

# **Inflation Monitor**

**October 2006**



**State Bank of Pakistan**  
*Research Department*



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## Overview

The inflationary pressures decelerated further during the month of October 2006 supported both by food and non-food inflation. However, food inflation was still showing a double digit growth despite witnessing a lower growth compared to the last two months.

The headline inflation exhibited a lesser growth of 8.1 percent in October 2006 which was 0.6 percentage points lower than the CPI YoY growth in preceding month and 0.2 percentage points less than the same month last year. Non-food

**Table 1.1: Inflation (YoY)**

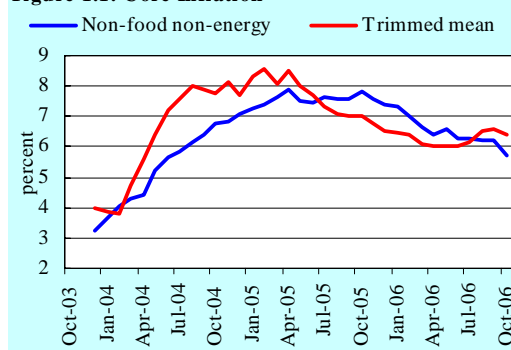
	CPI			WPI			SPI	Core Inflation	
	General	Food	Non-food	General	Food	Non-food		NFNE *	Trimmed mean
Oct-05	8.3	6.4	9.6	11.1	7.2	14.1	6.5	7.8	7.0
Nov-05	7.9	5.8	9.4	10.9	6.4	14.3	5.4	7.6	6.8
Dec-05	8.5	8.1	8.8	11.0	7.8	13.4	6.2	7.4	6.5
Jan-06	8.8	8.2	9.2	10.8	7.2	13.4	6.0	7.3	6.5
Feb-06	8.0	7.5	8.4	9.9	6.9	12.2	7.0	7.0	6.4
Mar-06	6.9	5.4	8.0	8.5	5.9	10.4	6.8	6.7	6.1
Apr-06	6.2	3.6	8.0	8.1	4.5	10.8	6.8	6.4	6.0
May-06	7.1	5.6	8.2	9.1	5.7	11.6	8.6	6.6	6.0
Jun-06	7.6	7.8	7.5	9.0	6.7	10.7	8.9	6.3	6.0
Jul-06	7.6	7.4	7.8	8.4	5.4	10.7	8.9	6.3	6.1
Aug-06	8.9	11.1	7.4	8.2	8.2	8.1	11.0	6.2	6.5
Sep-06	8.7	11.3	7.0	8.0	9.2	7.2	11.2	6.2	6.6
Oct-06	8.1	10.5	6.4	6.7	8.2	5.6	11.8	5.7	6.4

\*: NFNE is Non-food non-energy inflation; see Annexure B for more on measures of core inflation.

inflation also declined significantly to 6.4 percent in October – the lowest of the last two years. Nonetheless, pressure on food inflation still exists which is also evident from a considerably high rate of growth in SPI – an abridged basket of consumer goods consisting mostly of food items. However, WPI continued its declining trend and came further down to 6.7 percent during the month under review (see **Table 1.1**).

More importantly both measures of the core inflation i.e. non-

**Figure 1.1: Core Inflation**



energy non-food (NFNE) and 20 percent trimmed mean, also declined with NFNE being recorded at 5.7 percent and trimmed mean core inflation at 6.4 percent compared with 7.8 and 7 percent in the month of October last year (see **Figure 1.1**).

Looking at monthly inflation, i.e. percent change of price index in October over September 2006, it comes out that overall CPI increased by 0.4 percent which was not only lower than that of preceding month but also than its past five years average. Monthly food inflation was also significantly lower in October as compared to September partly due to base effect (see **Table 1.2**).

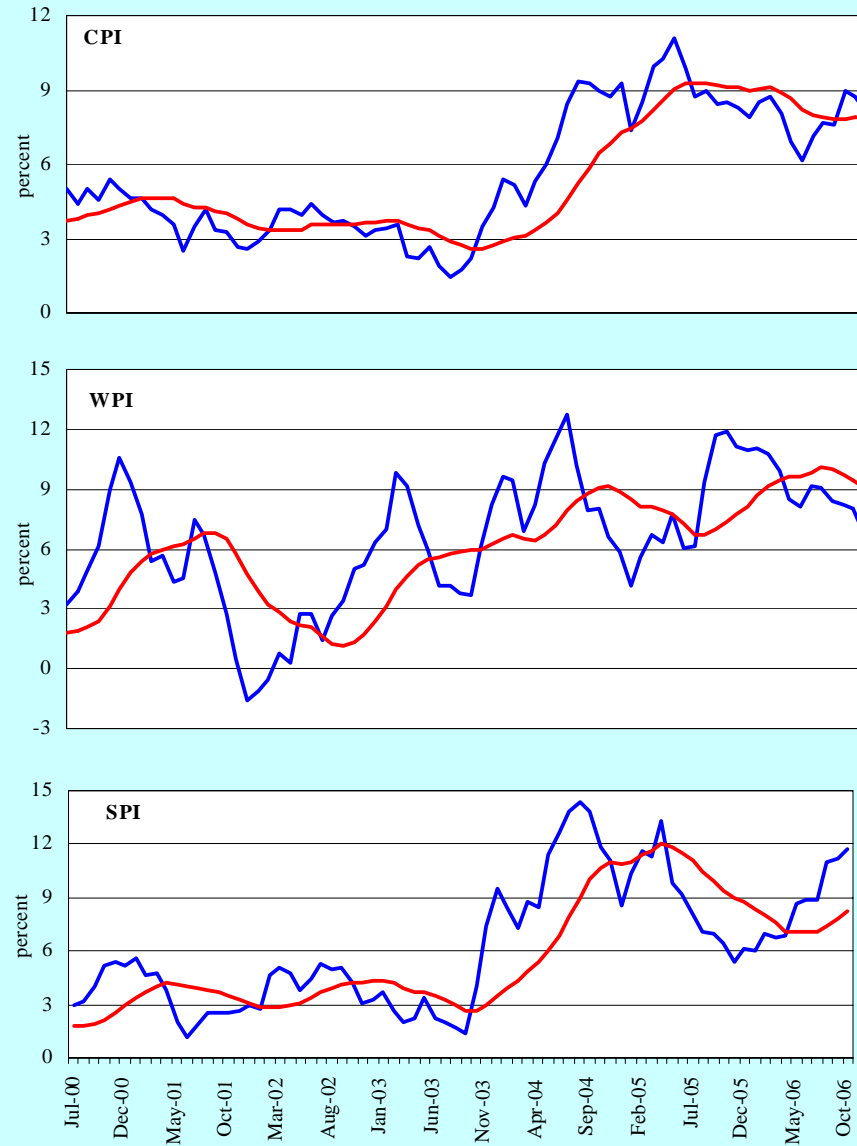
The long run trend of CPI inflation (measured as 12-month moving average) did not change from August 2006 and remained stable at 7.9 percent in October 2006 after declining continuously for past several months. The long run trend in SPI, on the other hand, kept on rising since the beginning of FY07 (see **Figure 1.2**). Contrary to CPI and SPI, the wholesale price index that remained on a rising long run path during FY06, turned down in July 2006 then continued to decline in subsequent months due to persistent deceleration in WPI for the last several months.

