

# **Inflation Monitor**

**September 2007**



**State Bank of Pakistan**

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## Overview

Headline CPI inflation, on an year-on-year (YoY) basis, declined to 8.4 percent in September 2007 from 8.7 percent in the same month last year. In September 2007, food inflation showed acceleration at 13 percent compared to 11.3 percent in the corresponding month last year. This was mainly due to an increase in the prices of some key food items including onion, wheat, rice, egg, vegetable ghee etc. In contrast, non-food CPI inflation (YoY) declined to 5.0 percent in the month under review compared to 7.0 percent in September 2006 (see **Table 1.1**).

**Table 1.1: Inflation (YoY)**

							Percent
	CPI			Core Inflation <sup>3</sup>		WPI	SPI <sup>2</sup>
	General	Food	Non-food	NFNE <sup>1</sup>	Trimmed		
Sep-06	8.7	11.3	7.0	6.6	7.2	8.0	10.0
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

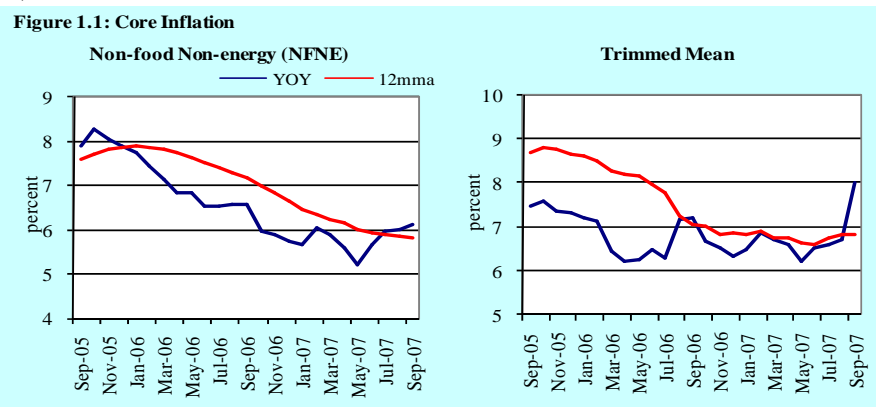
<sup>1</sup> NFNE is Non-food non-energy inflation; <sup>2</sup> SPI for all income groups combined.

<sup>3</sup> The series of core inflation is new. For detail see 'Special Section' of Inflation Monitor of July 2007 (pages 26-49).

The annual trend measured by 12-month moving average CPI inflation showed a decline in September 2007 compared to the same period last year (7.4 percent in September 2007 compared to 7.9 percent in September 2006). While the corresponding food inflation depicted a rise (10.3 percent in September 2007 compared to 7.4 percent in September 2006) and non-food inflation showed a decline (5.4 percent in September 2007 compared to 8.3 percent in September 2006).

In contrast to YoY CPI inflation, monthly CPI inflation showed an increase in September 2007 and was recorded at 2.1 percent, which was more than the five-year average of monthly increases in September. This increase in overall monthly CPI inflation was primarily due to a significant increase in food inflation for September 2007 which was recorded at 4.2 percent compared to the 0.1 percent inflation in September 2006. The monthly non-food inflation also showed an increase and was recorded at 0.6 percent in September 2007 compared to 0.4

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



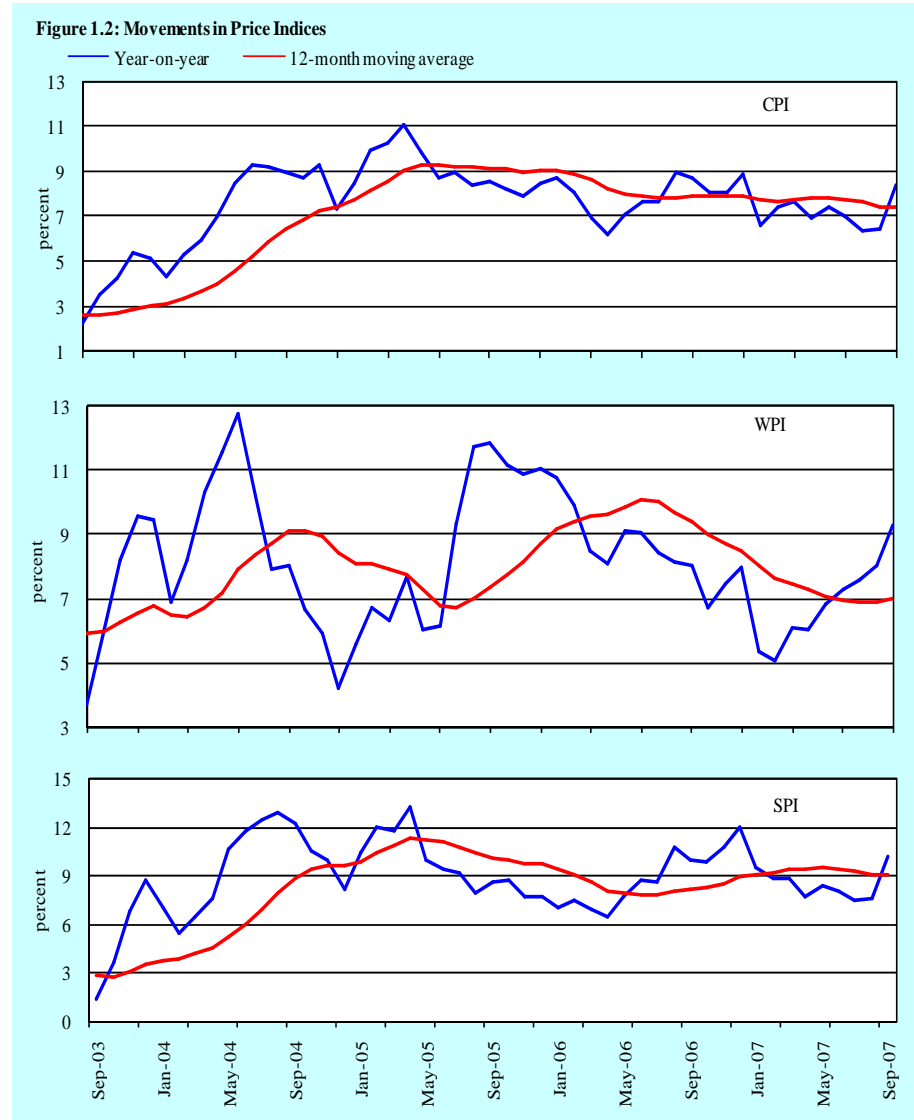
Core inflation based on NFNE (non-food non-energy) declined to 6.1 percent in September 2007 from 6.6 percent in September 2006 on YoY basis. Whereas, core inflation based on 20 percent trimmed-mean showed acceleration and was recorded at 8.0 percent in September 2007 compared to 7.2 percent in September 2006 (see **Figure 1.1**).

The Wholesale Price Index (WPI) inflation witnessed a downtrend through most of the FY07, falling to 5.1 percent (YoY) during February 2007, before beginning a steady upward trend. This uptrend has persisted during FY08 with the WPI recording a 9.3 percent YoY inflation during September 2007 compared to 8.0 percent in September 2006. WPI food and WPI non-food inflation also

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

	Sep-05	Sep-06	Sep-07	5-year average
<b>Year-on-year (Sep over Sep)</b>				
Overall CPI	8.5	8.7	8.4	7.4
Food group	7.5	11.3	13.0	9.3
Non-food group	9.3	7.0	5.0	6.0
Core Inflation				
NFNE	7.9	6.6	6.1	6.0
Trimmed	7.5	7.2	8.0	6.7
<b>Period average (Jul-Sep over Jul-Sep)</b>				
Overall CPI	8.6	8.4	7.1	7.0
Food group	8.4	9.9	10.0	8.6
Non-food group	8.8	7.4	4.9	6.0
Core Inflation				
NFNE	7.9	6.6	6.0	5.9
Trimmed	7.8	7.0	7.1	6.4
<b>12-month moving average</b>				
Overall CPI	9.1	7.9	7.4	6.7
Food group	11.0	7.4	10.3	8.0
Non-food group	7.8	8.3	5.4	5.8
Core Inflation				
NFNE	7.6	7.2	5.8	5.6
Trimmed	8.6	6.8	6.8	6.1
<b>Monthly (Sep over Aug)</b>				
Overall CPI	0.5	0.3	2.1	0.4
Food group	0.0	0.1	4.2	0.4
Non-food group	0.9	0.4	0.6	0.5
Core Inflation				
NFNE	0.5	0.5	0.6	0.5
Trimmed	0.4	0.5	0.8	0.5

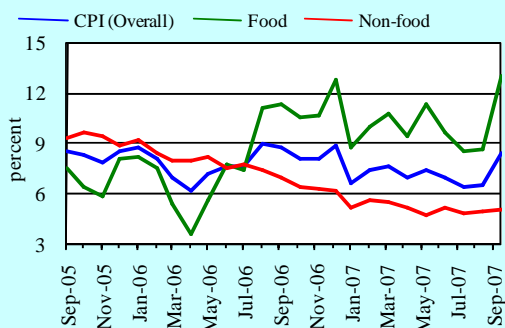
trended upwards since February 2007, though by September 2007, the latter was still below that in September 2007. The SPI (YoY) also showed an increase in September 2007 and was recorded at 10.2 percent compared to 10.0 percent in the corresponding month last year.



## 2. Consumer Price Inflation

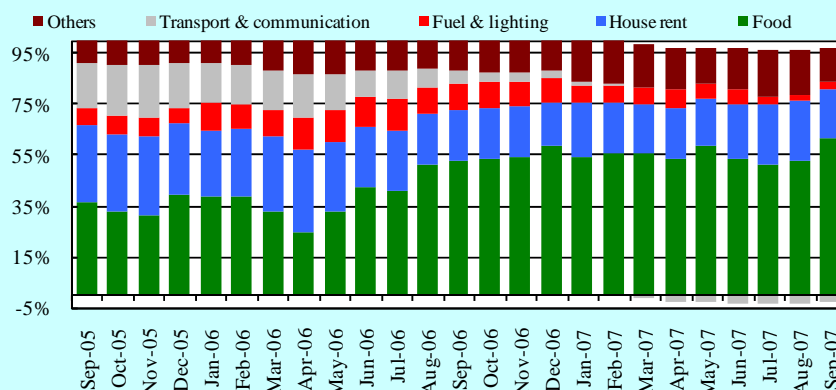
Overall CPI inflation (YoY) was recorded at 8.4 percent in September 2007 as compared to 8.7 percent in September 2006. Food inflation (YoY) accelerated and was recorded at 13 percent during the month under review as compared to 11.3 percent in the corresponding month last year. However non-food inflation (YoY) declined and was recorded at 5.0 percent in September 2007 compared to 7.0 percent in September 2006 (see **Figure 2.1**).

**Figure 2.1: Consumer Price Inflation**



The contribution of food group in overall inflation was 65.1 percent in September 2007 which is higher than the 52.9 percent during the corresponding month last year. The contribution of house rent index (the largest item of the CPI basket) increased to 20.7 percent in September 2007 from 19.6 percent during the corresponding month last year (see **Figure 2.2**).

