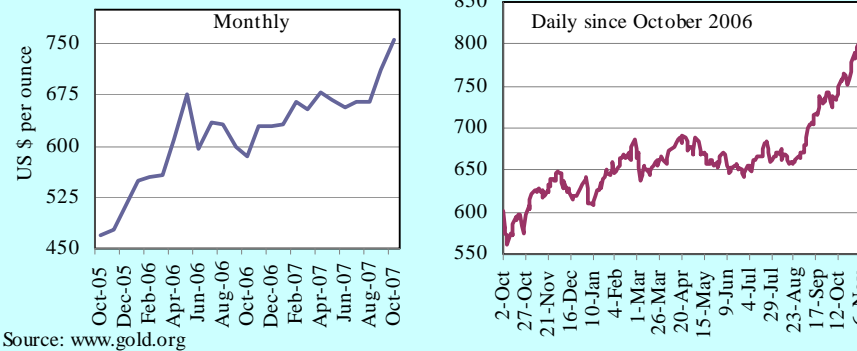
**Figure 4.2: Edible Oil Price YoY Change**

<sup>7</sup> World Bank Commodity Market Review, November 8, 2007

Among food staples, wheat prices continued to accelerate in October 2007 and exhibited a sharp YoY growth of 58.1 percent compared to 26.3 percent during the same month last year. Similarly, the price of rice in the international market exhibited a YoY increase of 8.3 percent in October 2007 compared to 6.5 percent in October 2006. However, sugar prices continued to decline in October 2007 on YoY basis and fell by 13.2 percent over the same month of last year (see **Figure 4.3**).



**Figure 4.4: Gold Prices**

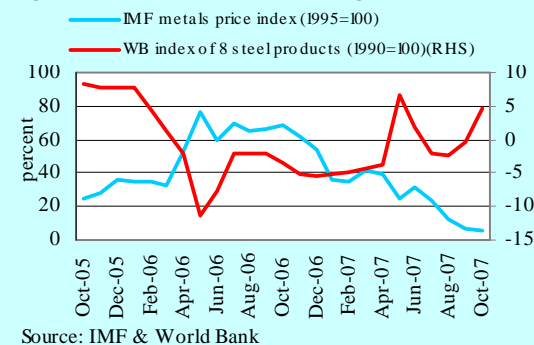


In the international market, gold prices remained strong at US\$ 754.6 per ounce in October 2007 and exhibited a ten month high YoY growth of 28.8 percent. According to the World Bank commodity market review the reason for high price of gold in the international market is safe-haven buying, expectations of rising inflation and continued dollar weakness. On a daily basis, gold price remained higher and fluctuated in a wider range, between US\$ 561 per ounce and US\$ 841 per ounce (see **Figure 4.4**).

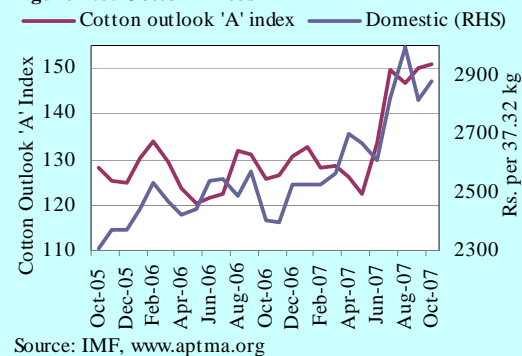
Metal prices, represented by the World Bank index of 8-steel products, showed growth of 3.3 percent in October 2007 compared to the same month last year. This rise was the result of a gain in aluminum, copper, lead, silver, tin and zinc prices. Lead was the leading performer in October 2007 and grew by 15.3 percent due to strong battery demand in China, ongoing production losses in Australia and sharply reduced exports from China. Tin prices also increased by 7.0 percent due to Indonesian government's ongoing efforts to restrict unauthorized production. Similarly nickel prices rose by 5.1 percent on expectations that stainless steel production will rebound in 2008 (see **Figure 4.5**).

In the international market, the cotton outlook A index increased significantly by 20.0 percent (YoY) in October 2007. Similarly, cotton prices in the domestic market rose significantly by 19.9 percent (YoY) during the month under review. However, on monthly basis cotton prices remained stable in the international markets seeing a marginal rise of 0.4 percent (see **Figure 4.6**).

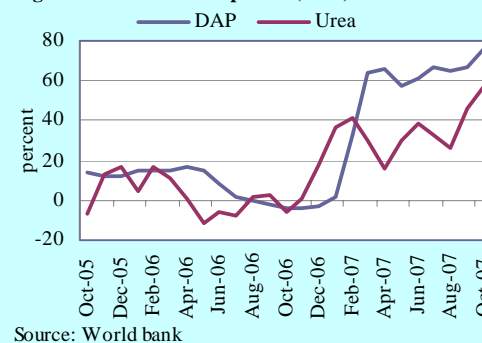
**Figure 4.5: Steel Prices (YoY Change)**



**Figure 4.6: Cotton Prices**



**Figure 4.7 : Fertilizer prices (YoY)**





Fertilizer prices remained strong in October 2007. Both DAP<sup>8</sup> and urea prices exhibited sharp YoY growth of 76.5 and 57.6 percent respectively. This rise in price levels was due to continuing strong demand for fertilizers because of high agricultural prices<sup>9</sup>. Similarly on monthly basis, prices of both DAP and urea registered growth of 4.5 and 6.3 percent respectively (see **Figure 4.7**).

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<sup>8</sup> DAP: Diammonium Phosphate

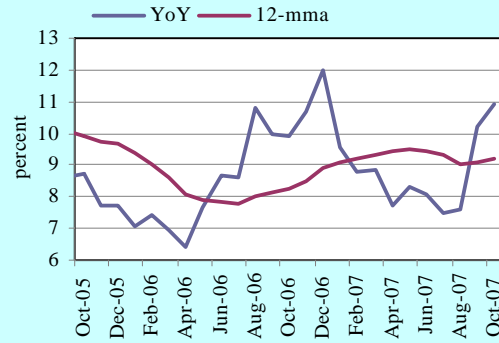
<sup>9</sup> World Bank Commodity Market Review, November 8, 2007