<b>Table 1.2: Different Dimensions of Inflation (percent)</b>				
	<b>Oct-04</b>	<b>Oct-05</b>	<b>Oct-06</b>	<b>5-year average</b>
<b>Year-on-year *</b>				
Overall CPI	8.7	8.3	8.1	6.4
Food group	12.3	6.4	10.5	7.5
Non-food group	6.3	9.6	6.4	5.7
<b>Period average *</b>				
Overall CPI	9.1	8.5	8.4	6.4
Food group	13.6	7.9	10.1	7.6
Non-food group	6.0	9.0	7.1	5.6
<b>12-month moving average *</b>				
Overall CPI	6.9	9.1	7.9	6.0
Food group	10.1	10.5	7.7	6.7
Non-food group	4.7	8.1	8.0	5.5
<b>Monthly *</b>				
Overall CPI	1.2	0.9	0.4	1.3
Food group	2.2	1.2	0.5	2.4
Non-food group	0.4	0.8	0.2	0.5

\* For definitions see Annexure B

**Figure 1.2: Movements in Price Indices**

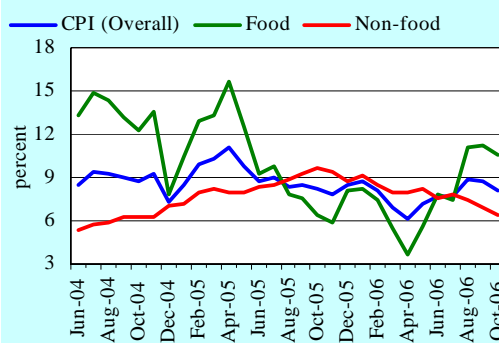
— Year-on-year — 12-month moving average



## 2. Consumer Price Inflation

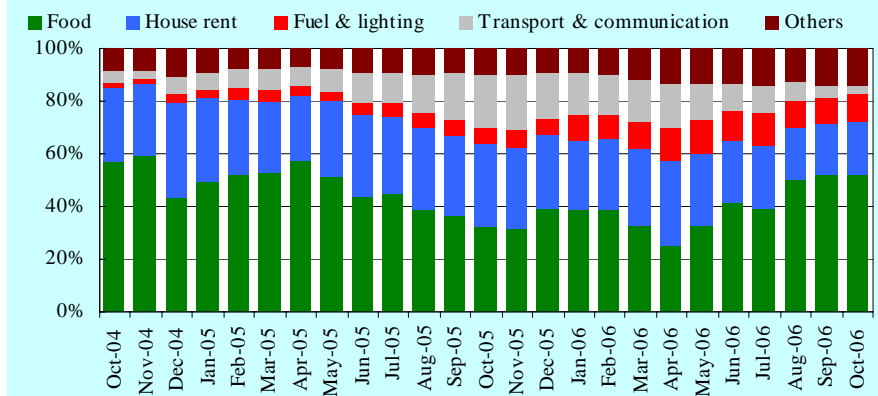
The consumer price inflation in October 2006 was recorded at 8.1 percent YoY that was 0.6 percentage point less than the previous month and 0.2 percentage points less than the corresponding month last year. The decline in inflation was supported by a significant fall in both non-food and food inflation. However, despite decline, food group still maintained double digit inflation (see **Figure 2.1**).

**Figure 2.1: Consumer Price Inflation**



Due to persistently high inflation during the last three months of the current fiscal year, the contribution of food group in overall inflation increased significantly to 52.4 percent in October 2006 from 31 percent during FY06; the non food group's contribution declined accordingly in the month. Within the non-food group, the contribution of house rent index also declined from 31 percent during the last fiscal year to below 20 percent in the month under review; some reduction in contribution of other sub-indices of non-food group to overall inflation has also been observed (see **Figure 2.2**).

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

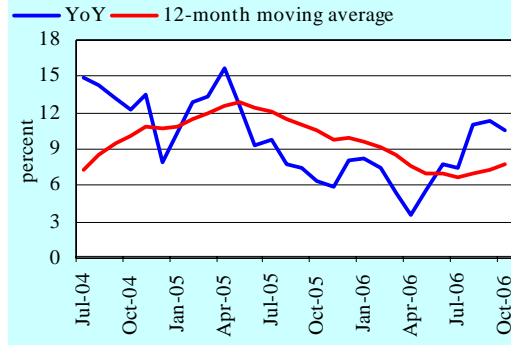




## 2.1 Food Inflation

Like in the last month of September, food inflation was recorded in double digit at 10.5 percent YoY in October 2006, driven mainly by increase in prices of vegetables including tomatoes, chills green, onion and arvi along with persistent pressure on prices of some pulses. Continuously high food inflation for three months in a row turned its declining long run trend up (see **Figure 2.3**).