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





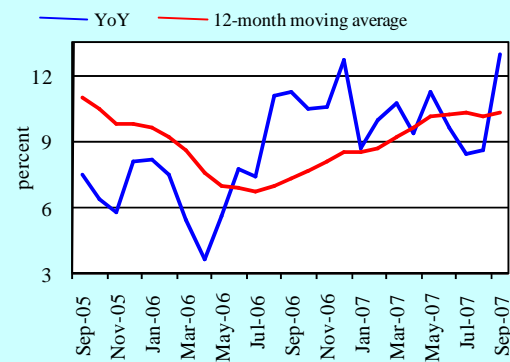
## 2.1 Food Inflation

Food inflation (YoY) increased significantly from 8.6 percent in August 2007 to 13.0 percent in September 2007. This significant (4.4 percentage points) increase is mainly due to an increase in the prices of some vegetables, onions, different types of rice and wheat. Out of the total 124 commodities included in the food group, 52 commodities including eggs, some fruits, cooking oil, different types of

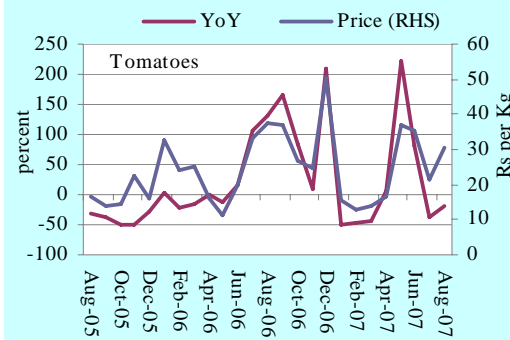
rice, vegetable ghee and a few vegetables, exhibited YoY inflation in the range of 10 to 75 percent in September 2007. The combined weight of commodities with double digit inflation was about 58 percent of the food group. Out of four types of basmati rice, three showed significant increase in YoY inflation of over 50 percent while one type showed 39 percent increase. On the other hand, YoY Inflation of 19 commodities including key staples such as tomatoes, 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 21 percent in the food group, exhibited subdued or moderate inflation (see **Table A2** in Annexure A).

As compared to August 2007, during September 2007 there was an increase in the average price of food items including wheat flour, fresh milk, beef, pulse gram, onion, vegetable ghee, tomatoes and chicken whereas price of sugar declined. Among the selected food items, onion and tomatoes remained the items with the most volatile<sup>1</sup> prices over the last two years (see **Figure 2.4** and **Figure 2.5**).

**Figure 2.3: CPI Food Inflation**

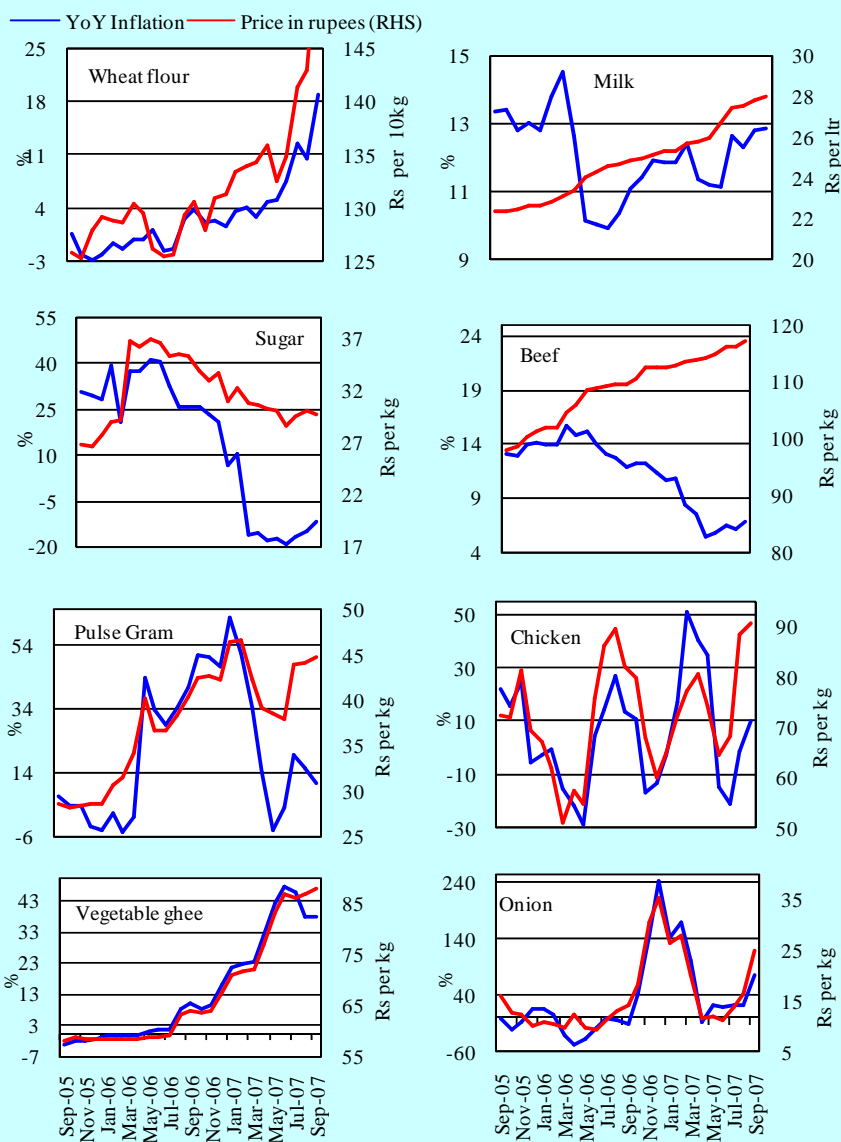


**Figure 2.4: Most Volatile Item CPI Food**



<sup>1</sup> The volatility is measured by standard deviation over last two years.

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



In terms of contribution to the overall YoY Inflation, wheat flour and fresh milk were the second and third highest contributors (house rent index of non-food group being the first), with 11.1 and 10.9 percent share in the overall CPI inflation (see **Table A3** in the annexure). The high contribution of wheat flour was due to a

continual strong 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 0.1 percentage point and was recorded at 5.0 percent in September 2007 compared to 4.9 percent in August 2007. This represented a decline of 2.0 percentage points compared to September 2006 (see **Figure 2.6**).

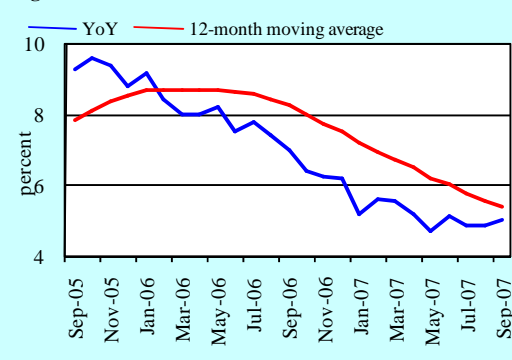
Inflation (YoY) in *apparel, textile & footwear* sub-group was recorded at 7.6 percent in September 2007 depicting a rise of 0.1 percentage points as compared to the previous month. However, there was a rise of 3.6 percentage points as compared to the corresponding month last year. This significant increase in the sub-group was mainly due to an increase in the price of almost all types of footwear compared to September 2006.

Inflation recorded by the *house rent index (HRI)* was 7.5 percent in September 2007 compared to 7.2 percent in the previous month. However, the house rent index declined by 0.2 percentage points as compared to the corresponding month last year (see **Figure 2.7**).

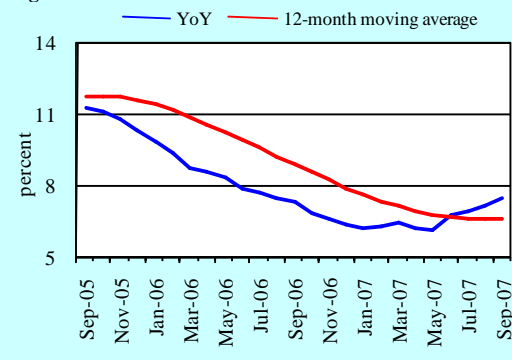
The *fuel & lighting* sub-group witnessed an increase of 0.5

percentage points and was recorded at 2.7 percent in September 2007 compared to 2.2 percent in August 2007. While a decline of 9.4 percentage points was recorded as compared to September 2006. This significant decline was mainly due to the lower prices of all types of gas charges and gas cylinder that partially offset the impact of an increase in electricity charges. In this group a significant decline in

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



**Figure 2.7: House Rent Inflation**



YoY Inflation was recorded in gas charges in all categories (-7.8 percent in September 2007 compared to 30 percent in September 2006).

Inflation (YoY) in *household furniture & equipment* sub-group declined to 6.3 percent in September 2007 compared to 6.6 percent in August 2007. This decline of 0.3 percentage points was due to an increase in the prices of electronic commodities included in the sub-group.

*Transport & communication* subgroup witnessed a disinflation and fell by 3.1 percent in September 2007 in contrast to 5.3 percent in September 2006.

Inflation in *recreation & entertainment* sub-groups showed a decline of 0.2 percentage points in September 2007 compared to the corresponding month of last year, whereas no change was recorded compared to the preceding month.

YoY inflation in the *education* sub-group was recorded at 4.8 percent in September 2007 as compared to 7.2 percent during the corresponding month last year, whereas a decline of 1.4 percentage points was recorded as compared to August 2007.

YoY inflation in the *cleaning, laundry & personal appearance* sub-group was recorded at 6.5 percent in September 2007 compared to 4.1 percent during the corresponding month last year.

The *medicare* sub-group saw YoY inflation decline to 7.8 percent in September 2007 compared to 9.8 percent inflation during the corresponding month last year (see **Figure A1** in annexure).

Out of the 250 non-food commodities included in the CPI basket, 24 commodities witnessed double digit inflation. These include items such as firewood, different units of electric charges, primary school fee (English medium) and doctors clinic fee, etc. There were 55 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, computers, CD rom, etc. A significant YoY deflation was recorded in telephone charges outside the city (33.9 percent) in September 2007 ( see **Table A4** in the annexure).

### 2.3 City-wise Inflation

City-wise inflation data indicates that 21 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 all three categories, i.e. general, food, and non-food. Out of five selected cities<sup>3</sup> all cities except Islamabad showed an increase in YoY inflation compared to the previous month. Peshawar in particular showed a significant increase in YoY inflation from 5.7 percent in August 2007 to 8.6 percent in September 2007. As a result, in September 2007 while Islamabad, Lahore, Karachi and Quetta were among the category of low inflation cities, Peshawar was among the category of high inflation cities (see **Table 2.1**).