### 5. Sensitive Price Indicator

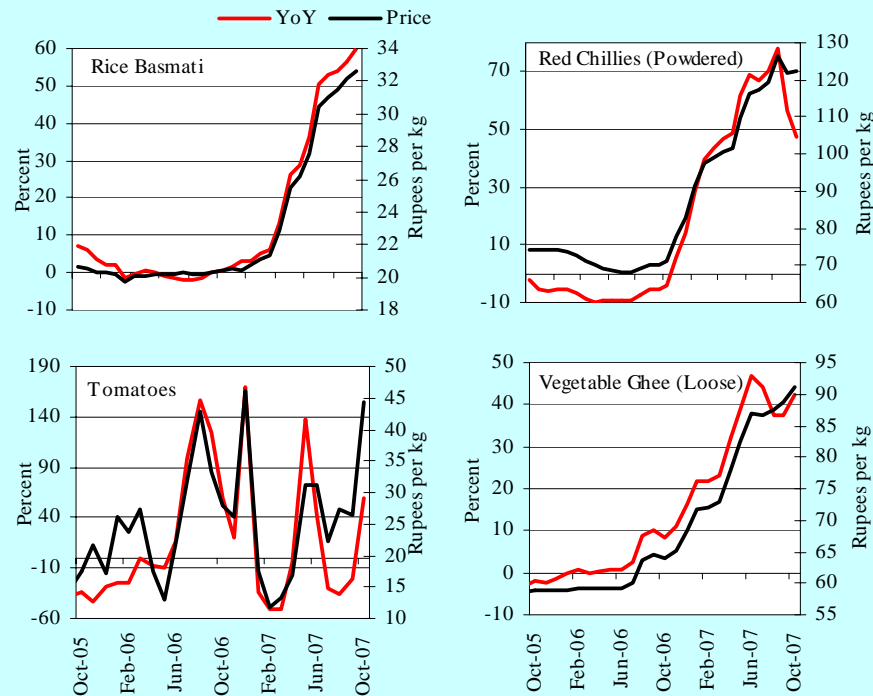
The year-on-year inflation recorded by the sensitive price indicator (SPI) continued to increase for the third consecutive month and was recorded at 10.9 percent in October 2007. This is higher than the 9.9 percent inflation recorded in the corresponding month last year. The long-run trend indicated by 12-month moving average also showed a slight increase in inflation

during the month under review, recording 9.2 percent inflation in October 2007 as compared to 9.1 percent in the previous month (see **Figure 5.1**).

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



**Figure 5.2: SPI Inflation (YoY) in selected Items**



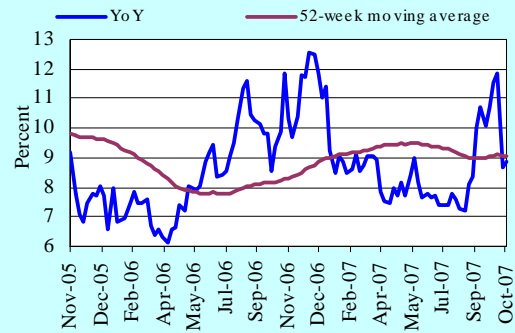
The major items contributing to higher SPI inflation were rice, mustard oil, vegetable ghee, tomatoes and red chilies (see **Figure 5.2**). In the SPI basket, 21 items recorded higher YoY inflation than the average level of 10.9 percent during October 2007. The remaining 32 items recorded lower YoY inflation than the average level of 10.9 percent with 11 items including sugar, pulse moong, gur, potatoes and garlic showing negative growth.

Compared to the prices of the previous month, almost 45 percent items included in the SPI basket witnessed either a decline or no change in the price level. On the other hand two items, i.e. tomatoes and onions, showed double digit growth in inflation compared with the previous month (see **Table A8** in Annexure A).

Weekly SPI generally showed an increasing trend in YoY inflation during the month under review. Thus, after recording weekly YoY SPI inflation of 10.1 percent in the last week of September 2007, inflation increased to 11.9 percent by the second last week of the month under review. However, the last week of October 2007 witnessed a decrease in weekly YoY SPI

inflation and was recorded at 8.7 percent. The long-run trend indicated by 52-week moving average remained stable around the 9 percent mark after continuously decreasing since June 2007 (see **Figure 5.3**).

**Figure 5.3: Weekly SPI Inflation**



During the month under review, the incidence of inflation was the highest in the lowest income group. On the other end, the least affected group was the highest income group with YoY inflation maintaining single digit growth for the tenth consecutive month (see **Table 5.1**). This is because most of the items showing high inflation are from the food group and thus are more significant for the lowest income group as compared to other income groups. However, despite being the least affected group income group-wise SPI inflation reveals that the highest income group, showed an increase in inflation as compared to the previous month.

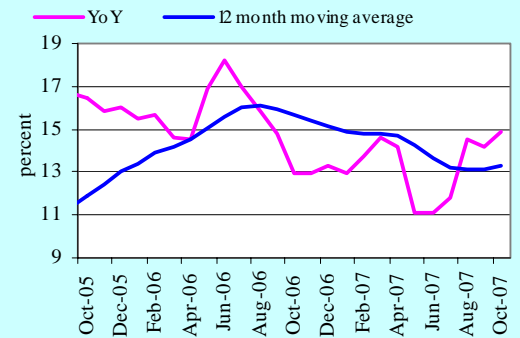
**Table 5.1 : Income Group-wise SPI Inflation (YoY)**

	percent				
	Up to Rs. 3000	Rs. 3001-5000	Rs. 5000- 12000	Above Rs. 12000	All income groups
Oct-06	11.8	11.3	11.2	9.8	9.9
Nov-06	13.4	12.7	12.2	10.1	10.7
Dec-06	14.5	14.0	13.6	11.2	12.0
Jan-07	12.1	11.3	10.7	8.5	9.5
Feb-07	10.6	10.0	9.7	7.8	8.8
Mar-07	9.7	9.5	9.4	8.0	8.9
Apr-07	8.3	8.3	8.2	6.9	7.7
May-07	9.1	9.3	9.0	7.0	8.3
Jun-07	9.7	9.6	8.9	6.2	8.0
Jul-07	9.8	9.4	8.3	5.2	7.5
Aug-07	9.2	9.0	8.1	5.5	7.6
Sep-07	8.9	12.2	11.5	8.0	10.2
Oct-07	12.7	12.6	11.6	8.2	10.9

## 6. Wage Inflation in the Construction Sector

Wage inflation accelerated in October 2007 and was recorded at 14.9 percent on YoY basis compared to 14.2 percent in the preceding month. Moreover this 14.9 percent YoY wage inflation in October 2007 is also greater than the 13 percent wage inflation recorded in the same month last year.