**Figure 2.3: CPI Food Inflation**

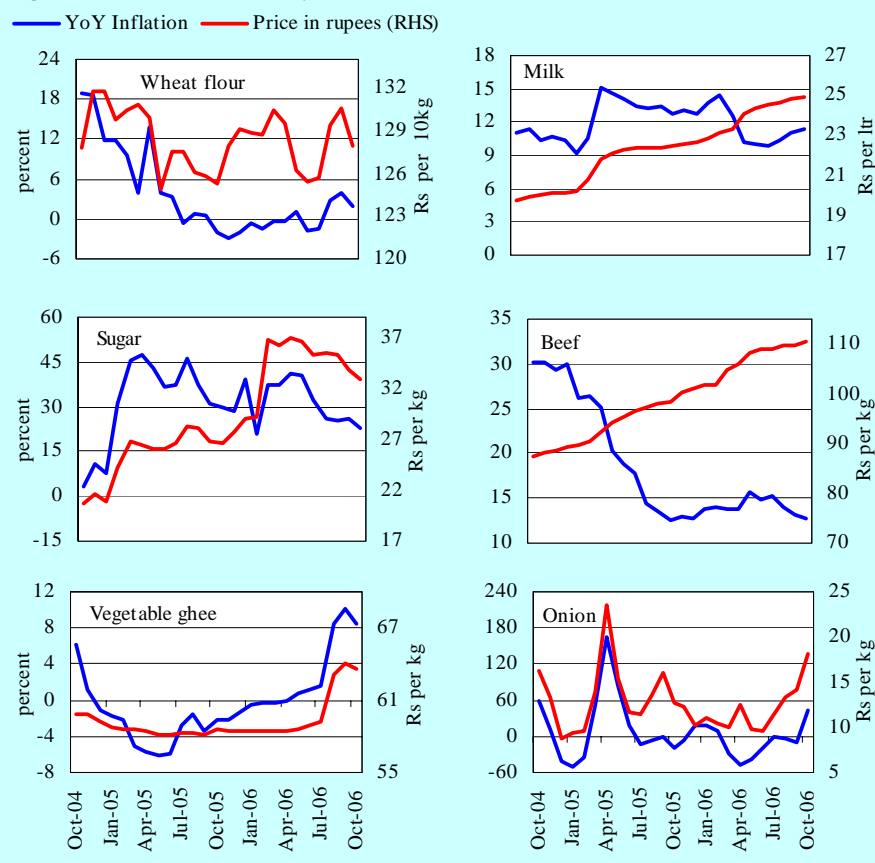


A closer look at price movements of individual items included in the CPI food group reveals that prices of 49 commodities including fresh milk, beef, sugar, chicken, pulses gram, mash and moong, cooked mutton, honey, tomatoes, chillies green etc. exhibited inflation in the range of 10 to 108 percent YoY in October 2006. The combined weight of such commodities (with double digit inflation) is about 52.4 percent of the food group. On the other hand, prices of 14 commodities like apple, ginger, pulse masoor declined during the month. The rest of items, having a weight of 35 percent in food group exhibited subdued or moderate inflation (see **Table A2** in annexure for distribution of CPI items).

Among the key food items, average price of wheat flour was recorded at Rs 127.86 per 10 kg bag during October 2006 which was about 2.77 percent less than that in the previous month. Fresh milk price showed a YoY increase of 11.4 percent in the month compared with 11.1 percent in September, while increases in prices of sugar and vegetable ghee were lower in October than those in the previous month (see **Figure 2.4**). The price of tomato has shown the highest increase of more than 108 percent in October 2006 followed by chillies green (89 percent), pulse mash (54 percent), basen (51 percent), onion (42 percent) and sugar (23 percent).

In terms of percent contribution to overall inflation, fresh milk and tomatoes were the second and third highest contributors (house rent index of non-food group being the first) with 9.2 percent and 5.8 percent share in overall YoY inflation of CPI (see **Table A4** in the Annexure).

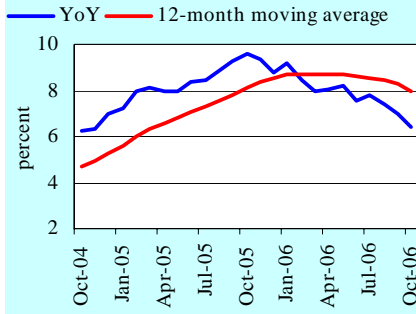
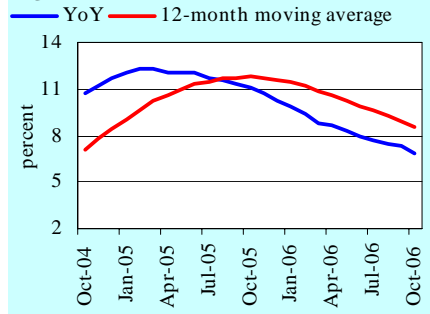
**Figure 2.4: Price Trends in Key Food Items**



## 2.2 Non-food Inflation

Contrary to food inflation, non-food inflation declined from 9.6 percent in October 2005 to 6.4 percent in the month under review primarily due to decline in inflation of transport & communication and fuel & lighting sub-indexes and continued deceleration in house rent index. The long run trend in CPI non-food inflation also continued to decelerate in the month (see **Figure 2.5**).

House rent index (HRI) maintained its declining trend which started after February 2005, and recorded a moderate increase of 6.9 percent in October 2006 compared with about 11.1 percent in the corresponding month last year (see **Figure 2.6**).

**Figure 2.5: CPI Non-food Inflation****Figure 2.6: House Rent Inflation**

Along with the HRI, all other sub-indexes of non-food group, except medicare and recreation and entertainment, also decelerated in October 2006. Fuel and lighting subgroup inflation declined to 11.3 percent in October 2006 compared to 12.1 percent in the preceding month. Most notable decline was recorded in transport and communication that already had been showing a continuous decrease since November 2006: YoY inflation of 3.8 percent in October 2006 compared with 22.7 percent in the same month of last year. On the other hand, medicare subgroup inflation registered a significant increase of 9.9 percent in the month under review compared to 1.6 percent growth in the same month last year (see **Figure A1** in annexure).

Of the 250 non-food commodities included in the CPI basket, 28 commodities witnessed double digit inflation which include items like gents shoe, gas cylinder, mattress, fares of different modes of transportation, primary school fee (English medium), gold tezabi, and doctor 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 a number of durable goods like telephone charges, computer, video cassette player, refrigerator, sewing machines, etc (see **Table A3** in the annexure)..

### 2.3 Region wise Inflation

An analysis of province wise<sup>1</sup> inflation in CPI (YoY) reveals that NWFP experienced the highest general CPI inflation – higher than the overall average inflation of 8.1 percent; followed by Punjab; while Sindh had faced the lowest general CPI inflation (see **Table 2.1**). The provinces depicted exactly the same position in food inflation as in general CPI but for non-food inflation Punjab was at the top followed by NWFP while Sindh and Balochistan both experienced the

<sup>1</sup> Province wise data has been calculated on the basis of given data of CPI of 35 cities.

same non-food inflation of 6.5 percent. The capital city of Islamabad, however, experienced the highest inflation of all the provinces. Although average inflation in provinces remained lower than Islamabad, there are some cities within provinces that experienced sharp increases in prices even higher than Islamabad (see **Table 2.2**).