**Table 2.1: City wise Inflation of selected cities**

	Over all CPI	Islamabad	Lahore	Karachi	Quetta	Peshawar
						percent
Sep-06	8.7	10.9	9.5	8.3	8.9	9.8
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

The highest level of YoY inflation was recorded in Gujranwala (12.6 percent) followed by Nawabshah (12.5 percent) and Bahawalnagar (11.7 percent) during September 2007. On the other hand the lowest YoY inflation was recorded in Okara (4.7 percent) during 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), September 2007**

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Gujranwala	12.6	18.1	8.6	Attock	8.3	12.1	5.6
Nawabshah	12.5	17.0	9.3	Sialkot	8.2	15.2	3.0
Bahawalnagar	11.7	17.7	7.4	Bannu	8.1	7.5	8.5
Vehari	11.5	17.7	6.9	Karachi	8.1	12.7	4.8
Samundari	11.2	17.7	6.6	Lahore	7.9	14.1	3.2
Multan	11.2	18.5	5.8	Turbat	7.9	8.8	7.2
Sukkur	11.0	16.6	7.2	Quetta	7.8	12.4	4.6
D.G. Khan	10.9	16.0	7.1	Islamabad	7.6	10.0	5.9
Hyderabad	10.8	14.8	7.8	Rawalpindi	7.4	10.2	5.3
Bahawalpur	10.1	16.8	5.1	D.I.Khan	7.3	10.8	4.8
Jhang	10.0	15.0	6.6	Mianwali	7.2	10.0	5.1
Mardan	10.0	13.9	7.2	Sargodha	6.6	10.1	4.1
Khuzdar	9.8	10.9	9.0	Loralai	6.1	6.0	6.1
Faisalabad	9.3	18.4	2.6	Okara	4.7	6.8	3.1
Mirpur Khas	9.3	12.4	7.0				
Jhelum	9.1	12.0	6.9				
Kunri	8.9	11.8	6.7				
Shahdadpur	8.8	9.7	8.1				
Peshawar	8.6	14.1	4.6				
Larkana	8.4	12.2	5.6				
Abbotabad	8.4	13.2	4.8				

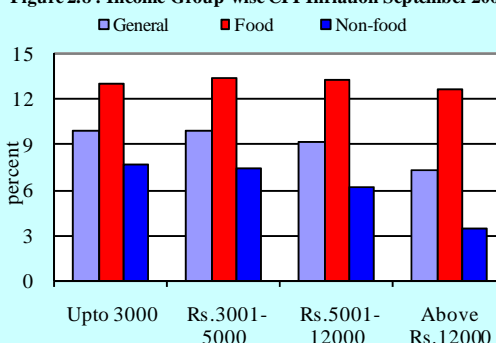
Note: High inflation refers to above average inflation, and low inflation refers to below average inflation

## 2.4 Income Group-wise Inflation

The CPI inflation (in YOY terms) recorded for all income groups showed an increase compared to the preceding month. The data revealed that YoY CPI inflation recorded for the highest income group, was higher than the overall CPI (YoY) inflation. However the inflation in food group, faced by the highest income group is less than the average food inflation for September 2007.

Similar to CPI general and food, in non-food group all income groups showed an

**Figure 2.8 : Income Group-wise CPI Inflation September 2007**

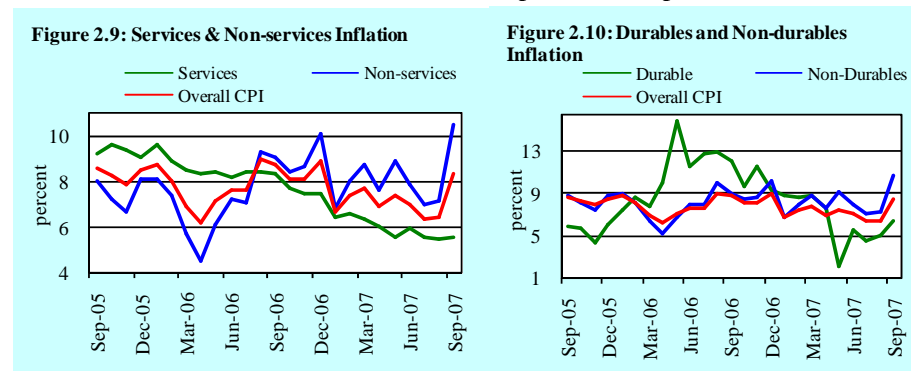


increase as compared to average non-food inflation, except highest income group (see **Figure 2.8**).

As in the previous month, the highest YoY CPI inflation was recorded for the income groups of up to Rs. 3000 & Rs. 3001-5000 (9.9 percent each), followed by income group of Rs. 5001 to 12000, while the highest income group of above Rs. 12000 experienced the lowest inflation (7.3 percent). City-wise data reveals that the lowest YoY inflation was recorded in Khuzdar for income groups up to Rs. 3000 and Rs. 3001 to 5000 and in Sargodha for income groups Rs. 5001 to 12000 and above 12000. While the highest YoY inflation was recorded in Gujranwala for all income groups (see **Table A5** in annexure A).

## 2.5 Services and Non-services Inflation

Inflation (YoY) in services<sup>4</sup> sector recorded a decline while non-services sectors recorded an increase in September 2007 compared to the corresponding month of last year. During September 2007 YoY inflation in the services sector was recorded at 5.6 percent compared to 8.4 percent in September 2006. YoY inflation recorded for the non-services sector was 10.5 percent in September 2007 as



compared to 9 percent in the corresponding month last year. As compared to the preceding month YoY inflation in the services sector in September 2007 showed a marginal increase (from 5.5 to 5.6 percent), while inflation recorded in non-services sector showed an increase of 3.3 percentage points (from 7.2 to 10.5 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.

Within the non-services sector, YoY inflation in both the durable<sup>5</sup> and non-durable goods declined. YoY inflation in the durable and non-durable goods was recorded at 6.4 and 10.6 percent respectively in September 2007 compared to 12 and 9 percent in September 2006. This significant decline in durable goods inflation is due to a deceleration in the growth of jewelry price reflecting increasing international prices. Jewelry has the highest weight among durable items, YoY inflation in jewelry was recorded at 9.6 percent in September 2007 compared to 29.5 percent in September 2006 (see **Figure 2.10**).

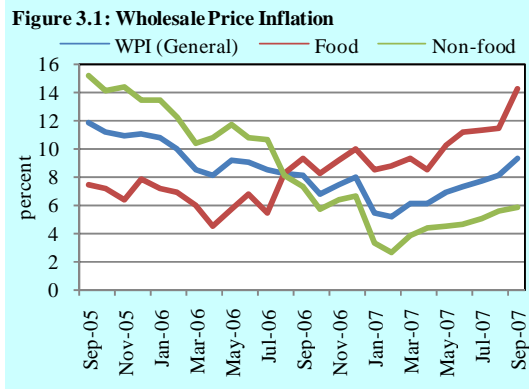
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<sup>5</sup> Durable items include suitcase, furniture, electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerators, air conditioners, vehicles, computer & allied products, watches and jewellery, etc.

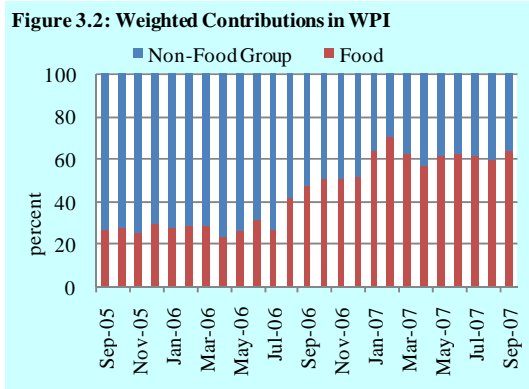


### 3. Wholesale Price Inflation

WPI inflation accelerated sharply to 9.3 percent – the highest level for 18 months – during September 2007 compared to 8.0 percent in September 2006. This rise was attributed to the WPI food inflation that exhibited a sharp YoY acceleration of 14.2 percent during September 2007 compared to 9.2 percent during the same month last year. By comparison, non-food WPI inflation, on an YoY basis, was only 5.7 percent in September 2007 compared to 7.2 percent recorded in the same month last year (see **Figure 3.1**).



As a result of high growth in WPI food prices during the last five months, the weighted contribution of the food group in WPI inflation increased to 63.9 percent in September 2007 from 47.2 percent in September 2006 (see **Figure 3.2**).



In overall WPI inflation, an item wise breakup shows that the prices of onion, rice, vegetable ghee and oil, fruits, fresh milk, spices, hides, sugarcane, chemicals, foot wear, wires and cables etc. showed a positive growth of more than 10 percent in their prices. The prices of another 36 items depicted a growth of more than 10 percent and 9 items showed growth between 5 to 10 percent in their wholesale prices.

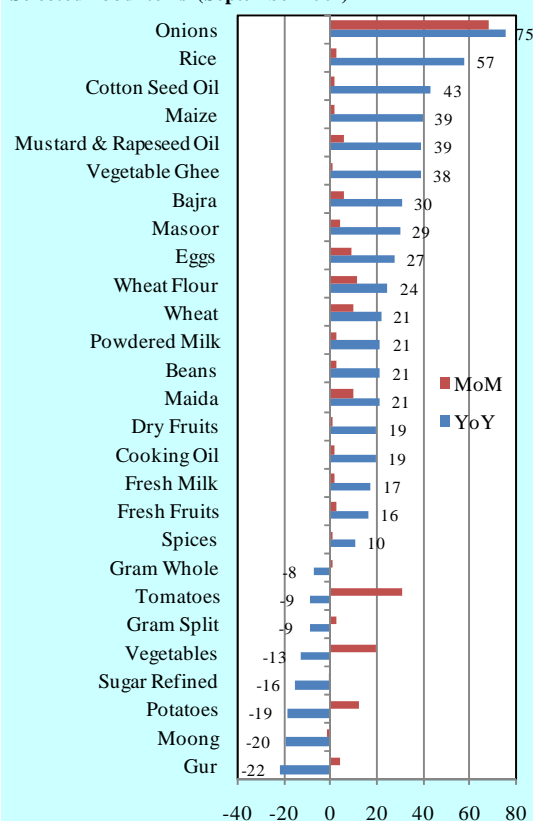
In case of WPI food inflation the wholesale prices of 18 out of 43 food items witnessed a rise of more than 10 percent during the month under review. While 4 items recorded moderate inflation of 5 to 10 percent, other 5 items showed subdued inflation of up to 5 percent. The wholesale prices of the remaining 16 food items declined or remained stable (see **Table 3.1**).

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

		No. of Items				
	Groups	Decrease or no change	Up to 5%	5%-10%	More than 10%	Total
A.	<b>Food</b>	16	5	4	18	<b>43</b>
B.	<b>Non-Food</b>	<b>24</b>	<b>16</b>	<b>5</b>	<b>18</b>	<b>63</b>
	Raw Material	3	1	1	4	9
	Fuel, lighting and Lubricant	5	0	0	6	11
	Manufactures	12	12	3	5	32
	Building Material	4	3	1	3	11
	<b>Total</b>	<b>40</b>	<b>21</b>	<b>9</b>	<b>36</b>	<b>106</b>

With the increase in WPI non-food inflation the prices of 18 items saw a rise of more than 10 percent, 16 items showing growth up to 5 percent, 24 items showing decrease or no change and the remaining 16 items demonstrated moderate inflation, i.e. 5 to 10 percent (see **Table 3.1**).

The WPI food inflation continued to show strong growth rising by 14.2 percent during September 2007 – the highest jump in the last 12 years. In the food group, the wholesale prices of onions, rice, vegetable ghee and cotton seed oil exhibited a sharp increase of more than 35 percent each during the month under review. Whereas gur, pulse moong, potatoes, sugar refined and vegetables

**Figure 3.3: Wholesale Price Inflation (%) in Selected Food Items (September 2007)**

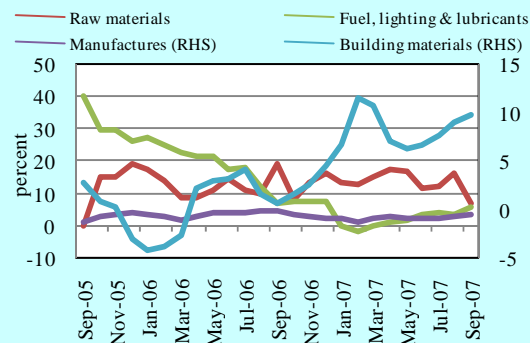
witnessed a YoY deflation of varying magnitudes ranging from 22.2 to 12.9 percent in September 2007 (see **Figure 3.3**).

The WPI non-food inflation (YoY) was recorded at 5.7 percent in September 2007 compared to 7.2 percent during the same month last year. Except the *building material* subgroup, all other subgroups of non-food group showed lower (YoY) WPI inflation in September 2007 compared to the same month last year (see **Figure 3.4**).