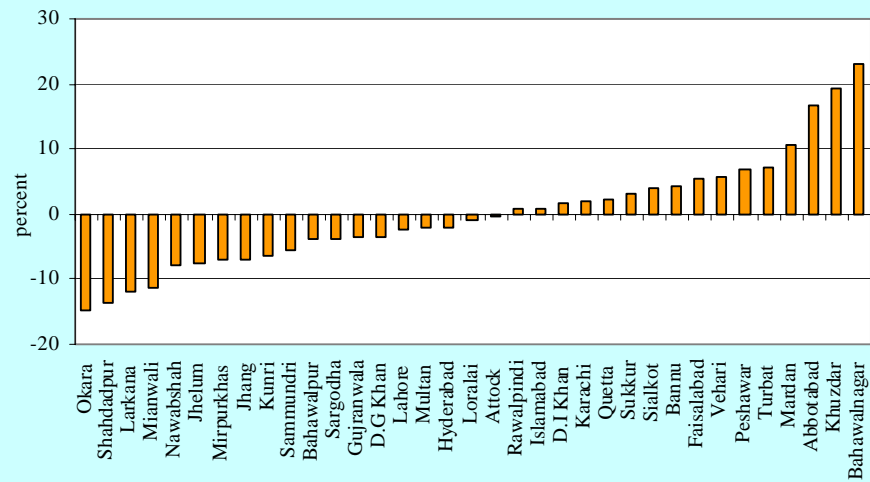
This acceleration in inflation was mainly due to skilled workers which showed higher inflation compared to both the previous month as well as the same month last year (see **Figure 6.1** and **Table 6.1**). The long run trend of nominal wage inflation, measured by 12 month moving average also increased slightly and was recorded at 13.3 percent after continuously remaining on a downward trend during the last 12 months.

**Figure 6.1: Wage Inflation**

**Table 6.1: Wage Inflation (YoY)**

	Mar- 07	Apr- 07	May- 07	Jun- 07	Jul- 07	Aug- 07	Sep-07	Oct-07
	percent							
<b>Overall</b>	14.6	14.2	11.1	11.1	11.8	14.5	14.2	14.9
<b>Skilled:</b>	<b>14.3</b>	<b>13.8</b>	<b>10.5</b>	<b>10.4</b>	<b>11.4</b>	<b>14.2</b>	<b>14.0</b>	<b>14.8</b>
Carpenter	14.6	13.7	12.8	11.9	11.9	14.8	13.6	14.4
Mason	15.2	16.0	14.2	13.5	13.4	15.9	16.6	17.1
Plumber	11.7	11.2	9.8	10.9	12.1	15.0	14.3	15.2
Electrician	15.6	14.1	5.2	5.3	8.1	11.1	11.6	12.6
<b>Unskilled:</b>	<b>17.3</b>	<b>16.8</b>	<b>14.9</b>	<b>15.6</b>	<b>14.8</b>	<b>16.4</b>	<b>15.3</b>	<b>14.8</b>
Laborer	17.3	16.8	14.9	15.6	14.8	16.4	15.3	14.8

Figure 6.2 presents the picture of city wise deviation in wages from mean during the month under review. Out of 35 cities, 16 cities recorded higher than average wage inflation and the remaining 19 cities witnessed lower than average inflation. The highest wage inflation was observed in Bahawalnagar followed by Khuzdar and Abbottabad, whereas Okara, Shahdadpur, Larkana etc., showed lowest YoY changes in the wages during October 2007.

**Figure 6.2: City-wise Wage Inflation - Difference from Mean in October 2007**

## Annexure A

Table A1: CPI Inflation (YoY) by Groups (percent)						
	Weights	Oct-03	Oct-04	Oct-05	Oct-06	Oct-07
<b>I. Food Group</b>	<b>40.3</b>	<b>4.6</b>	<b>12.3</b>	<b>6.4</b>	<b>10.5</b>	<b>14.7</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>2.8</b>	<b>6.3</b>	<b>9.6</b>	<b>6.4</b>	<b>5.4</b>
Apparel, textile, etc.	6.1	4.2	2.5	4.3	3.8	8.2
House rent	23.4	2.7	10.8	11.1	6.9	7.8
Fuel & lighting	7.3	3.2	2.2	7.6	11.3	3.1
Household furniture & equipt	3.3	3.0	6.2	5.5	6.5	6.3
Transport & com.	7.3	0.6	5.2	22.7	3.7	-3.1
Recreation & entert.	0.8	-0.9	0.1	-0.4	0.3	0.3
Education	3.5	4.4	2.7	6.6	7.1	4.2
Cleaning, laundry, etc.	5.9	4.2	4.7	2.8	3.5	8.3
Medicare	2.1	1.7	1.0	1.6	9.8	7.9
<b>Headline</b>	<b>100</b>	<b>3.5</b>	<b>8.7</b>	<b>8.3</b>	<b>8.1</b>	<b>9.3</b>

Table A2: Distribution of Price Changes of CPI Basket, October 2007 (YoY)						
Groups	% Changes	Total Number of Items	No. of Items in each Inflation Range			
			Decrease or no change	Subdued increase	Moderate increase	Double digit increase
			(0 % or less)	(0 to 5%)	(5 to 10%)	(over 10%)
<b>I. Food Group</b>	<b>14.7</b>	<b>115</b>	<b>26</b>	<b>11</b>	<b>25</b>	<b>53</b>
<b>II. Non-Food Group</b>	<b>5.4</b>	<b>250</b>	<b>74</b>	<b>76</b>	<b>74</b>	<b>26</b>
Apparel, textile, etc.	8.2	42	2	18	18	4
House rent	7.8	1			1	
Fuel & lighting	3.1	15	9		1	5
Household furniture & equipt	6.3	44	2	15	24	3
Transport & com.	-3.1	43	24	12	5	2
Recreation & entert.	0.3	16	10	3	1	2
Education	4.2	24	8	8	6	2
Cleaning, laundry, etc.	8.3	36		20	9	7
Medicines	7.9	29	19		9	1
<b>Overall</b>	<b>9.3</b>	<b>365</b>	<b>100</b>	<b>87</b>	<b>99</b>	<b>79</b>
Note: Prices of 9 seasonal items were not reported during the month.						