**Table 2.1: Province wise CPI Inflation, Oct 2006**

	General	Food	Non-food
Punjab	8.6	10.9	7.1
NWFP	8.8	11.8	6.8
Sindh	7.8	9.8	6.5
Balochistan	7.9	9.9	6.5
Islamabad	10.1	11.8	9

**Table 2.2: City wise Inflation in CPI (YoY), October 2006**

High inflation cities				Low inflation cities			
	General	Food	Non-food		General	Food	Non-food
Kunri	11.2	17.9	6.6	Turbat	7.9	8.5	7.4
Okara	11.0	11.7	10.4	Nawabshah	7.7	9.1	6.8
Gujranwala	10.4	13.7	8.1	Abbotabad	7.7	9.3	6.5
Attock	10.2	13.6	8.0	Khuzdar	7.7	10.9	5.5
Islamabad	10.1	11.8	9.0	Larkana	7.3	8.9	6.2
Bannu	9.6	11.9	8.0	Jehlum	7.3	7.0	7.6
Rawalpindi	9.6	11.8	8.0	Sialkot	7.1	7.5	6.8
Mardan	9.4	11.8	7.7	Sukkur	6.0	5.7	6.3
Multan	9.3	10.6	8.4	Faisalabad	5.7	7.1	4.7
Peshawar	9.3	13.4	6.6	Samundari	5.1	6.5	4.1
Bahawalnagar	8.9	11.6	7.1				
D.I.Khan	8.8	12.8	6.0				
Vehari	8.7	9.8	8.0				
Lahore	8.7	12.0	6.4				
Karachi	8.7	12.4	6.2				
D.G. Khan	8.6	11.4	6.5				
Shahdadpur	8.5	10.5	7.1				
Loralai&Cantt	8.5	12.4	5.9				
Sargodha	8.5	10.8	6.8				
Mirpur Khas	8.4	10.9	6.6				
Mianwali	8.3	9.5	7.5				
Hyderabad	8.3	11.2	6.2				
Bahawalpur	8.3	10.1	6.9				
Jhang	8.1	10.4	6.6				
Quetta	8.1	10.3	6.6				

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

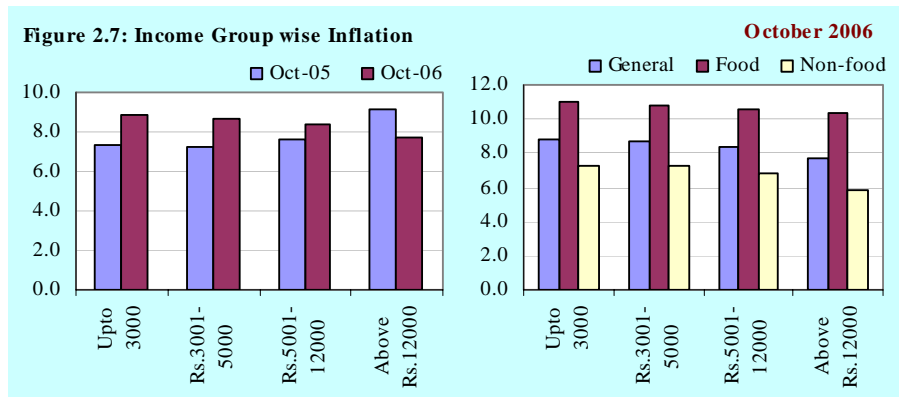
City wise YoY inflation data for October 2006 shows that 25 cities out of 35 cities had more than average inflation. The highest inflation of 11.2 percent was recorded in Kunri and the lowest of 5.1 percent in Samundri. The major shift in the ranking of Kunri from seventh position of last month (September 2006) to first position this month was all due to food inflation that had increased to 17.9 percent from 16.3 percent while non-food inflation had declined from 6.9 percent to 6.6

percent. Other major cities including Okara, Gunjranwala, Attock, Banu, Rawalpindi, and Peshawar experienced high inflation while Turbat, Nawabshah, Abbottabad and Khuzdar were among low inflation cities.

It is interesting to note that the cities of Karachi and Hyderabad<sup>2</sup> were found in the category of high inflation cities for October 2006 as traditionally these cities had remained in the category of low inflation cities. The ranking of Loralai & Cantt and Jhang had also been changed from low inflation cities to high inflation cities but these cities got mixed trend for the last few months. Jhelum was the only city shifted from high inflation category to low inflation.

#### 2.4 Income Group-wise Inflation

The inflation of all income groups except for the highest income was higher in October 2006 than the inflation of the same month last year. However as compared to previous month, all income groups depicted the declining trend in all the three categories of inflation (viz general, food and non-food). Moreover, the income-group wise inflation continued to follow the similar pattern of last two months, i.e., the highest income group experiencing inflation lower than average and the lowest income group experiencing inflation above the average (see **Figure 2.7**).



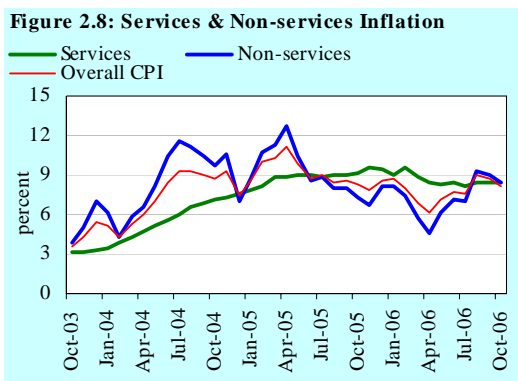
Province wise data reveals that NWFP experienced the highest inflation for all income groups except for the highest income group. For the highest income group, Islamabad is depicting the highest general CPI inflation. However, food inflation in NWFP remained higher even than Islamabad (see **Table 2.3**).

<sup>2</sup> Hyderabad ranking had been shifted to high inflation cities despite of decline in inflation as compared to last month.

Table 2.3: Province wise Inflation by Income Groups						
	Upto Rs.3000			Rs.3001-5000		
	General	Food	Non-Food	General	Food	Non-Food
Islamabad	9.2	9.9	8.7	9.7	10.7	9.0
Punjab	9.0	11.2	7.5	8.9	10.6	7.7
Sindh	7.8	9.7	6.4	8.0	10.1	6.6
NWFP	10.0	13.5	7.7	10.3	13.1	8.5
Baluchistan	9.0	12.0	7.0	9.2	12.6	7.0
	Rs. 5000-12000			Above 12000		
	General	Food	Non-Food	General	Food	Non-Food
Islamabad	9.6	10.9	8.7	10.2	12.0	8.9
Punjab	8.6	10.5	7.3	8.0	10.3	6.3
Sindh	7.7	9.6	6.3	7.3	9.2	5.9
NWFP	9.8	12.9	7.7	8.9	12.5	6.5
Baluchistan	8.6	12.4	6.1	8.2	11.9	5.6

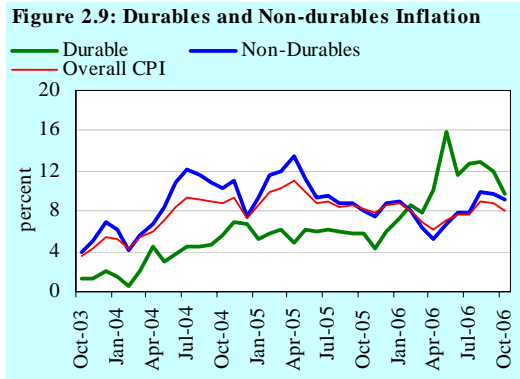
## 2.5 Services and Non-services Inflation

Following the trend of overall inflation, both the services<sup>3</sup> and commodities groups of CPI basket witnessed decline in inflation in October 2006. YoY inflation in services was recorded at 7.7 percent in October compared with 8.4 percent in the previous month and 9.6 percent in the corresponding month last year. The prices of non-services (commodities) increased by 8.4 percent in October 2006 – down from above 9 percent during the last two months (see **Figure 2.8**).