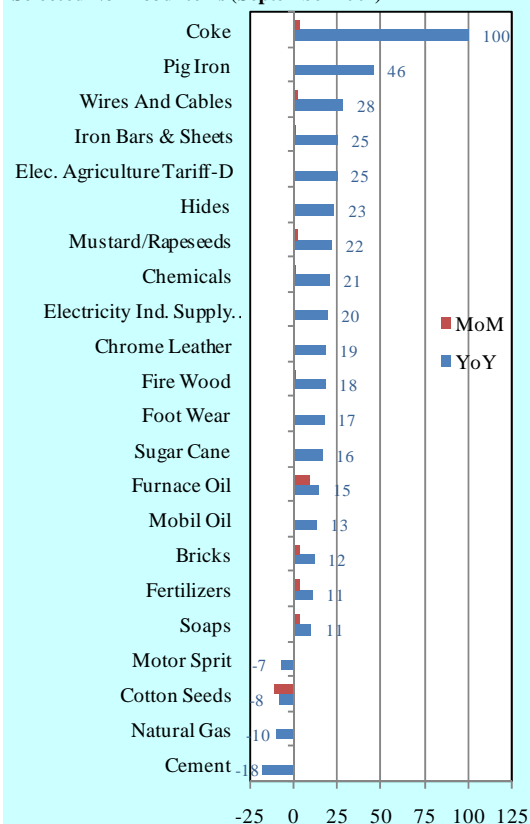
Prices of coke, pig iron, wires and cables, fire wood, foot wear, fertilizers, soaps, bricks, chemicals displayed YoY growth between 10 to 100 percent in September 2007. Whereas YoY deflation in the prices of cement, gas, cotton seed and motor spirit was recorded during the month under review (see **Figure 3.5**).

The wholesale prices of the *raw material* sub-group decelerated sharply during the month under review and recorded a growth of 6.9 percent on an YoY basis. This is significantly lower than 19.3 percent inflation in September 2006. It was observed that cotton seed, tobacco and skins showed decline in their prices during September 2007. While the wool prices showed positive (YoY) growth of less

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



**Figure 3.5: Wholesale Prices Inflation (%) in Selected Non-food Items (September 2007)**



than 5 percent. Whereas the prices of sugarcane, pig iron, hides and rapeseeds accelerated significantly and exhibited double digit YoY growth during the month under review.

The wholesale prices of *fuel, lightning & lubricants* subgroup witnessed a YoY growth of 6.4 percent during September 2007 compared to 7.5 percent growth in the corresponding month last year. Within this group, 6 items (mobil oil, furnace oil, fire wood, coke and electricity tariff-B exhibited) witnessed double digit (YoY) growth during September 2007. The remaining 5 items (natural gas, motor spirit, diesel oil, coal and kerosene oil) showed decrease or no change in their wholesale prices (see **Table A7** in Annexure A).

The wholesale prices of *manufactures* sub-group recorded a growth of 3.7 percent in September 2007 compared to 4.6 percent in September 2006. Chemicals, footwear, fertilizers, soaps and machinery showed strong price growth in this sub-group. Out of 32 items in the *manufactures* sub group, 12 recorded a decline or no change, the other 12 items showed subdued growth of up to 5 percent and the remaining 8 items exhibited a YoY growth of more than 5 percent in their prices during September 2007 (see **Table A7** in Annexure A).

The *building material* sub-group witnessed growth of 9.8 percent in its wholesale prices in September 2007 compared to 0.7 percent inflation during the same month of last year. This was mainly due to the wholesale price of bricks, iron bars & sheets, and wires and cables that showed double digit rise during the month under review (see **Table A7** in Annexure A).

#### 4. Global Commodity Prices

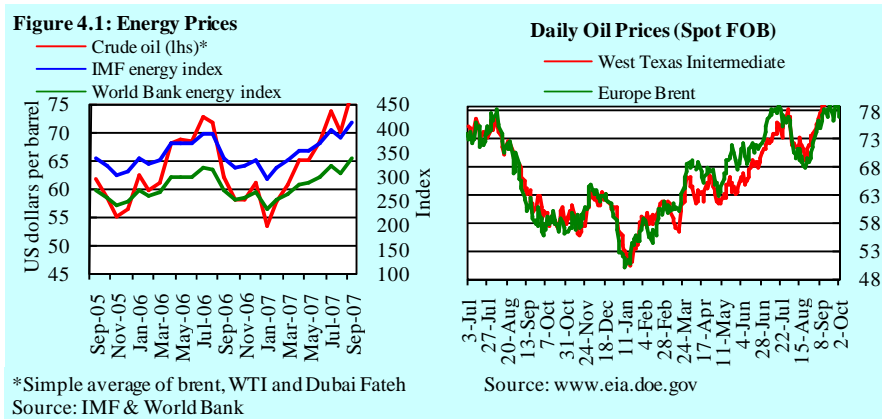
Prices in the international market remained strong in September 2007 compared to the same month last year as well as to the preceding month. This significant upward movement in the global commodity prices was a result of upsurge in the prices of food, energy and non-food non-energy groups. Energy prices reflected by crude oil, as well as the IMF and World Bank energy indices (see **Figure 4.1**) showed strong upward movements due to the tensions along the Turkish-Iraq border and decline in the world crude inventories<sup>6</sup>. In the food group, wheat prices exhibited a steep YoY rise due to limited export from EU, Canada and Ukraine, continued drought in Australia and fears of Russian export restrictions. The prices of rice, sugar and edible oils (soybean and palm) showed higher YoY growth in September 2007. In non-food non-energy group, cotton, steel and DAP prices remained stable in September 2007 (see **Table 4.1**).

<b>Table 4.1: International Commodity Prices/Indices</b>				
	<b>Sep 06</b>	<b>Jun 07</b>	<b>Aug 07</b>	<b>Sep 07</b>
<b>Energy</b>				
Crude Oil (US\$ per barrel)	62.0	68.2	70.1	76.9
IMF Energy Index (1995=100)	336.2	368.4	379.8	412.2
WB Energy Index (1990=100)	271.5	298.0	306.5	335.5
Coal (\$/MT)	50.7	60.4	74.5	73.2
<b>Food (\$/MT)</b>				
Rice	312.9	326.3	331.5	330.0
Wheat	196.0	223.0	259.7	326.5
Sugar	12.3	9.3	9.6	9.9
Palm Oil	416.9	748.4	729.6	745.2
Soybean Oil	534.3	782.9	797.1	852.7
Sunflower Oil	673.0	673.0	673.0	673.0
<b>Non-Food Non-Energy</b>				
Cotton Outlook 'A' Index #	58.8	133.6	148.2	148.3
WB Steel Products Index (1990=100)	135.8	133.5	132.6	135.3
DAP (\$/MT)	258.8	434.5	429.4	431.9
Urea (\$/MT)	215.3	289.0	269.0	314.0
\$/MT = US\$ per metric tonne. # 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.				

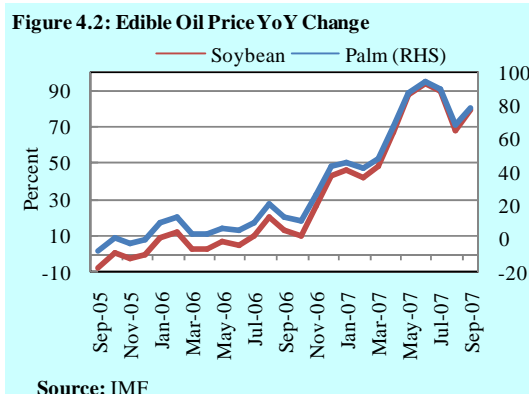
In September 2007, the crude oil prices touched record daily highs of above US\$ 80 per barrel largely on strong speculative demand due to expectations of tight supplies, geopolitical concerns and as a hedge against weak US dollar, according to World Bank report. The spot crude oil price in the international market fluctuated between the ranges of US\$ 74.6 – US\$ 81.3 per barrel during the month of September compared to US\$ 68.5 – US\$ 76.8 per barrel during the previous

<sup>6</sup> World Bank Commodity Market Review, October 11, 2007.

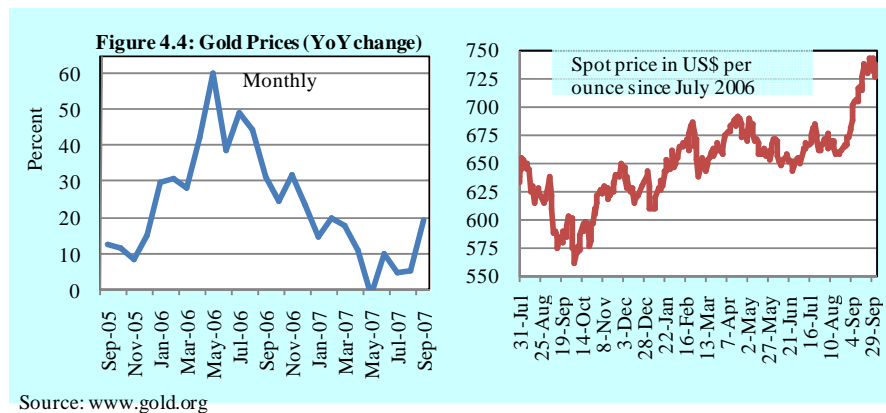
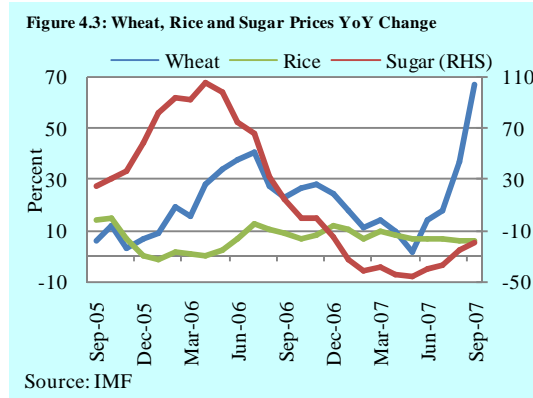
month.



Palm and soybean oil prices continued to reflect strong YoY growth and registering steep rises (YoY) of 78.7 and 59.6 percent respectively in September 2007. The high rise in edible oil prices is the result of lower US soybean production. In addition, according to World Bank commodity price review, soybean meal and soybean oil prices increased due to strong demand of soymeal in response to higher prices of maize and other feed prices, as well as strong demand for soyoil for bio-fuel production. On a month-on-month basis, the palm and soybean oil prices increased by 2.1 and 7.0 percent respectively (see **Figure 4.2**).



Among other food staples, wheat prices continued to accelerate in September 2007 and exhibiting a sharp YoY growth of 66.6 percent compared to 22.7 percent during the same month last year. This represented a 25.7 percent rise in September 2007 as compared to the previous month. This steep rise in wheat prices was the result of poor crop in Australia, Canada, the EU and Ukraine<sup>7</sup>. The price of rice in the international market exhibited a moderate YoY increase of 5.5 percent in September 2007. Sugar prices continued to decline in September 2007 on YoY basis and fell by 20.0 percent over the same month of last year (see **Figure 4.3**).



In the international market gold prices remained strong at US\$ 712.6 per ounce in September 2007 and exhibited a six month high YoY growth of 19.2 percent on the back of record dollar weakness against the Euro. On a daily basis, gold price remained higher and fluctuated in a wider range, between US\$ 672 per ounce and US\$ 743 per ounce (see **Figure 4.4**).

<sup>7</sup> World Bank Commodity Market Review, October 11, 2007.