**Table A3: Top Ten Contribution to YoY CPI Inflation in October 2007**

	Items	weights	YoY change		Weighted Contribution
			Oct 06	Oct 07	
A. Ranked by Weighted Contribution					
1	House Rent Index	23.43	6.88	7.81	19.43
2	Wheat Flour	5.11	1.81	22.85	11.87
3	Vegetable Ghee	2.67	6.77	36.82	10.39
4	Milk Fresh	6.66	11.29	12.98	9.75
5	Rice	1.34	2.77	55.85	7.19
6	Tomatoes	0.50	83.51	100.08	5.99
7	Onions	0.64	42.24	46.31	4.02
8	Electricity	4.37	0.00	10.07	3.64
9	Vegetables	1.80	10.72	12.55	3.18
10	Meat	2.70	12.61	6.36	2.72
	Total	49.21	-	-	78.18
B. Ranked by Percentage Change					
1	Tomatoes	0.50	83.51	100.08	5.99
2	Rice	1.34	2.77	55.85	7.19
3	Onions	0.64	42.24	46.31	4.02
4	Mustard Oil	0.05	8.98	38.25	0.17
5	Vegetable Ghee	2.67	6.77	36.82	10.39
6	Eggs	0.41	-15.00	36.50	1.50
7	Milk Powder	0.11	3.90	30.09	0.33
8	Pulse Masoor	0.22	-4.67	29.31	0.58
9	Cooking Oil	0.69	5.04	29.04	2.03
10	Wheat	0.48	3.09	23.09	1.15
	Total	7.09	-	-	33.35
C. Ranked by Weights					
1	House Rent Index	23.43	6.88	7.81	19.43
2	Milk Fresh	6.66	11.29	12.98	9.75
3	Wheat Flour	5.11	1.81	22.85	11.87
4	Electricity	4.37	0.00	10.07	3.64
5	Bakery & Confectionary	2.98	5.06	3.97	1.06
6	Meat	2.70	12.61	6.36	2.72
7	Vegetable Ghee	2.67	6.77	36.82	10.39
8	Tution Fees	2.36	8.56	4.84	1.20
9	Transport Fare/Charges	2.12	3.58	1.74	0.48
10	Natural Gas	2.05	25.66	-5.90	-2.04
0	Total	54.45	-	-	58.50

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 9.3 percent in October 2007.

**Table A4: Distribution of Price Changes - Selected CPI Items, October 2007**

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Grapes Sugar Refined Pulse Moong (Washed) Chillies Green Ginger Potatoes	Pulse Mash (Washed) Rooh Afza Salt-Powdered (Lahori) Loose Betel Nuts Chocolate Candy (Small Size) Cold Drink (Standard Size)	Beef With Bone Av.Qlty. Tea Prepared (Ordinary) Mutton Av.Qlty. Biscuits-Packed Turmeric Powd.National 250Gm, Almonds Whole Av.Qlty. Pistachio Av.Qlty.	Maida Wheat Flour Bag Cooking Oil (Dalda) Vegetable Ghee Tin, Eggs Farm Onion Rice Basmati Sup. Qlty., Tomatoes
<b>Apparel &amp; Textile</b>	Gents Shoes Paul Bata Ladies Sandal Bata	School Uni. Pant,Shirt Boys Awami-Suit W & W(Boy) 24"/26 Lawn Av.Qlty.	Tailoring Shirt Shirting Av.Qlty. Linen Av.Qlty	Gents Sandal Bata
<b>House Rent Index</b>			House rent index	
<b>Fuel &amp; Lighting</b>	Gas Chrg10.1157 - 13.4876Mmb Tube Light Philips 40 Watts Kerosene Oil		Gas Cylinder Stand. Size	Elect.Charges 101 - 300 Unit Elect.Charges 01 - 100 Unit Firewood Whole
<b>H/hold Furniture</b>	Carpet Plain Av. Qlty Sewing Machine(Singer)	Matress Single(4"Thick) Water Cooler 9/10 Ltr.Plasti Blanket (90" X 54")	Farshi Dari 12'X9' Av.Qlty Almirah (Steel) 6'X3' 20 Gua Dinning Table 6 Chairs	Table Shesham Wood (4X2X5") Marriage Hall With Furniture Airconditioner
<b>Transport &amp; Comm.</b>	Tel Charges Out Side City Petrol Super Motorcycle Honda Cd-70. Motorcycle Yamaha 100Cc.	Minibus Fare Max.With In Cit Car Suzuki 800 Cc (W/O. A/C) Tyre Car With Tube General Car Service Charges	Full Tonga Charges T.C.S. Ch. Min.With In Zone Tyre Cycle Specify Brand Nam Taxi 4 Seater Fare	Tyre Motor Cycle Without Tub Air Fare Economy Class.
<b>Recreation &amp; Entertainment</b>	T.V. 20" Colored With R/Cont Video Game Sega 16 Byte, V.C.P., Panasonic/Lg/Nat	Vid. Cassette Blk. Tdk/Sony Radio With C.Player National, Cinema A/C. Highest Class	Cinema Non-A/C High Class	Dry Cell 1.5 Volt(Local) Weekly "Akhbar-E-Jahan"
<b>Education</b>	Urdu Book Ist.Year/Inter Urdu Book Class V (T.B.Bord) English Book Class V1	Eng. Book Ist.Yr Complete Se Pen Ink Dollor 57 MI Bottle English Book Class Ix Or X	School Fee 2Nd-Ry Eng.Med. School Fee Primary Eng.Med. Paper Foolscape (27"X17")	Ball Pen (Local) Urdu Book Class Ix/X(T.B.B)
<b>Cleaning &amp; Laundry</b>		Surf (Medium) Toothpaste Macklines Wrist Watch Gents Citizen Tissu Paper Perfumed	Toothbrush Sheild Washing Powder Shampoo Plain Medora Dry Cleaning Suit Coat Pant	Washing Soap Nyl(135-160Gms) Shaving Cream Touch-Me/Adm. Toilet Soap Lux Gold Tezabi 24 Ct
<b>Medicare</b>	Phenergan Syrup Panadol Tab. Extra/Plain, Disprin	Amoxil Capsole Flagyl Tab. 200 Mg. Galxos-D (450 Grms)		Doctor Fee