<sup>3</sup> The services group of CPI basket includes item like house rent index, electricity charges, marriage hall, house hold 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, further breakup is for durables<sup>4</sup> and non-durables goods. The inflation of durable items decreased significantly, and stood at 9.6 percent in October 2006 as compared with 12 percent in September 2006 (see **Figure 2.9**). On the other hand, the non-durable goods inflation was recorded at 9.1 percent in October 2006 as compared with 9.7 percent in September 2006 and 8.1 percent in the corresponding month last year.



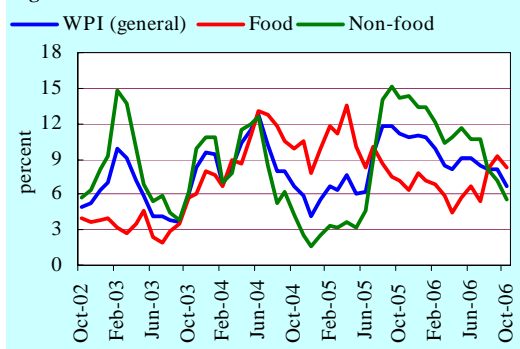
<sup>4</sup> Durable items includes suitcase, furniture (ready made), electric iron, fans, washing machines, sewing machines, clocks, needles, refrigerator, air conditioners, vehicles, computer & allied products, watches and jewellery, etc.

### 3. Wholesale Price Inflation

The wholesale price inflation (WPI) continued its decelerating trend in the current fiscal year and stood lower at 6.7 percent (YoY) in October 2006 compared to the same month last year – showing the lowest WPI in last 15 months. Both food and non-food components of WPI inflation contributed in this slowdown. WPI food inflation which was increasing from the start of this fiscal year

decelerated in October 2006 and showed a decline of 1 percentage point from the previous month, however, it still registered 1 percentage point higher than the same month last year on YoY basis (see **Figure 3.1**). Similarly, non-food component of WPI inflation decelerated further and registered a growth of 5.6 percent down by 8.5 percentage points in comparison to the same month a year earlier mainly due to the decline in prices of raw materials.

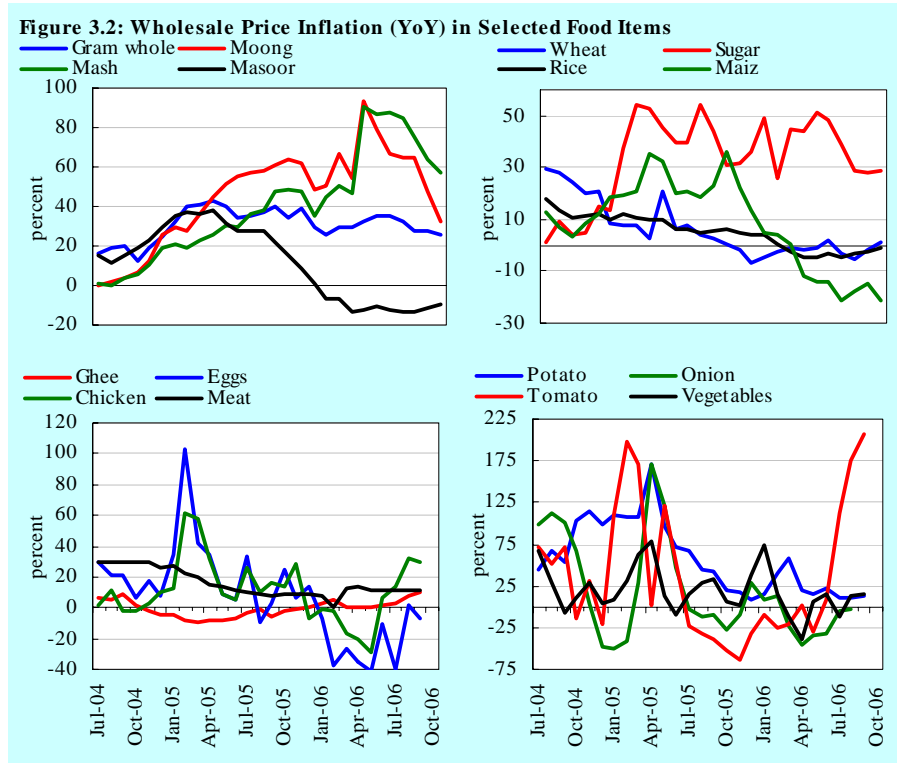
**Figure 3.1: Wholesale Price Inflation**



After witnessing a sharp increase for the months of August and September 2006, the pace of increase in WPI food inflation slowed down mainly on account of decrease in prices of eggs, maize, masoor, dry fruits, rice and subdued increase in the whole sale prices of fish, spices, wheat and wheat flour, cooking oil etc. There were some food items that exhibited significant increase in their wholesale prices due to the disruption to the supply chain on the back of rains and floods couple of months back. These items included potatoes, fresh fruits, gram whole, onions, tomatoes etc. (see **Figure 3.2**).

WPI non-food prices declined by 1 percent on monthly basis – the highest decline recorded in more than two years. Raw material sub group which showed monthly decline of 6 percent was the major contributory factor in declining WPI non-food inflation. Among the individual commodities of non-food group, wholesale prices of coal, diesel oil, transports, soaps, matches, ready made garments etc. declined significantly on YoY basis during the month of October 2006 whereas cotton seeds, hosiery, machinery, medicines, chemicals, cotton yarn were among the items with YoY growth of up to 5 percent.



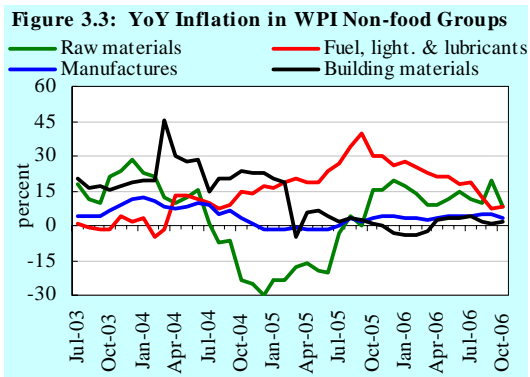


A frequency distribution of wholesale price changes suggests that 18 out of 43 food items witnessed a rise of more than 10 percent. While 7 items of food group recorded moderate inflation of 5 to 10 percent and 9 items showed subdued inflation of up to 5 percent. The wholesale prices of remaining 8 items declined or remained stable. In case of non-food group distribution of price changes, the prices of 24 items revealed a subdued rise of up to 5 percent, 19 items showed decrease or no change, 8 demonstrated double digit rise and remaining 12 items displayed a moderate inflation i.e. 5 to 10 percent (see **Table A7** in the annexure).