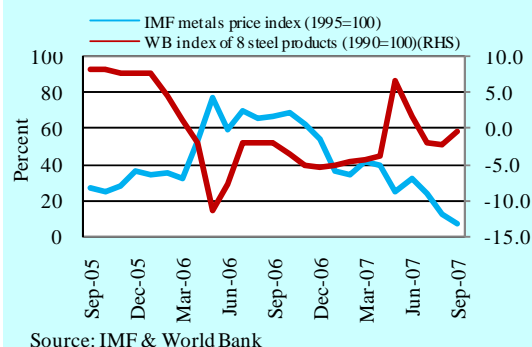
According to the World Bank index of 8-steel products, metal prices went up by 2.0 percent in September 2007 compared to the preceding month. This rise was the result of a gain in steel rebar, nickel, silver and lead price which was partially offset by fall in zinc and aluminum prices. Nickel prices rose by 7.0 percent due to cutbacks in stainless steel output. Zinc prices fell around

11 percent on prospects of rising mine supplies; while aluminum prices dropped 5 percent due to rising stocks and continued large production growth in China (see **Figure 4.5**).

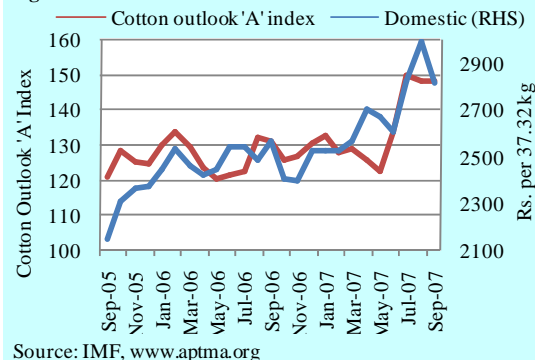
In the international market, cotton outlook A index increased significantly by 9.6 percent (YoY) in September 2007. Similarly, cotton prices in the domestic market rose (YoY) significantly by 13.2 percent during the month under review. However, on August-September basis cotton prices remained stable in the international markets seeing a marginal rise of 0.1 percent (see **Figure 4.6**).

Fertilizer prices remained strong in September 2007. Both DAP<sup>8</sup> and urea prices exhibited sharp YoY growth of 66.9 and 45.9 percent respectively. On August-September basis urea prices registered significant growth

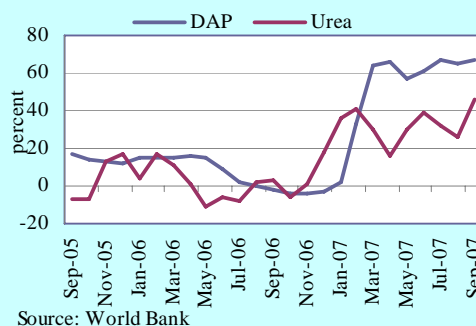
**Figure 4.5: Steel Prices (YoY Change)**



**Figure 4.6: Cotton Prices**



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



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



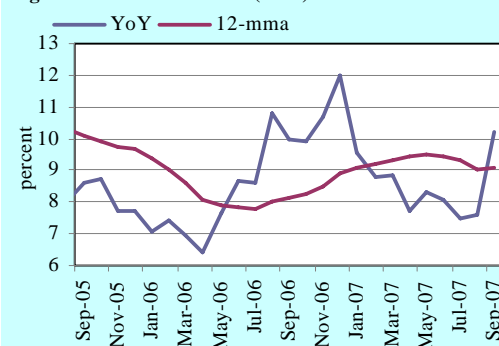
of 16.7 percent due to increased demand from Asia and Latin America as well as limited exports from the Black Sea region (see **Figure 4.7**).

## 5. Sensitive Price Indicator

The YoY inflation under sensitive price indicator (SPI) continued to increase for the second consecutive month and was recorded at 10.2 percent, which is higher than the 10 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: 9.1 percent in

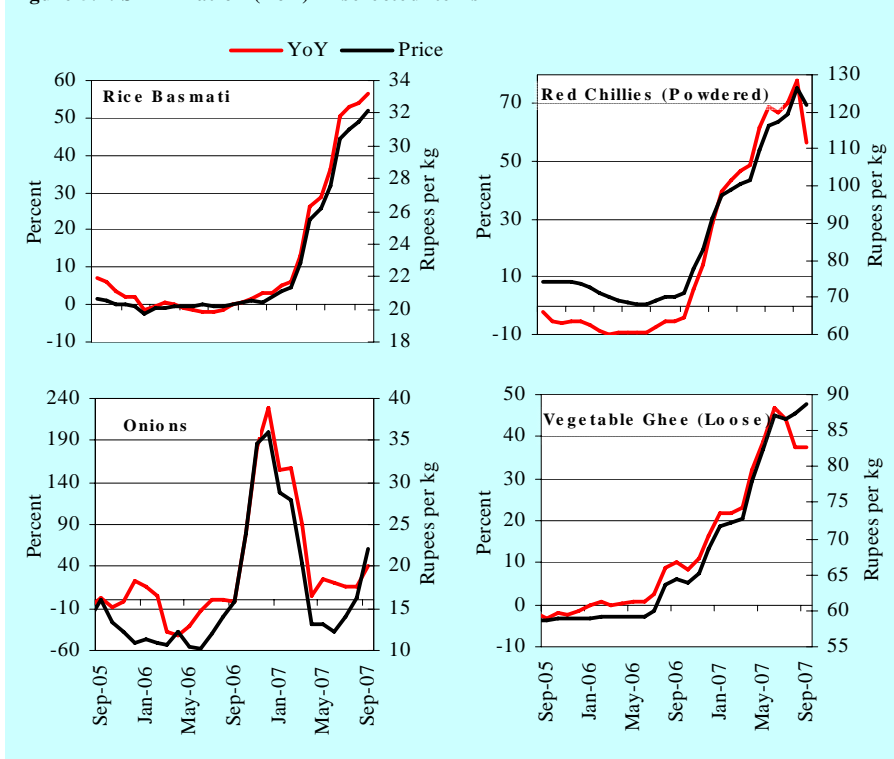
September 2007 as compared to 9 percent in the previous month (see **Figure 5.1**).

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



The major items contributing to the higher SPI inflation were rice, mustard oil,

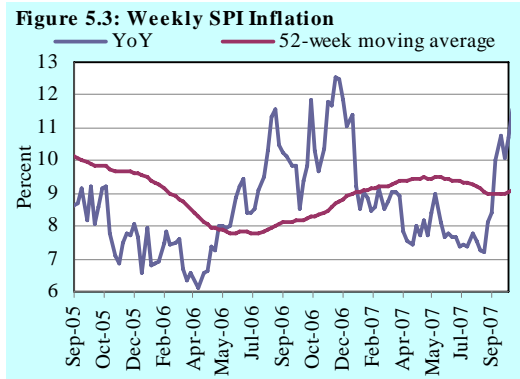
**Figure 5.2: SPI Inflation (YoY) in selected Items**



vegetable ghee, cooking oil, onions and red chilies (see **Figure 5.2**). In the SPI basket, 21 items recorded higher YoY inflation than the average level of 10.2 percent during September 2007. The remaining 32 items recorded lower YoY inflation than the average level of 10.2 percent with 12 items including sugar, pulse moong, gur, potatoes, tomatoes and garlic showing negative growth.

Compared to the prices of previous month, almost 30 percent items included in the SPI basket witnessed either a decline or no change in the inflation. On the other hand two items, i.e. wheat 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 mainly due to Ramadan effect. Thus, after recording weekly YoY SPI inflation of 8.1 percent in the last week of August 2007, inflation increased to 10.7 percent by the second last week of the month under review. However the last week of



**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
Sep-06	11.2	10.8	10.8	10.6	10.0
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

September 2007 witnessed a slight decrease in weekly YoY SPI inflation and was recorded at 10.1 percent. The long-run trend indicated by 52-week moving

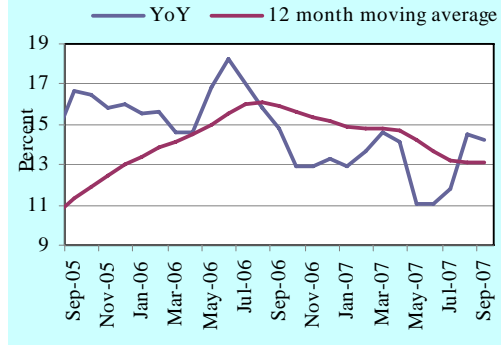
average remained stable around 9 percent mark after continuously decreasing since June 2007 (see **Figure 5.3**).

During the month under review, the incidence of SPI inflation was the highest in the middle two income groups. On the other end, the least affected group was the highest income group with YoY inflation maintaining single digit growth for the ninth consecutive month in September 2007 (see **Table 5.1**). As compared to the previous month all income groups, except the lowest income group, showed an increase in inflation.

## 6. Wage Inflation in Construction Sector

Wage inflation decelerated in September 2007 and was recorded at 14.2 percent on an YoY basis compared to 14.5 percent in the preceding month. Moreover this 14.2 percent YoY wage inflation in September 2007 is also less than the 14.8 percent wage inflation recorded in the same month last year. The annual trend of nominal wage inflation, measured by the 12 month moving average, remained stable at 13.1 percent after having recorded a downward trend during the 12 months preceding September 2007 (see **Figure 6.1** and **Table 6.1**).

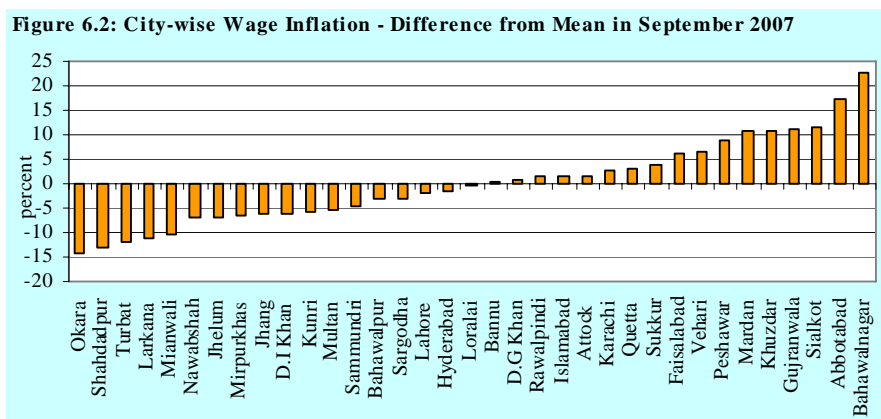
**Figure 6.1: Wage Inflation**



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

	Feb- 07	Mar- 07	Apr- 07	May- 07	Jun- 07	Jul- 07	Aug- 07	Sep-07
<b>Overall</b>	13.7	14.6	14.2	11.1	11.1	11.8	14.5	14.2
<b>Skilled:</b>	<b>13.3</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>
Carpenter	12.8	14.6	13.7	12.8	11.9	11.9	14.8	13.6
Mason	13.9	15.2	16.0	14.2	13.5	13.4	15.9	16.6
Plumber	11.3	11.7	11.2	9.8	10.9	12.1	15.0	14.3
Electrician	15.1	15.6	14.1	5.2	5.3	8.1	11.1	11.6
<b>Unskilled:</b>	<b>17.1</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>
Laborer	17.1	17.3	16.8	14.9	15.6	14.8	16.4	15.3

The average month wise wage of all types of workers increased by 14.2 percent during September 2007 over the corresponding month of last year (see **Table A9** in Annexure 'A'). Figure 6.2 presents the picture of city wise deviation in wages from mean during the month of September 2007. Out of 35 cities, 17 cities recorded higher than average wage inflation and the remaining 18 cities witnessed lower than average inflation. The highest wage inflation was observed in Bahawalnagar followed by Abbottabad and Sialkot whereas Okara, Shahdadpur, Turbat etc., showed the lowest YoY changes in wages during the month under review.