**Table A5: City-wise Inflation (YoY) by Income Groups, October 2007**

		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	9.2	13.6	6.3	9.5	14.2	6.3
2	Faisalabad	11.8	21.4	5.3	12.9	21.3	7.2
3	Rawalpindi	9.1	11.7	7.3	9.8	13.4	7.4
4	Multan	11.9	17.1	8.3	12.0	17.9	7.9
5	Gujranwala	12.4	17.9	8.6	13.6	18.9	10.0
6	Islamabad	10.9	13.6	9.0	11.2	14.2	9.1
7	Sargodha	9.5	13.5	6.8	9.4	13.6	6.5
8	Sialkot	10.1	15.8	6.3	10.0	15.7	6.2
9	Bahawalpur	12.1	17.8	8.3	12.1	18.3	8.0
10	Karachi	11.5	17.4	7.6	12.0	18.6	7.6
11	Hyderabad	12.8	16.6	10.2	12.6	16.6	9.9
12	Sukkur	12.5	18.3	8.6	12.1	17.2	8.6
13	Larkana	10.9	15.8	7.7	11.4	15.9	8.4
14	Peshawar	11.1	15.1	8.4	11.9	16.5	8.8
15	Bannu	11.0	11.8	10.4	11.7	12.0	11.5
16	Quetta	13.5	19.8	9.3	11.8	18.6	7.3
17	Khuzdar	11.0	13.7	9.1	10.8	13.2	9.1
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	8.7	14.0	5.1	6.8	12.4	3.0
2	Faisalabad	11.5	20.6	5.4	8.5	19.5	1.1
3	Rawalpindi	9.4	13.2	6.8	7.9	12.7	4.7
4	Multan	10.8	17.6	6.3	8.6	15.3	4.1
5	Gujranwala	12.8	18.1	9.3	11.2	16.0	7.9
6	Islamabad	10.4	14.8	7.4	8.6	13.0	5.6
7	Sargodha	8.9	13.3	6.0	6.8	12.5	3.0
8	Sialkot	9.5	16.0	5.2	8.1	15.1	3.3
9	Bahawalpur	11.3	18.6	6.3	8.7	17.5	2.7
10	Karachi	11.4	17.7	7.1	8.6	16.2	3.5
11	Hyderabad	12.4	17.0	9.3	10.6	15.8	7.1
12	Sukkur	11.2	16.3	7.7	10.2	15.3	6.7
13	Larkana	10.5	15.4	7.3	8.4	13.0	5.3
14	Peshawar	10.4	16.3	6.4	8.1	15.1	3.4
15	Bannu	11.8	12.9	11.0	10.2	12.1	8.9
16	Quetta	10.7	17.6	5.9	9.2	16.4	4.3
17	Khuzdar	11.0	14.4	8.7	8.5	12.0	6.1

Table A6 : Income Group-wise Inflation (YoY)								percent
	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07
<u>Up to Rs. 3000</u>								
General	7.8	6.9	7.7	7.7	7.5	7.3	9.9	11.2
Food	9.1	7.7	9.6	9.3	8.7	8.4	13.0	14.9
Non-food	6.8	6.3	6.3	6.6	6.7	6.5	7.6	8.5
<u>Rs. 3001-5000</u>								
General	7.9	7.2	8.0	7.9	7.5	7.3	9.9	11.2
Food	9.3	8.0	10.2	9.6	8.8	8.6	13.4	15.4
Non-food	6.9	6.5	6.5	6.8	6.6	6.5	7.4	8.2
<u>Rs. 5000-12000</u>								
General	7.8	7.1	7.8	7.5	6.9	6.9	9.1	10.2
Food	10.1	8.8	10.9	9.7	8.6	8.7	13.2	15.0
Non-food	6.2	5.9	5.7	5.9	5.6	5.6	6.1	6.7
<u>Above Rs. 12000</u>								
General	7.5	6.7	6.9	6.3	5.6	5.8	7.3	8.0
Food	12.2	10.8	12.3	9.8	8.1	8.6	12.6	13.9
Non-food	4.3	3.9	3.1	3.9	3.8	3.7	3.4	3.6
<u>All income groups</u>								
General	7.7	6.9	7.4	7.0	6.4	6.5	8.4	9.3
Food	10.7	9.4	11.3	9.7	8.5	8.6	13.0	14.7
Non-food	5.5	5.2	4.7	5.1	4.9	4.9	5.0	5.4

Table A7: Distribution of Price Change (YoY)--WPI Items: October 2007

Decrease or no change		Subdued increase (upto 5%)	Moderate increase (5 to 10%)	More than 10% increase
Food	Gur			Spices
	Potatoes			Oil Cakes
	Sugar Refined			Fresh Milk
	Moong			Cooking Oil
	Gram Split	Mineral Water		Dry Fruits
	Besan	Jowar		Powdered Milk
	Gram Whole	Meat		Beans
	Mash	Fresh Fruits	Vegetables	Maida
	Vegetables	Fish	Prepared/Preserved	Wheat
	Tea	Salt	Fruit	Wheat Flour
	Beverages	Chicken	Prepared/Preserved	Masoor
	Sugar Confectionary	Condiments	Milk Food	Onions
				Eggs
				Maize
Raw material				Mustard & Rapeseed Oil
				Bajra
				Vegetable Ghee
				Cotton Seed Oil
Fuel & lighting				Rice
				Tomatoes
				Sugar Cane
				Mustard/Rapeseeds
				Cotton
Manufactures				Hides
				Pig Iron
				Mobil Oil
				Fire Wood
				Electricity Ind.
				Supply Tariff-B
				Elec. Agriculture
				Furnace Oil
				Coke
Building material				

Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Price Oct 07	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	14.6	23.6	4.4
2	Wheat flour a.qlt.	Kg.	16.2	24.0	0.2
3	Rice basmti.broken	Kg.	32.7	59.9	1.6
4	Rice irri-6	Kg.	23.6	46.4	0.1
5	Masur pulse washed	Kg.	55.9	34.3	1.4
6	Moong pulse washed	Kg.	50.5	-10.4	-1.3
7	Mash pulse washed	Kg.	70.4	2.1	-0.3
8	Gram pulse washed	Kg.	40.6	-5.0	-0.4
9	Beef	Kg.	121.0	4.5	0.2
10	Mutton	Kg.	232.8	5.8	0.2
11	Egg hen (farm)	Doz.	49.0	37.3	6.8
12	Bread plain m.s.	Each	17.2	11.9	1.7
13	Sugar	Kg.	29.5	-10.1	-1.0
14	Gur	Kg.	36.8	-15.5	0.4
15	Milk fresh	Litr	29.3	12.6	0.2
16	Milk powdered nido	400g	145.1	31.4	0.3
17	Curd	Kg.	34.5	12.6	0.0
18	Veg.ghee tin	2.5k	275.3	29.3	0.0
19	Veg.ghee loose	Kg.	91.1	42.5	2.7
20	Mustard oil	Kg.	100.4	41.8	4.9
21	Cooking oil	2.5l	275.3	29.1	0.0
22	Potatoes	Kg.	18.7	-19.6	2.8
23	Onions	Kg.	24.3	2.1	10.4
24	Tomatoes	Kg.	44.4	59.5	67.3
25	Bananas	Doz.	31.8	-2.5	-0.5
26	Salt powdered	Kg.	4.9	4.0	0.0
27	Red chillies(powd)	Kg.	122.3	47.4	0.5
28	Garlic	Kg.	52.0	-13.6	0.1
29	Tea packet	250g	65.0	-5.7	0.0
30	Tea (prepared)	Cup	6.6	5.1	0.0

continued

S.No	Items	Unit	Price Oct 07	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	31.8	8.0	0.0
32	Cooked dal plate	Each	19.1	7.5	0.2
33	Cigarettes k-2	10's	8.4	5.2	-2.1
34	Coarse latha	Mtr.	38.3	9.8	2.9
35	Lawn (avg.+s.qlty)	Mtr.	80.8	2.7	-0.3
36	Voil printed	Mtr.	38.8	2.9	0.2
37	Shirting	Mtr.	70.5	7.8	1.7
38	Sandel gents bata	Pair	499.0	25.1	0.0
39	Sandel ladies bata	Pair	299.0	0.0	0.0
40	Chappal spng. Bata	Pair	99.0	11.2	0.0
41	Kerosene	Litr	39.5	1.0	0.2
42	Firewood	40kg	208.4	12.4	1.4
43	Elec. Bulb 60-wats	Each	12.4	3.3	1.8
44	Match box	Each	0.9	26.9	0.0
45	Washing soap	Cake	8.9	9.4	0.7
46	Bath soap lifebuoy	Cake	16.6	19.3	7.9
47	Chicken (farm)	Kg.	87.1	7.9	-1.3
48	Gas chrg. All clb. Comb	D.mmbt	224.7	-7.8	0.0
49	L.p.g .(cylinder 11kg.)	Each	647.7	6.4	5.8
50	Elec.chrg.all slabs com	Bd. Unit	5.1	9.9	0.0
51	Petrol	Litr	53.8	-6.9	0.0
52	Diesel	Litr	37.9	-2.6	0.0
53	Telephone local	Call	2.3	0.0	0.0
<b>Max:</b>				<b>59.9</b>	<b>67.3</b>
<b>Median</b>				<b>7.8</b>	<b>0.2</b>
<b>Min:</b>				<b>-19.6</b>	<b>-2.1</b>

**Table A9: Daily Labor Wages (Rs. per day) - Average of 35 Cities**

	<b>Carpenter</b>	<b>Mason</b>	<b>Laborer</b>	<b>Plumber</b>	<b>Electrician</b>	<b>Average</b>
Annual Averages						
FY03	218	225.4	107.7	219.8	216.4	197.4
FY04	224.5	237.4	114.5	225	221.9	204.6
FY05	245.8	261.4	129.5	245.5	240.3	224.5
FY06	283.2	306.0	154.7	283.2	270.1	259.4
FY07	319.9	350.2	180.3	315.7	308.1	294.8
Monthly Averages						
Sep-06	312.4	338.2	173.7	310.1	303.7	287.6
Oct-06	313.9	340.3	176.9	310.4	303.7	289.0
Nov-06	315.0	342.2	178.4	311.8	304.8	290.4
Dec-06	318.1	347.6	180.7	315.5	306.9	293.8
Jan-07	320.2	349.0	181.5	316.3	307.9	295.0
Feb-07	324.1	354.7	182.9	319.8	308.3	298.0
Mar-07	328.4	359.7	184.9	321.5	311.7	301.2
Apr-07	330.8	364.1	186.2	323.6	313.2	303.6
May-07	331.1	365.3	188.0	321.3	313.2	303.8
June-07	334.9	374.0	191.5	330.2	318.2	309.7
Jul-07	339.9	377.4	193.9	338.4	326.4	315.2
Aug-07	351.2	387.9	198.3	351.6	337.3	325.2
Sep-07	354.8	394.2	200.3	354.3	338.8	328.5
Oct-07	359.1	398.5	203.1	357.6	341.9	332.1
Source: Federal Bureau of Statistics						

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities

Item and Specification	Weights	Index	
		Oct-06	Oct-07
<b>GENERAL</b>	<b>100.001</b>	<b>140.57</b>	<b>153.66</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3416</b>	<b>146.67</b>	<b>168.18</b>
1 WHEAT	0.483	135.92	167.31
2 WHEAT FLOUR	5.1122	133.59	164.11
3 MAIDA	0.1059	129.65	157.22
4 BESAN	0.132	155.45	147.95
5 RICE	1.3369	126.58	197.27
6 PULSE MASOOR	0.2214	116.94	151.22
7 PULSE MOONG	0.223	189.01	170.18
8 PULSE MASH	0.2017	152.21	155.43
9 PULSE GRAM	0.4272	146.68	140.78
10 GRAM WHOLE	0.1491	141.78	135.81
11 MUSTARD OIL	0.0456	127.85	176.75
12 COOKING OIL	0.6858	133.93	172.82
13 VEGETABLE GHEE	2.6672	139.10	190.31
14 SUGAR	1.9467	119.53	107.31
15 GUR	0.0735	166.80	138.91
16 TEA	1.2559	113.78	108.76
17 MILK FRESH	6.6615	148.25	167.49
18 MILK POWDER	0.1105	130.23	169.41
19 MILK PRODUCTS	0.5607	135.31	153.79
20 HONEY	0.0358	130.17	130.17
21 CEREALS	0.0878	129.38	146.01
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	120.79	135.19
23 BEVERAGES	0.7286	129.69	137.51
24 CONDIMENTS	0.3392	111.88	121.14
25 SPICES	0.6008	106.79	130.61
26 DRY FRUIT	0.276	200.40	224.53
27 BAKERY & CONFECTIONARY	2.9837	117.39	122.05
28 CIGARETTES	0.9527	147.35	157.83
29 BETEL LEAVES & NUTS	0.1851	133.28	142.14
30 READYMADE FOOD	1.6833	151.26	162.76
31 SWEETMEAT & NIMCO	0.3846	148.36	165.39
32 FISH	0.2703	141.55	147.28
33 MEAT	2.6981	208.22	221.47
34 CHICKEN FARM	0.9158	152.00	172.94
35 EGGS	0.4119	131.10	178.95
36 POTATOES	0.5542	240.29	208.10
37 ONIONS	0.5973	179.47	262.58
38 TOMATOES	0.4569	158.81	317.75
39 VEGETABLES	1.9165	185.12	208.36
40 FRESH FRUITS	1.616	162.25	169.49
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>121.02</b>	<b>130.97</b>
41 COTTON CLOTH	1.6197	127.08	134.93
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	124.04	131.44
43 TAILORING CHARGES	0.8636	126.04	134.03
44 HOSIERY	0.1528	133.44	140.51
45 READYMADE GARMENTS	1.2038	121.13	125.57
46 WOOLEN READYMADE GARMENTS	0.1485	133.60	138.52
47 FOOTWEAR	1.5327	108.10	127.45
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>139.53</b>	<b>150.43</b>
48 HOUSE RENT INDEX (Combined)	23.4298	139.53	150.43
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>148.12</b>	<b>152.76</b>
49 KEROSENE	0.1366	235.87	235.87
50 FIREWOOD	0.4778	197.84	225.03
51 MATCH BOX	0.1301	100.00	100.00
52 BULB & TUBE	0.1311	87.64	86.73