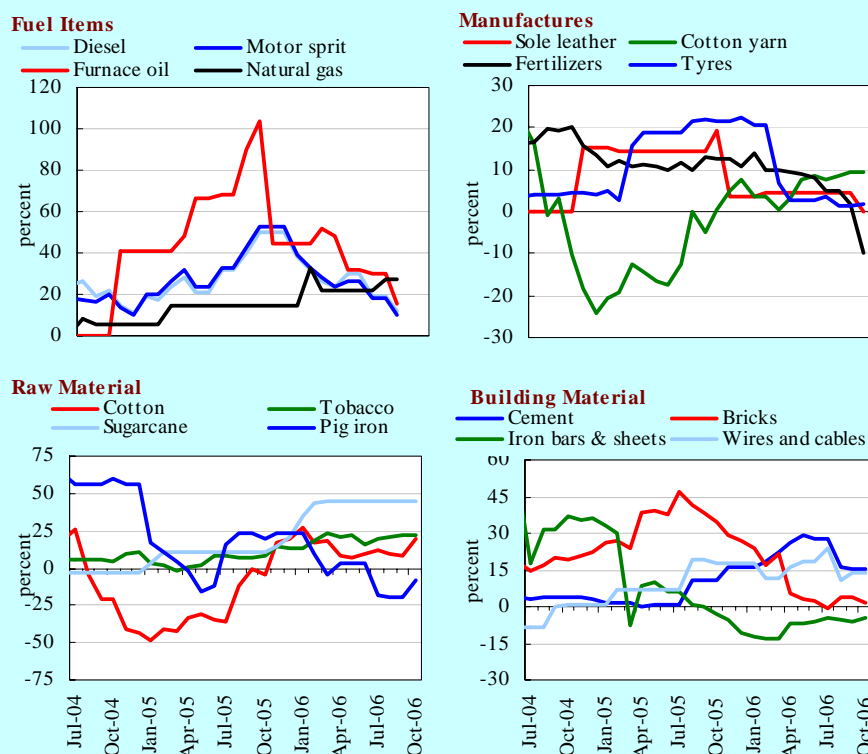
While the overall inflation in non-food group of WPI had been showing a persistent decline since September 2005, its sub-indices exhibited mixed trends. Sub-indices of *raw materials* and *manufactures* decelerated in October 2006 compared with the preceding month as well as to the corresponding month last year; whereas the *fuel & lighting* and *building materials* showed rise during the month under review (see **Figures 3.3**).

The sharp deceleration in raw material index was the outcome of declining pig iron prices and slow down in cotton prices which outpaced the rise in prices of tobacco, hides and skin. 25 out of 32 items under manufacturers sub group of WPI non-food recorded negative to moderate YoY growth in prices.

In the fuel & lightening sub group, prices of all petroleum products and natural gas remained stable and showed same growth as of preceding month except for mobil oil that grew at a faster rate of 7.0 percent in October 2006



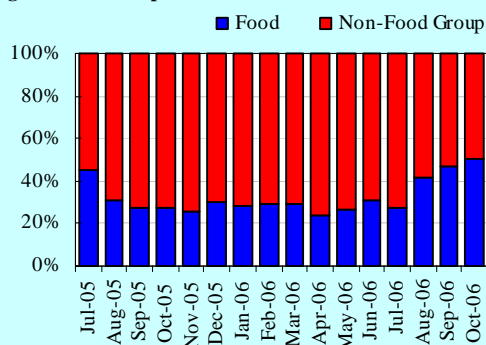
**Figure 3.4: Wholesale Prices Inflation in Selected Non-food Items**



compared to the growth of 5.4 percent in October 2005. In building material subgroup, the wholesale prices of cement and wires & cables increased significantly by 15.1 percent and 14.2 percent respectively over the corresponding month last year whereas the prices of iron bars & bricks registered YoY decline of 4.6 percent during the month under study (see **Figure 3.4**).

Both WPI food and non-food inflation declined, however, the decline in food was less than that of non-food, therefore weighted contribution of food group inflation increased further and covered more than half share of overall WPI inflation after remaining below 50 percent for the last 15 months. This rising contribution of food group in WPI was attributed to the higher wholesale prices in most of the major food items (15 out of 21) during the last three months. The weighted contribution of non-food inflation in WPI that remained around 70 percent during FY06 declined significantly to 49.4 percent in October 2006 (see **Figure 3.5**).

**Figure 3.5: Groups' Contribution to WPI Inflation**



Within non-food group, the contributions of its sub groups showed mixed trends. The major shift was recorded in the raw material whose contribution declined to 17.4 percent from 31.0 percent- still higher than the average contribution of 9.9

**Table 3.1: Contribution of Sub-indices to WPI Non-food Inflation**

	Oct -04	Oct -05	Oct -06
Raw materials	-87.9	12.7	17.4
Fuel, lighting & lubricants	113.9	77.9	57.6
Manufactures	29.8	8.8	22.4
Building materials	44.2	0.5	2.6

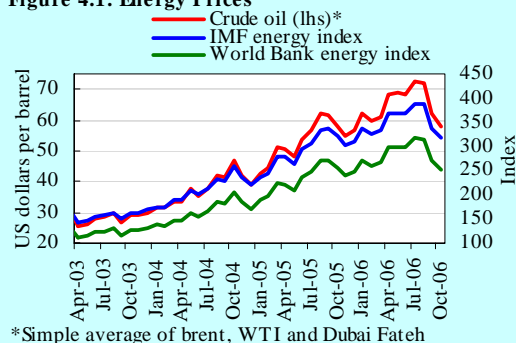
percent during the last fiscal year- while the contribution of fuel & lightening sub group increased significantly to 57.6 percent from 44.0 percent. The contributions of manufactures and building materials inflation stood at 22.4 percent and 2.5 percent respectively during the month under review (see **Table 3.1**).

#### 4. Global Commodity Prices

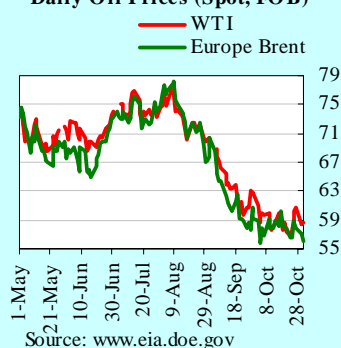
International crude oil prices decelerated further in October 2006 compared to the preceding month and reached almost at the same level as it was in July 2005. Reasons for the recent price decreases have included easing tensions in the Mideast region and increased non-OPEC supply.