## Annexure A

Table A1: CPI Inflation (YoY) by Groups (percent)						
	Weights	Sep-03	Sep-04	Sep-05	Sep-06	Sep-07
<b>I. Food Group</b>	<b>40.3</b>	<b>1.4</b>	<b>13.1</b>	<b>7.5</b>	<b>11.3</b>	<b>13.0</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>2.7</b>	<b>6.3</b>	<b>9.3</b>	<b>7.0</b>	<b>5.0</b>
Apparel, textile, etc.	6.1	4.0	2.4	3.9	4.0	7.6
House rent	23.4	2.3	10.2	11.3	7.3	7.5
Fuel & lighting	7.3	3.3	2.8	6.9	12.1	2.7
Household furniture & equip.	3.3	3.1	5.7	5.6	6.7	6.3
Transport & com.	7.3	1.0	6.8	20.7	5.3	-3.1
Recreation & entertainment	0.8	-0.6	-0.2	-0.3	0.2	0.0
Education	3.5	4.6	2.9	5.4	7.2	4.8
Cleaning, laundry, etc.	5.9	4.3	4.2	2.9	4.1	6.5
Medicines	2.1	1.1	1.0	1.6	9.8	7.8
<b>Headline</b>	<b>100</b>	<b>2.2</b>	<b>9.0</b>	<b>8.5</b>	<b>8.7</b>	<b>8.4</b>

Table A2: Distribution of Price Changes of CPI Basket, September 2007 (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>13.0</b>	<b>112</b>	<b>17</b>	<b>14</b>	<b>29</b>	<b>52</b>
<b>II. Non-Food Group</b>	<b>5.0</b>	<b>250</b>	<b>23</b>	<b>148</b>	<b>55</b>	<b>24</b>
Apparel, textile, etc.	7.6	42		28	10	4
House rent	7.5	1			1	
Fuel & lighting	2.7	15	5	5		5
Household furniture & equip.	6.3	44	2	16	23	3
Transport & com.	-3.1	43	6	31	3	3
Recreation & entertainment	0.0	16	4	9	1	2
Education	4.8	24	6	11	5	2
Cleaning, laundry, etc.	6.5	36		20	12	4
Medicines	7.8	29		28		1
<b>Overall</b>	<b>8.4</b>	<b>362</b>	<b>40</b>	<b>162</b>	<b>84</b>	<b>76</b>

Note: Prices of 11 seasonal items were not reported during the month.

Table A3: Top Ten Contribution to YoY CPI Inflation in September 2007					
Items		weights	YoY change		Weighted Contribution
			Sep-06	Sep-07	
A. Ranked by Weighted Contribution					
1	House Rent Index	23.43	7.28	7.46	20.71
2	Wheat Flour	5.11	2.94	18.75	11.10
3	Milk Fresh	6.66	11.00	12.98	10.89
4	Vegetable Ghee	2.67	7.43	33.32	10.58
5	Rice	1.34	2.45	52.84	7.68
6	Onions	0.64	-11.35	75.67	5.76
7	Electricity	4.37	0.00	10.07	4.08
8	Vegetables	1.80	16.01	14.22	3.78
9	Meat	2.70	12.64	6.89	3.29
10	Fresh Fruits	1.62	20.31	14.05	2.82
Total		50.33	-	-	80.70
B. Ranked by Percentage Change					
1	Onions	0.64	-11.35	75.67	5.76
2	Rice	1.34	2.45	52.84	7.68
3	Mustard Oil	0.05	7.84	34.26	0.17
4	Vegetable Ghee	2.67	7.43	33.32	10.58
5	Milk Powder	0.11	4.05	28.83	0.35
6	Pulse Masoor	0.22	-7.80	28.15	0.62
7	Cooking Oil	0.69	4.50	28.12	2.20
8	Eggs	0.41	-3.48	25.37	1.18
9	Spices	0.60	2.71	20.66	1.13
10	Wheat Flour	5.11	2.94	18.75	11.10
Total		11.83	-	-	40.78
C. Ranked by Weights					
1	House Rent Index	23.43	7.28	7.46	20.71
2	Milk Fresh	6.66	11.00	12.98	10.89
3	Wheat Flour	5.11	2.94	18.75	11.10
4	Electricity	4.37	0.00	10.07	4.08
5	Bakery & Confectionary	2.98	4.83	3.86	1.15
6	Meat	2.70	12.64	6.89	3.29
7	Vegetable Ghee	2.67	7.43	33.32	10.58
8	Tution Fees	2.36	8.22	6.10	1.68
9	Transport Fare/Charges	2.12	8.61	1.80	0.55
10	Natural Gas	2.05	27.35	-6.56	-2.57
Total		54.45	-	-	61.46
Note: Weighted contribution is estimated by multiplying the weights by the index-change of an item; this is then reported as a share in YoY change in CPI, which is 8.4 percent in September 2007.					



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

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Sugar Refined	Pulse Gram	Beef With Bone Av.Qlty.	Milk Fresh (Unboiled)
	Potatoes	Bananas	Mutton Av.Qlty.	Wheat Flour Bag
	Tomatoes	Cold Drink (Standard Siz)	Tea Prepared (Ordinary)	Vegetable Ghee Tin
	Pulse Moong (Washed)	Fish-Rahu Medium Size	Bread Tandoori St. Size	Chicken Farm Broiler (Live)
	Pulse Mash (Washed)	Cigarettes K-2 10'S	Cigarettes Gold Leaf 20'S, Cooked Mutton (Av. Hotel)	Cooking Oil (Dalda)
	Gram Whole Yellow Av.Qlty	Ice Cream Walls		Onion
		Lawn Av.Qlty.	Long Cloth Av.Qlty.	Rice Basmati Broken Av.Qlty
<b>Apparel &amp; Textile</b>	Gents Shoes Paul Bata	Shirting Av.Qlty.	Tailoring Awami-Suit (Male)	Nylon Jogger 27 Size 2-5
	Ladies Sandal Bata	School Uni.	Tailoring Suit Female	Child Shoe Power Lite Bata
		Kameez,Shal.Girl		Gents Spoung Chappal Bata
<b>House Rent Index</b>		House rent index		
<b>Fuel &amp; Lighting</b>	Gas Chrg Upto 3.3719 Mmbtu, Tube Light			Elect.Charges Above 1000 Uni
	Philips 40 Watts	Gas Cylinder Stand. Size		Elect.Charges 301 - 1000 Uni
	Gas Chrg 3.3719 - 6.7438 Mmb	Kerosene Oil		Elect.Charges 101 - 300 Unit
		Match Box Small		
<b>H/hold Furniture</b>		Quilt (Lihaf) 3 Kg. Cotton	Household Servant Female P/T	Marriage Hall With Furniture
		Tea Set Pak. Chinaware	Bedsheet Single Bed	Table Shesham Wood (4X2X5")
	Sewing Machine(Singer)	21 Pc, Blanket (90" X 54")	Sup.Qlty, Pedestal Fan 22" Super Qlty	Airconditioner 1.5 Ton Pel
	Carpet Plain Av. Qlty			
<b>Transport &amp; Comm.</b>	Petrol Super	Telephone Charges Local	Motor Cycle Service Charges, T.C.S. Ch.	Taxi 4 Seater Fare
	Tel Charges Out Side City	City, A/C Bus Fare	Min.With In Zone	Air Fare Economy Class.
	High Speed Diesel Hsd	Outside City	Tyre Cycle Specify Brand Nam	Tyre Motor Cycle Without Tub
	Motorcycle Honda Cd-70. T.V. 20" Colored With	Car Service Charges		
<b>Recreation &amp; Entertainment</b>	R/Cont	Tv.Licence Feedomestic		
	Video Game Sega 16 Byte	Daily "Jang"	Cinema Non-A/C High Class	Weekly "Akhbar-E-Jahan" Dry Cell 1.5 Volt(Local)
	Tv.Licence Feedomestic	Daily "Nawa-E-Waqt"		
<b>Education</b>	Urdu Book Ist.Year/Inter	Govt. College Fee Ist.	School Fee 2Nd-Ry	
	Urdu Book Class V (T.B.Bord)	Year, Govt. College Fee 4Th. Year, Eng. Book	Eng.Med, School Fee Primary Eng.Med.	
	English Book Class V1	Ist.Yr Complete Se	Exercise.Book Lined 80/100 P	Ball Pen (Local)
				Urdu Book Class Ix/X(T.B.B)
<b>Cleaning &amp; Laundry</b>		Washing Soap		
		Haircut Charges For MenNyl(135-160Gms)		
		Surf (Medium) 160 Grm	Shampoo Plain Medora	Shaving Cream Touch-Me/Adm.
		Toothpaste Macklines 70 200 ML., Washing Grm	Powder 1000 Grm	Silver Tezabi 24 Ct
		Perfume Med.Size Medora/Broa	Toilet Soap Lifebouy 140 Grm	Robin Blue (35 Grams)
<b>Medicare</b>				Toilet Soap Lux 95 Grams
		Gripe-Water Woodward		
		O.R.S. (Nimcol)		Doctor (Mbbs) Clinic Fee
		Dettol (Medium)		

Table A5: City-wise CPI Inflation (YoY) by Income Groups, September 2007							
		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	9.3	14.4	5.8	9.6	15.2	5.9
2	Faisalabad	10.2	18.3	4.7	11.4	18.3	6.7
3	Rawalpindi	7.6	9.1	6.6	8.2	10.4	6.7
4	Multan	12.4	18.3	8.4	12.6	19.1	8.2
5	Gujranwala	12.5	18.4	8.6	13.5	19.0	9.9
6	Islamabad	9.7	11.2	8.7	9.7	11.2	8.7
7	Sargodha	7.9	11.3	5.7	7.7	10.8	5.5
8	Sialkot	9.5	15.6	5.5	9.7	15.7	5.6
9	Bahawalpur	11.7	16.6	8.4	11.6	16.9	8.0
10	Karachi	8.8	12.4	6.4	9.4	13.7	6.5
11	Hyderabad	11.3	14.4	9.2	11.2	14.5	8.9
12	Sukkur	12.3	18.5	8.1	12.0	17.5	8.3
13	Larkana	8.9	12.8	6.3	8.8	11.9	6.7
14	Peshawar	9.9	13.0	7.8	10.5	14.1	8.0
15	Bannu	7.2	6.1	8.0	8.4	7.0	9.3
16	Quetta	9.1	11.6	7.3	8.6	12.4	6.0
17	Khuzdar	5.4	4.6	6.0	6.3	5.9	6.6
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	8.8	14.9	4.7	6.7	12.9	2.6
2	Faisalabad	10.5	18.4	5.2	8.1	18.6	1.0
3	Rawalpindi	7.9	10.3	6.3	6.7	10.0	4.5
4	Multan	11.7	19.0	6.7	9.8	17.2	4.7
5	Gujranwala	12.9	18.4	9.2	11.4	16.7	7.7
6	Islamabad	9.0	11.2	7.5	7.4	9.7	5.8
7	Sargodha	7.1	10.3	5.0	5.1	9.3	2.3
8	Sialkot	9.1	15.8	4.5	7.5	14.6	2.6
9	Bahawalpur	10.6	17.1	6.2	8.2	16.2	2.7
10	Karachi	9.0	13.2	6.2	7.1	11.9	3.8
11	Hyderabad	11.1	15.0	8.5	9.6	14.3	6.5
12	Sukkur	11.1	16.5	7.4	10.2	15.8	6.4
13	Larkana	8.7	12.5	6.1	7.3	11.3	4.6
14	Peshawar	9.4	14.4	6.0	7.4	13.7	3.2
15	Bannu	8.4	7.5	9.0	7.6	8.2	7.2
16	Quetta	8.1	12.4	5.2	7.3	12.4	3.8
17	Khuzdar	7.5	7.7	7.3	7.2	7.9	6.8