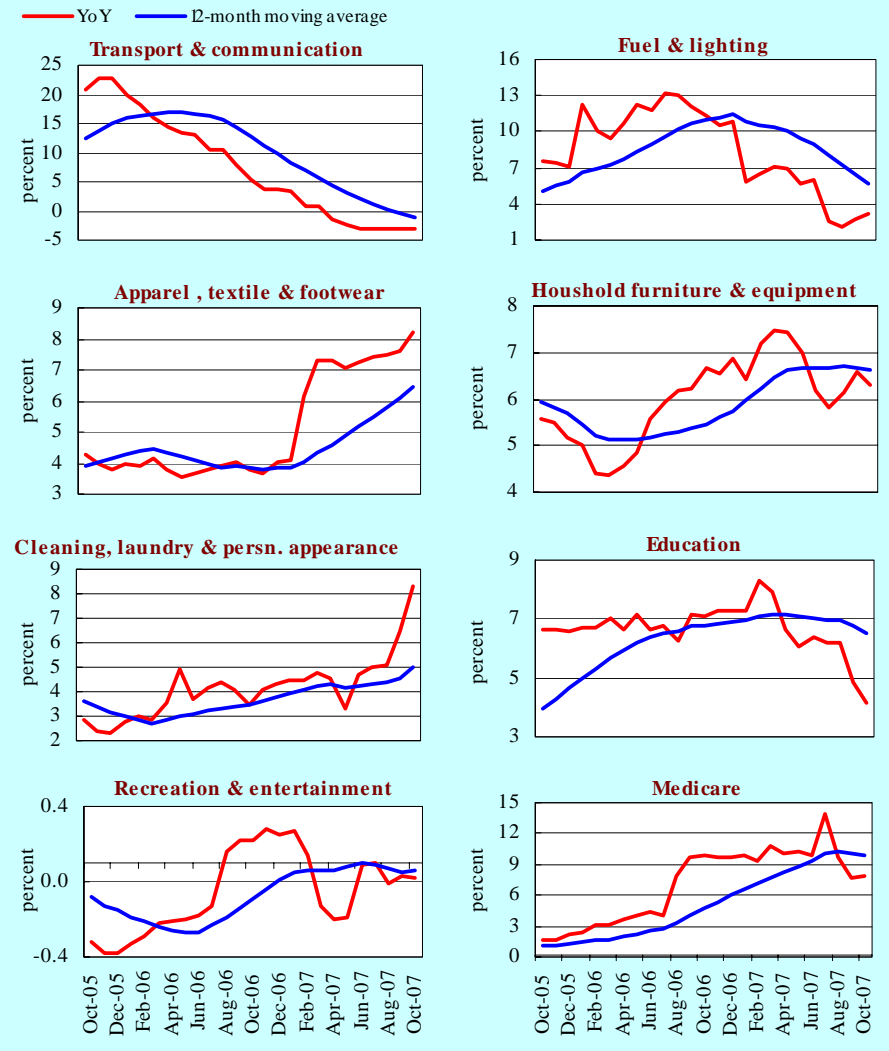
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Table A10 (continued)