Easing tensions in the Mideast amid steady OPEC supply, lower refinery rates in Asia, healthy winter fuel stockpile and expectations of slower economic growth caused a sharp drop in prices in past two months. In accordance with the oil prices the IMF and World Bank energy indices for October 2006 exhibited a significant fall over the preceding month. The daily crude oil prices that started downward movement during the first week of August 2006 and remained close to US\$60 per barrel in September 2006 declined further in October 2006 registering around US\$58 per barrel price. On October 23, crude oil fell to a 10-month low (see **Figure 4.1**).

**Figure 4.1: Energy Prices**

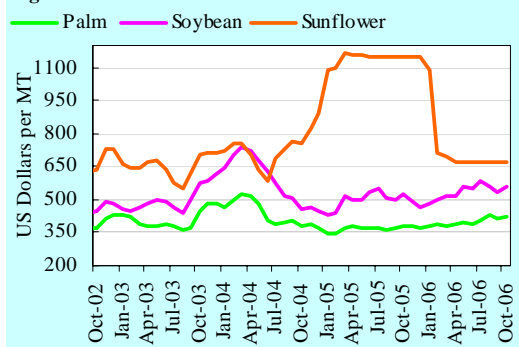


**Daily Oil Prices (Spot, FOB)**



As regards the food prices, the edible oil prices (palm and soybean) continued its rising trend that started from January 2006. The palm and soybean oil recorded 10.2 and 7.0 percent YoY inflation in October 2006 respectively whereas the price of sunflower did not show any change since April 2006. In accordance to the YoY trend, the prices of palm as well as

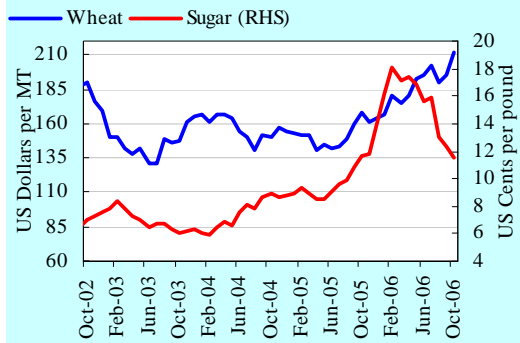
**Figure 4.2: Edible Oil Prices**



soybean oil witnessed a rise over the preceding month (see **Figure 4.2**).

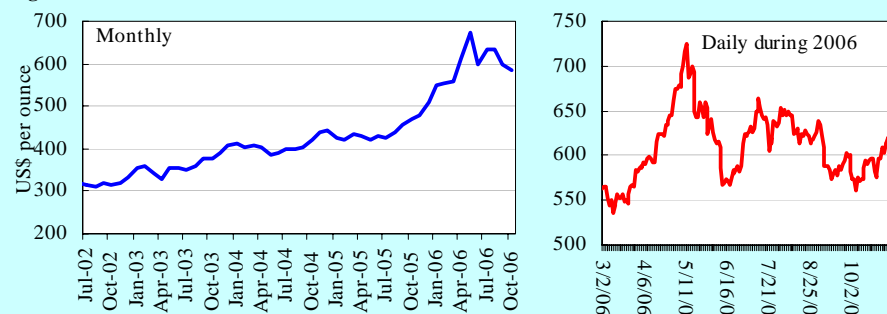
Wheat prices increased for the second consecutive month on YoY as well as monthly basis mainly on account of the expectations of lower production on the back of poor weather condition in the major wheat producing countries (see **Figure 4.3**). In contrast, sugar price declined in October 2006 after registering more than 30 percent rise every month since Nov 05 and showing a modest rise of 13.9 percent in the preceding month. On monthly basis, sugar prices declined by 6.6 percent for the third consecutive month over the preceding month.

**Figure 4.3: Sugar and Wheat Prices**



The price of gold decreased by 2.1 percent in October 2006 over the preceding month; however, it registered significant increase of 31.0 percent over the corresponding month of last year (see **Figure 4.4**). Gold prices remained comparatively lower, largely in reaction to a softer tone in crude oil prices and the euro. Moreover, the variation in gold prices reduced significantly during October 2006 showing a standard deviation (SD) of 12.89 around mean of US\$585.78 per ounce compared to SD of 19.5 around mean of US\$598.06 per ounce a month earlier.

**Figure 4.4: Gold Prices**



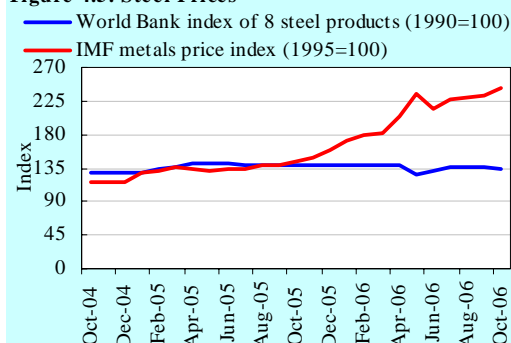
Source: [www.gold.org](http://www.gold.org)

In non-fuel commodities, prices of all major metals including copper, zinc, aluminum, iron ore, tin, nickel, lead, uranium etc. increased further in October 2006 mainly due to the strong demand from USA and China construction industries. The IMF metal price index maintained its YoY growth and increased by 68.5 percent – much higher compared with 24.5 percent growth in October 2005. In contrast, steel prices – as measured by the World Bank index of 8 steel products – exhibited a meager monthly decline of 1.5 percent in October 2006- after remaining at 135.8 during the last three months (see **Figure 4.5**).

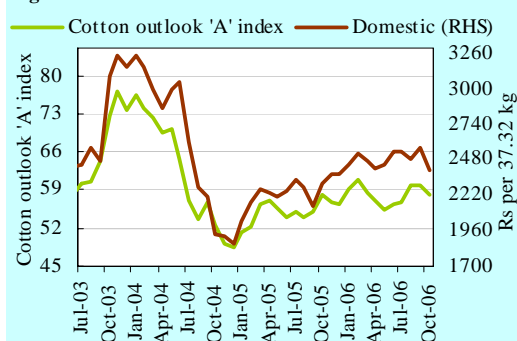
Cotton prices in international market declined by 6.4 percent in October 2006 compared to the previous month. Whereas on YoY basis international cotton prices decelerated and registered a growth of 4.1 percent much lower than the previous 12 months (see **Figure 4.6**).

After showing growth for two consecutive months, from August to September 2006, urea prices dropped by 6.1 percent on YoY basis during the month under review. On the other hand monthly prices of DAP continued its declining trend that started from June 2006 and declined by 4.0 percent in October 2006 on YoY basis as against a significant increase of 14.0 percent in October 05. The DAP prices have declined by 5.0 percent since June 2006 (see **Figure 4.7**).