Table A6 : Income Group-wise CPI Inflation (YoY)								percent
	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07
<u>Up to Rs. 3000</u>								
General	7.9	7.8	6.9	7.7	7.7	7.5	7.3	9.9
Food	9.6	9.1	7.7	9.6	9.3	8.7	8.4	13.0
Non-food	6.7	6.8	6.3	6.3	6.6	6.7	6.5	7.6
<u>Rs. 3001-5000</u>								
General	7.8	7.9	7.2	8.0	7.9	7.5	7.3	9.9
Food	9.4	9.3	8.0	10.2	9.6	8.8	8.6	13.4
Non-food	6.7	6.9	6.5	6.5	6.8	6.6	6.5	7.4
<u>Rs. 5000-12000</u>								
General	7.5	7.8	7.1	7.8	7.5	6.9	6.9	9.1
Food	9.6	10.1	8.8	10.9	9.7	8.6	8.7	13.2
Non-food	6.0	6.2	5.9	5.7	5.9	5.6	5.6	6.1
<u>Above Rs. 12000</u>								
General	7.2	7.5	6.7	6.9	6.3	5.6	5.8	7.3
Food	10.7	12.2	10.8	12.3	9.8	8.1	8.6	12.6
Non-food	4.7	4.3	3.9	3.1	3.9	3.8	3.7	3.4
<u>All income groups</u>								
General	7.4	7.7	6.9	7.4	7.0	6.4	6.5	8.4
Food	10.0	10.7	9.4	11.3	9.7	8.5	8.6	13.0
Non-food	5.6	5.5	5.2	4.7	5.1	4.9	4.9	5.0

<b>Table A7: Distribution of Price Change (YoY)--WPI Items: September 2007</b>				
<b>Groups</b>	<b>Decrease or no change</b>	<b>Subdued increase (upto 5%)</b>	<b>Moderate increase (5 to 10%)</b>	<b>More than 10% increase</b>
<b>Food</b>	Gur, Moong			Fresh Fruits, Fresh Milk
	Potatoes			Cooking Oil, Dry Fruits
	Sugar Refined			Maida, Beans
	Vegetables			Powdered Milk
	Gram Split			Wheat, Wheat Flour
	Tomatoes			Eggs, Masoor
	Gram Whole			Bajra
	Mash, Besan		Vegetables	Vegetable Ghee
	Jowar, Tea	Mineral Water	Prepared/Preserved	Mustard & Rapeseed
	Beverages	Meat	Milk Food	Oil, Maize
	Chicken	Fish	Fruit	Cotton Seed Oil
	Sugar Confectionary	Condiments	Prepared/Preserved	Rice, Onions
	Oil Cakes	Salt	Spices	
<b>Raw material</b>				Sugar Cane
	Cotton Seeds			Mustard/Rapeseeds
	Tobacco			Hides
<b>Fuel &amp; lighting</b>	Skins	Wool	Cotton	Pig Iron
				Mobil Oil
	Natural Gas			Furnace Oil
	Motor Sprit			Fire Wood
	Diesel Oil			Electricity Ind. Supply
	Coal			Tariff-B
<b>Manufactures</b>				Elec. Agriculture Tariff-D
				Coke
	Woolen Textiles	Tubes, Cosmetics		
	Paper	Other Electrical		
	Transports	Goods, Ready Made		
	Mattresses	Garments		
	Blended Yarn	Dying Materials		
	Cotton Yarn	Silk & Rayon		
	Jute Manufactures	Textiles		
	Utensils	Plastic Products		
	Drugs & Medicines	Pesticides &		
	Glass Products	Insecticides		Soaps
	Audio-Visual	Tyres		Fertilizers
	Instruments	Cotton Textiles	Hosiery	Foot Wear
	Matches	Nylon Yarn	Machinery	Chrome Leather
<b>Building material</b>		Cigarettes	Sole Leather	Chemicals
	Cement			
	Sanitary Wares	Timber		Bricks
	Paints & Varnishes	Tiles		Iron Bars & Sheets
	Cement Blocks	Glass Sheets	Pipe Fittings	Wires And Cables

**Table A8: SPI Item-wise Price Movements for the month of September 2007**

S.No	Items	Unit	Price Sep -07	Percentage change	
				YoY	Monthly
1	Wheat	Kg.	14.0	19.2	<b>10.2</b>
2	Wheat flour a.qlt.	Kg.	16.2	21.1	8.5
3	Rice basmati, broken	Kg.	32.2	56.4	2.2
4	Rice irri-6	Kg.	23.6	45.5	3.9
5	Masur pulse washed	Kg.	55.2	32.9	1.4
6	Moong pulse washed	Kg.	51.2	-13.6	-4.0
7	Mash pulse washed	Kg.	70.6	0.6	-1.2
8	Gram pulse washed	Kg.	40.7	0.0	-0.1
9	Beef	Kg.	120.7	4.4	-0.1
10	Mutton	Kg.	232.4	5.2	0.1
11	Egg hen (farm)	Doz.	45.9	28.5	7.9
12	Bread plain m.s.	Each	17.0	11.3	2.9
13	Sugar	Kg.	29.8	-10.8	-0.6
14	Gur	Kg.	36.7	-16.4	2.8
15	Milk fresh	Litr	29.2	12.9	0.2
16	Milk powdered Nido	400g	144.6	30.4	0.5
17	Curd	Kg.	34.5	12.7	0.3
18	Veg.ghee tin	2.5k	275.3	30.3	2.8
19	Veg.ghee loose	Kg.	88.7	37.5	1.4
20	Mustard oil	Kg.	95.7	35.7	3.6
21	Cooking oil	2.5l	275.3	30.1	2.8
22	Potatoes	Kg.	18.2	-17.7	5.6
23	Onions	Kg.	22.0	39.9	<b>35.2</b>
24	Tomatoes	Kg.	26.6	-20.0	<b>-2.2</b>
25	Bananas	Doz.	32.0	-1.6	-3.6
26	Salt powdered	Kg.	4.9	7.0	2.3
27	Red chilies (powd)	Kg.	121.7	56.3	-3.7
28	Garlic	Kg.	51.9	-10.2	-0.1
29	Tea packet	250g	65.0	-6.0	0.0
30	Tea (prepared)	Cup	6.6	5.3	0.0

**continued**

S.No	Items	Unit	Price Sep -07	Percentage change	
				YoY	Monthly
31	Cooked beef plate	Each	31.8	8.1	0.1
32	Cooked dal plate	Each	19.1	7.6	0.6
33	Cigarettes k-2	10's	8.5	7.4	0.9
34	Coarse latha	Mtr.	37.2	6.8	1.8
35	Lawn (avg.+s.qlty)	Mtr.	81.1	3.0	-1.1
36	Voil printed	Mtr.	38.7	2.3	-0.3
37	Shirting	Mtr.	69.3	5.9	1.5
38	Sandal gents Bata	Pair	499.0	25.1	0.0
39	Sandal ladies Bata	Pair	299.0	0.0	0.0
40	Chappal spng. Bata	Pair	99.0	11.2	0.0
41	Kerosene	Litr	39.4	0.9	0.9
42	Firewood	40kg	205.5	11.8	1.6
43	Elec. Bulb 60-wats	Each	12.2	1.5	0.6
44	Match box	Each	0.9	25.0	3.7
45	Washing soap	Cake	8.8	8.7	0.9
46	Bath soap lifebuoy	Cake	15.4	10.5	2.7
47	Chicken (farm)	Kg.	88.3	9.9	0.5
48	Gas chrg. All clb. Comb	D.mmbt	224.7	-7.8	0.0
49	L.p.g.(cylinder 11kg.)	Each	612.1	-3.6	8.8
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>56.4</b>	<b>35.2</b>
<b>Median</b>				<b>7.4</b>	<b>0.5</b>
<b>Min:</b>				<b>-20.0</b>	<b>-4.0</b>

Table A9: Daily Labor Wages (Rs. per day) - Average of 35 Cities						
	Carpenter	Mason	Laborer	Plumber	Electrician	Average
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
Source: Federal Bureau of Statistics						

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities			
Item and Specification	Weights	Index	
		Sep-06	Sep-07
<b>GENERAL</b>	<b>100.0006</b>	<b>140.07</b>	<b>151.80</b>
<b>FOOD &amp; BEVERAGES.</b>	<b>40.3412</b>	<b>145.90</b>	<b>164.83</b>
1 WHEAT	0.4830	135.05	159.81
2 WHEAT FLOUR	5.1122	135.81	161.27
3 MAIDA	0.1059	130.41	152.60
4 BESAN	0.1320	149.77	148.94
5 RICE	1.3369	127.43	194.77
6 PULSE MASOOR	0.2214	116.31	149.05
7 PULSE MOONG	0.2230	200.00	171.30
8 PULSE MASH	0.2017	155.38	155.08
9 PULSE GRAM	0.4272	139.49	140.99
10 GRAM WHOLE	0.1491	142.19	135.61
11 MUSTARD OIL	0.0456	126.75	170.18
12 COOKING OIL	0.6858	133.84	171.48
13 VEGETABLE GHEE	2.6672	139.57	186.08
14 SUGAR	1.9467	122.87	108.11
15 GUR	0.0735	167.07	137.55
16 TEA	1.2559	114.16	108.70
17 MILK FRESH	6.6615	147.67	166.84
18 MILK POWDER	0.1105	130.23	167.78
19 MILK PRODUCTS	0.5607	134.78	153.91
20 HONEY	0.0358	130.17	130.17
21 CEREALS	0.0878	128.02	142.82
22 JAM,TOMATO,PICKLES & VINEGAR	0.2472	119.13	134.55
23 BEVERAGES	0.7286	129.73	137.67
24 CONDIMENTS	0.3392	112.35	119.99
25 SPICES	0.6008	106.69	128.73
26 DRY FRUIT	0.2760	197.93	224.31
27 BAKERY & CONFECTIONARY	2.9837	117.04	121.56
28 CIGARETTES	0.9527	147.40	158.07
29 BETEL LEAVES & NUTS	0.1851	133.12	143.22
30 READYMADE FOOD	1.6833	151.51	162.19
31 SWEETMEAT & NIMCO	0.3846	147.27	164.12
32 FISH	0.2703	139.70	142.03
33 MEAT	2.6981	207.44	221.73
34 CHICKEN FARM	0.9158	156.16	172.20
35 EGGS	0.4119	132.19	165.72
36 POTATOES	0.5707	236.62	201.44
37 ONIONS	0.6138	140.37	246.59
38 TOMATOES	0.4734	219.35	211.55
39 VEGETABLES	1.8670	173.29	197.94
40 FRESH FRUITS	1.6156	145.77	166.25
<b>APPAREL, TEXTILE &amp; FOOTWEAR.</b>	<b>6.0977</b>	<b>120.55</b>	<b>129.74</b>
41 COTTON CLOTH	1.6197	126.75	132.89
42 SILK,LINEN,WOOLEN/CLOTH	0.5766	123.81	129.10
43 TAILORING CHARGES	0.8636	124.31	132.67
44 HOSIERY	0.1528	132.53	139.53
45 READYMADE GARMENTS	1.2038	120.76	124.27
46 WOOLEN READYMADE GARMENTS	0.1485	133.27	138.52
47 FOOTWEAR	1.5327	108.09	127.45
<b>HOUSE RENT.</b>	<b>23.4298</b>	<b>138.90</b>	<b>149.26</b>
48 HOUSE RENT INDEX (Combined)	23.4298	138.90	149.26
<b>FUEL AND LIGHTING.</b>	<b>7.2912</b>	<b>148.74</b>	<b>152.74</b>
49 KEROSENE	0.1366	236.02	235.87
50 FIREWOOD	0.4778	196.07	220.66
51 MATCH BOX	0.1301	100.00	100.00
52 BULB & TUBE	0.1311	88.02	86.73