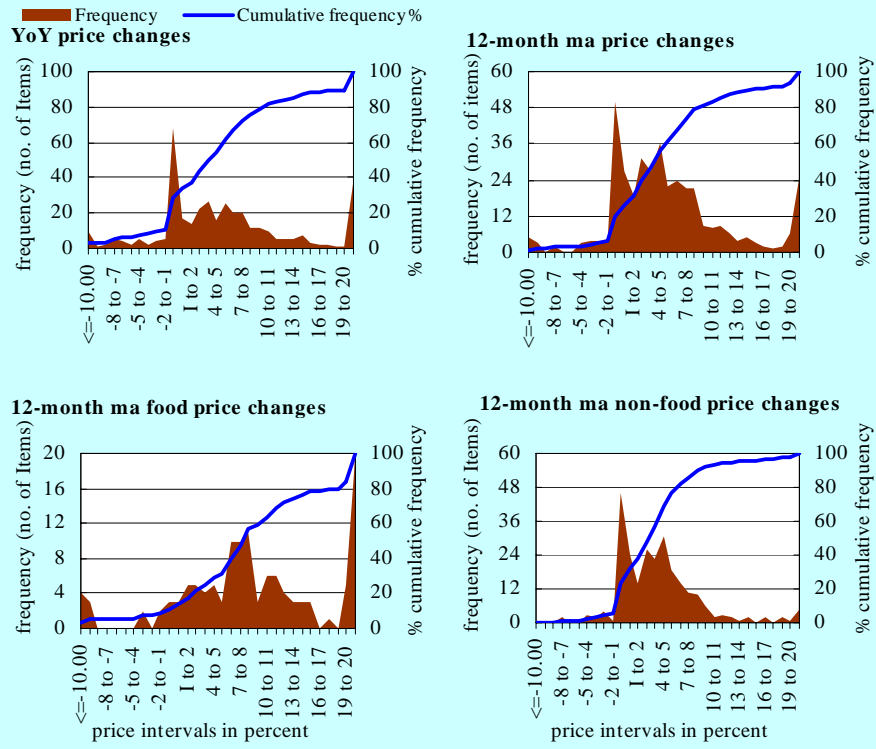
Item and Specification	Weights	Index	
		Oct-06	Oct-07
53 ELECTRICITY	4.3698	108.59	119.53
54 NATURAL GAS	2.0458	222.02	208.92
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>	<b>3.2862</b>	<b>129.86</b>	<b>137.99</b>
55 UTENSILS	0.369	118.56	123.33
56 PLASTIC PRODUCTS	0.1055	136.3	143.7
57 SUITCASE	0.047	119.79	127.02
58 HOUSE HOLD EQUIPMENTS	0.0953	117.63	123.4
59 FURNITURE (Ready Made)	0.3054	128.29	138.93
60 FURNISHING	0.6362	126.19	132.95
61 ELECT.IRON FANS & WASHING MACHINE	0.1889	119.32	125.99
62 SEWING MACHINE,CLOCK AND NEEDLES	0.127	117.09	118.9
63 REFRIGERATOR & AIRCONDITIONER	0.1756	94.99	100.68
64 MARRIAGE HALL	0.0445	136.4	151.24
65 HOUSE HOLD SERVANT	1.1918	144.45	155.02
<b>TRANSPORT &amp; COMMUNICATION.</b>	<b>7.3222</b>	<b>151.44</b>	<b>146.76</b>
66 PETROL	1.7253	188.63	175.59
67 DIESEL	0.207	245.02	238.74
68 CNG. FILLING CHARGES	0.1649	138.02	142.87
69 SERVICE CHARGES	0.3835	128.87	134.39
70 VEHICLES	0.2596	100.27	101.16
71 TYRE & TUBE	0.2831	120.45	125.4
72 TRANSPORT FARE/CHARGES	2.1236	170.32	173.29
73 TRAIN FARE	0.1514	170.01	170.01
74 AIR FARE	0.0983	218.72	253
75 COMMUNICATION	1.9255	99.43	86.6
<b>RECREATION &amp; ENTERTAINMENT.</b>	<b>0.8259</b>	<b>105.86</b>	<b>106.21</b>
76 RECREATION	0.3399	100.00	101.91
77 ENTERTAINMENT	0.486	109.96	109.22
<b>EDUCATION.</b>	<b>3.4548</b>	<b>133.20</b>	<b>138.74</b>
78 TUTION FEES	2.3629	138.47	145.17
79 STATIONERY	0.35	120.23	128.57
80 TEXT BOOKS	0.6894	125.54	126.17
81 COMPUTER & ALLIED PRODUCTS	0.0525	83.05	82.10
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>	<b>5.8788</b>	<b>122.56</b>	<b>132.77</b>
82 WASHING SOAP & DETERGENT	1.5535	113.68	121.68
83 TOILET SOAP	0.7436	118.33	144.11
84 TOOTH PASTE	0.4036	105.18	108.2
85 SHAVING ARTICLES	0.348	108.1	117.3
86 COSMETICS	1.4272	122.23	126.84
87 WATCHES	0.0552	118.84	121.56
88 JEWELLERY	0.3936	179.98	212.47
89 LAUNDRY CHARGES	0.2207	137.02	147.49
90 HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	127.83	130.84
<b>MEDICARE.</b>	<b>2.0728</b>	<b>120.26</b>	<b>129.75</b>
91 DRUGS & MEDICARES	1.0752	106.64	107.05
92 DOCTOR'S FEE	0.9976	134.93	154.2



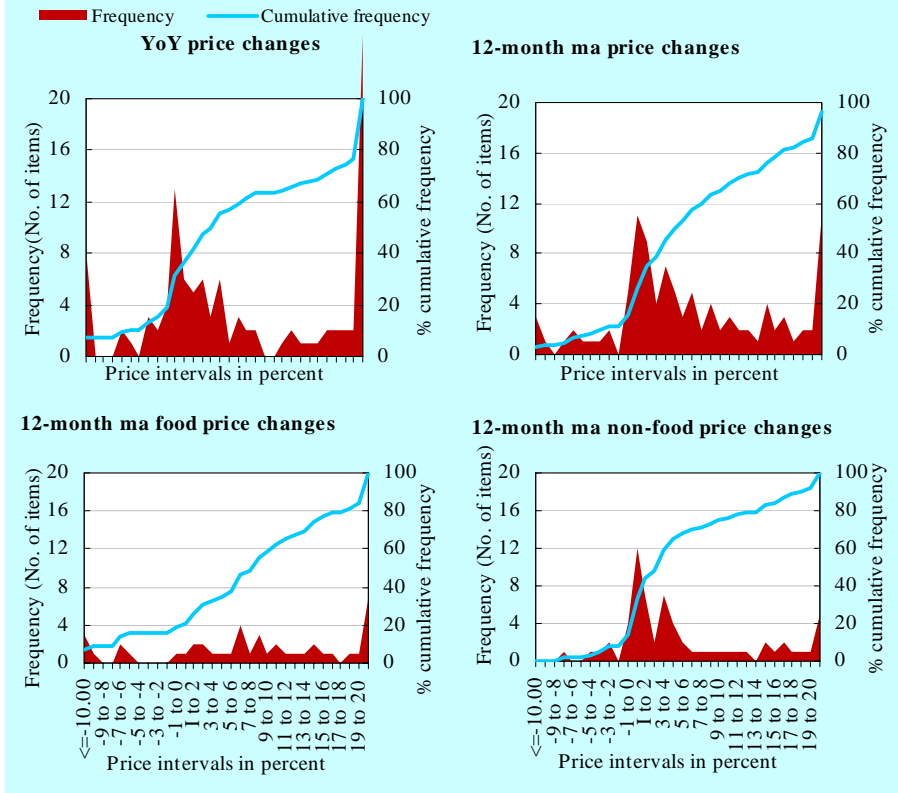
**Figure A1: CPI Non-food Sub-indexes' Inflation**



**Figure A2: Frequency Distribution of Price Changes of CPI Items, October 2007**



**Figure A3: Frequency Distribution of Price Changes of WPI Items, October 2007**



## 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