(continued)



Table A10 (continued)

Item and Specification		Weights	Index	
			Aug-06	Aug-07
53	ELECTRICITY	4.3698	108.59	119.53
54	NATURAL GAS	2.0458	224.59	209.86
<b>H.HOLD.FURNITURE &amp; EQUIPMENT ETC.</b>		<b>3.2862</b>	<b>129.41</b>	<b>137.58</b>
55	UTENSILS	0.3690	118.05	122.93
56	PLASTIC PRODUCTS	0.1055	136.02	143.32
57	SUITCASE	0.0470	119.79	126.60
58	HOUSE HOLD EQUIPMENTS	0.0953	117.42	123.19
59	FURNITURE (Ready Made)	0.3054	127.90	138.21
60	FURNISHING	0.6362	125.89	132.14
61	ELECT.IRON FANS & WASHING MACHINE	0.1889	119.16	125.99
62	SEWING MACHINE,CLOCK AND NEEDLES	0.1270	117.09	118.74
63	REFRIGERATOR & AIRCONDITIONER	0.1756	94.87	100.63
64	MARRIAGE HALL	0.0445	136.40	150.56
65	HOUSE HOLD SERVANT	1.1918	143.72	154.72
<b>TRANSPORT &amp; COMMUNICATION.</b>		<b>7.3222</b>	<b>151.38</b>	<b>146.74</b>
66	PETROL	1.7253	188.63	175.59
67	DIESEL	0.2070	245.02	238.74
68	CNG. FILLING CHARGES	0.1649	137.66	142.87
69	SERVICE CHARGES	0.3835	128.74	133.72
70	VEHICLES	0.2596	100.15	101.19
71	TYRE & TUBE	0.2831	120.42	125.15
72	TRANSPORT FARE/CHARGES	2.1236	170.18	173.24
73	TRAIN FARE	0.1514	170.01	170.01
74	AIR FARE	0.0983	218.72	253.00
75	COMMUNICATION	1.9255	99.44	86.77
<b>RECREATION &amp; ENTERTAINMENT.</b>		<b>0.8259</b>	<b>105.84</b>	<b>105.86</b>
76	RECREATION	0.3399	100.00	100.97
77	ENTERTAINMENT	0.4860	109.92	109.28
<b>EDUCATION.</b>		<b>3.4548</b>	<b>131.84</b>	<b>138.21</b>
78	TUTION FEES	2.3629	136.46	144.78
79	STATIONERY	0.3500	120.11	127.54
80	TEXT BOOKS	0.6894	125.65	125.38
81	COMPUTER & ALLIED PRODUCTS	0.0525	83.24	82.10
<b>CLEANING LAUNDRY &amp; PER.APPEARANCE.</b>		<b>5.8788</b>	<b>122.77</b>	<b>130.71</b>
82	WASHING SOAP & DETERGENT	1.5535	113.71	121.33
83	TOILET SOAP	0.7436	118.33	135.80
84	TOOTH PASTE	0.4036	104.83	108.18
85	SHAVING ARTICLES	0.3480	108.10	115.78
86	COSMETICS	1.4272	121.99	126.16
87	WATCHES	0.0552	118.84	121.56
88	JEWELLERY	0.3936	185.44	203.18
89	LAUNDRY CHARGES	0.2207	136.97	147.30
90	HAIR CUT & BEAUTY PARLOUR CHARGES	0.7334	127.19	130.52
<b>MEDICARE.</b>		<b>2.0728</b>	<b>120.17</b>	<b>129.51</b>
91	DRUGS & MEDICARES	1.0752	106.54	106.90
92	DOCTOR'S FEE	0.9976	134.86	153.87

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

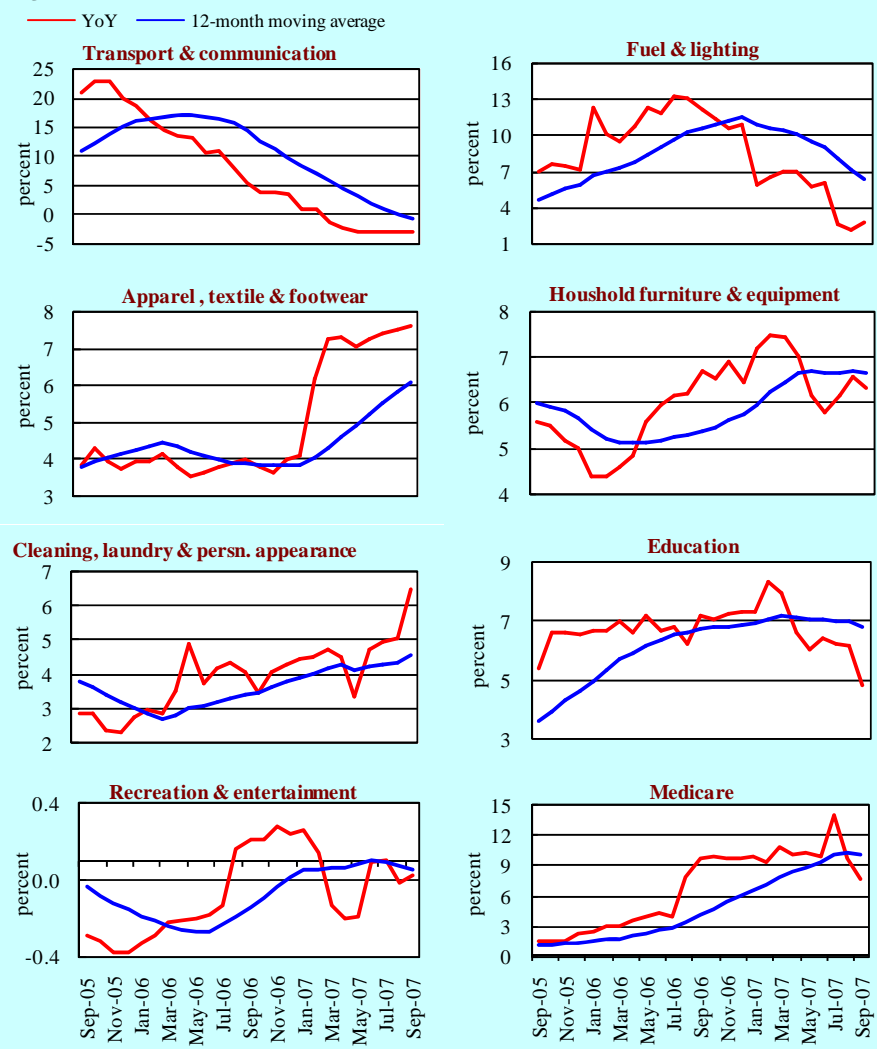


Figure A2: Frequency Distribution of Price Changes of CPI Items, September 2007

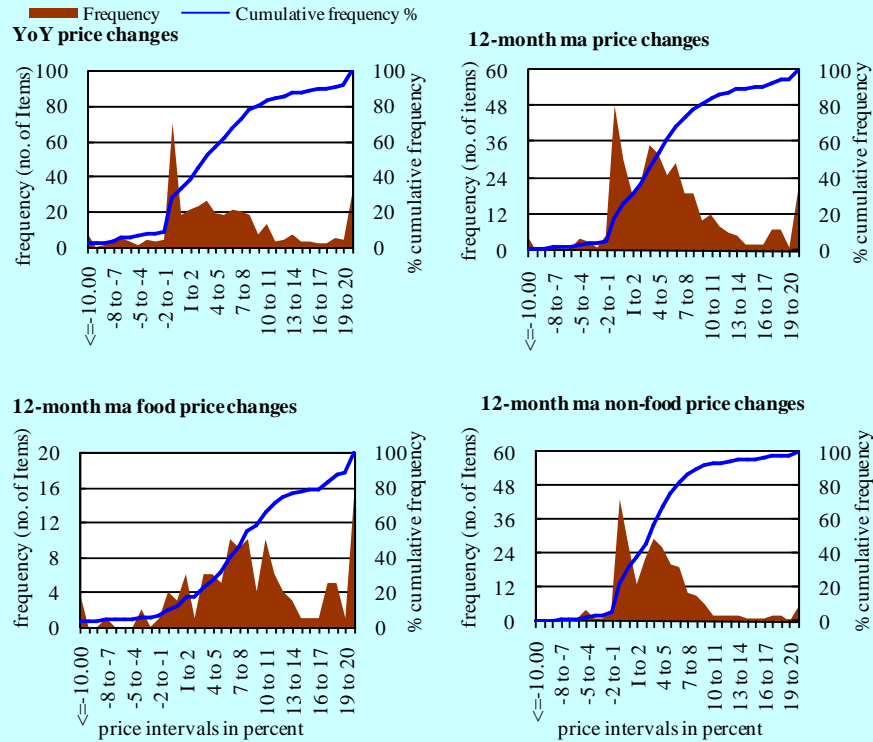
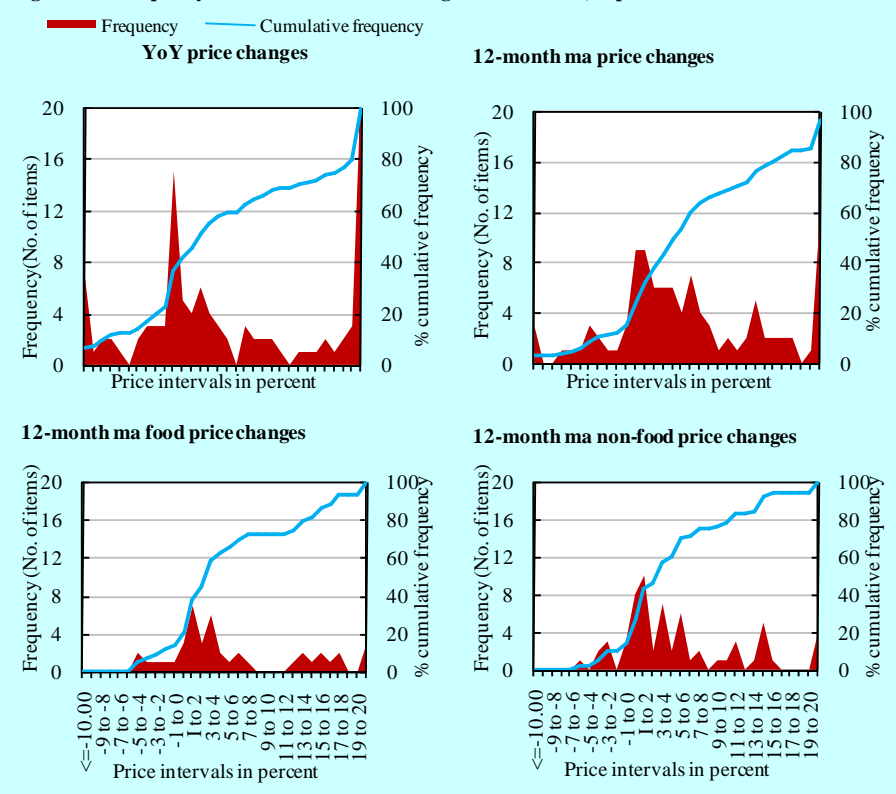


Figure A3: Frequency Distribution of Price Changes of WPI Items, September 2007



## 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