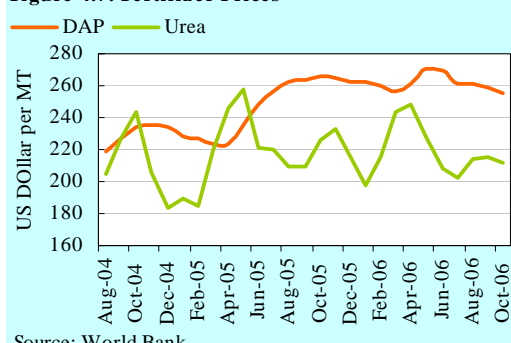
**Figure 4.5: Steel Prices**



**Figure 4.6: Cotton Prices**



**Figure 4.7: Fertilizer Prices**



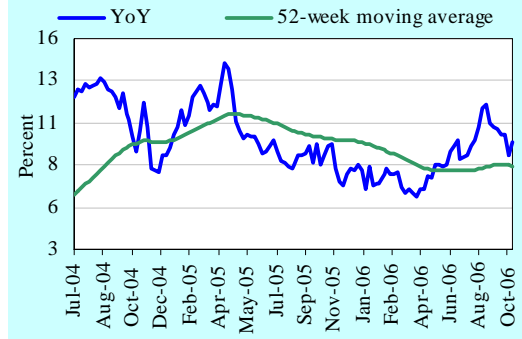
Source: World Bank

## 5. Sensitive Price Indicator

The upward trend in the sensitive price indicator continued in the month of October with an increase of 11.76 percent YoY in the month that was the highest in the last one and a half year. Weekly SPI also showed high average inflation during the month: with persistent increase being witnessed in the last three weeks of the month after showing a slight deceleration in the first

week of October. The major items contributing to SPI inflation were pulses, vegetables, gas and other liquid fuel prices. About 43 percent of the total items in the SPI basket recorded double-digit YoY inflation during October 2006 with some of the items like pulses moong, gram and mash, tomato, onion, electric charges, etc. witnessing inflation of more than 30 percent.

Figure 5.1: Weekly SPI Inflation



## 6. Wage Inflation

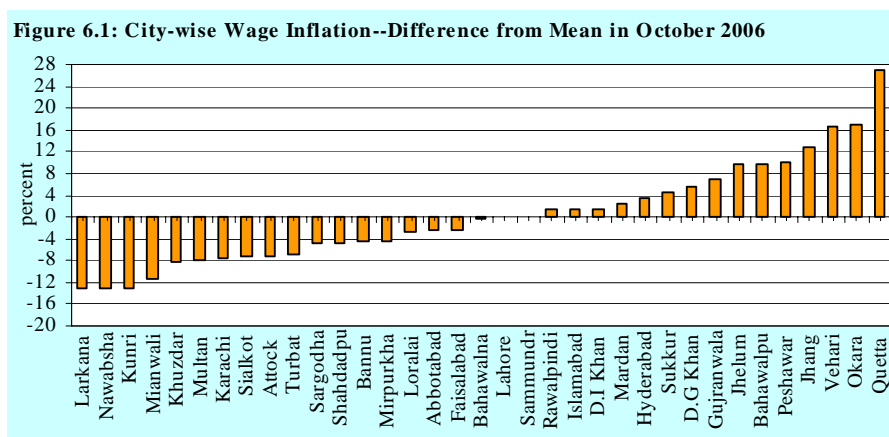
Wage inflation that started declining from the start of FY07 continued its decelerating trend in October 2006 resulting from lower wages of both skilled and unskilled workers on account of slow down in construction activities. Average wages of skilled labour registered a lesser YoY growth of 12.6 percent compared with 14.8 percent in the preceding month and 16.5 percent in the corresponding month last year. Further breakup of skilled and unskilled workers' wage inflation

Table 6.1: Wage Inflation

	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06
<b>Overall</b>	15.5	15.6	14.6	14.6	16.9	18.2	17.0	15.9	14.8	13.0
<b>Skilled:</b>	15.0	15.2	14.0	14.0	16.5	18.1	16.8	15.7	14.6	12.6
Carpenter	14.7	15.8	14.4	14.9	14.6	15.9	15.0	13.4	13.3	11.8
Mason	18.2	17.2	16.0	16.4	17.2	19.7	18.4	17.8	15.2	12.6
Plumber	16.4	17.0	15.1	13.9	14.0	15.2	14.0	13.2	12.1	10.7
Electrician	10.4	10.4	10.3	10.8	20.2	21.4	19.8	18.6	17.8	15.1
<b>Unskilled:</b>	19.6	19.3	19.0	18.6	19.9	19.5	18.5	16.9	16.4	16.2
Laborer	19.6	19.3	19.0	18.6	19.9	19.5	18.5	16.9	16.4	16.2

reflected that all sub-categories exhibited deceleration in wage inflation during October 2006 (see **Table 6.1**).

Like nominal wage inflation the growth in average real wages slowed down further as the average nominal wages declined more rapidly than CPI inflation. While the real wages of skilled workers kept on declining during October 2006, the unskilled workers' real wages turned up in the month under review. Skilled and unskilled workers registered real wage inflation growth of 4.4 and 8.1 percent respectively compared to 7.7 and 14.1 percent growth in the corresponding month of last year.



**Figure 6.1** presents the picture of city wise deviation in wages from mean during the month of October 2006. Out of 35 cities, 17 recorded higher than average wage inflation and 18 cities witnessed lower than average inflation during the month. The highest wage inflation was evidenced in Quetta followed by Okara and Vehari whereas Larkana, Nawabshah, Kunri etc. showed lower changes in wages. The month wise average wages of all types of workers increased by 13.0 percent during October 2006 over the corresponding month of last year and lie between Rs 176.9 rupees per day for labour and Rs 340.3 rupee per day for meson (see **Table 6.2**).



**Table 6.2: Daily Labor Wages (Rs. per day)--Average in 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
Monthly averages						
Jan-05	248.5	263.3	130.4	245.8	242.8	226.1
Feb-05	248.2	265.6	130.9	245.7	242.8	226.6
Mar-05	250.5	269.2	132.5	250.0	244.3	229.3
Apr-05	253.3	269.8	134.4	255.4	247.7	232.1
May-05	256.0	273.1	136.5	256.8	247.7	234.0
Jun-05	258.1	275.2	138.5	258.6	248.8	235.8
Jul-05	264.2	280.9	142.5	264.6	252.1	240.8
Aug-05	269.9	284.1	145.8	270.2	256.0	245.2
Sep-05	275.8	293.6	149.3	276.6	257.7	250.6
Oct-05	280.8	302.1	152.2	280.4	263.8	255.9
Nov-05	281.5	304.2	152.9	281.3	265.5	257.1
Dec-05	283.8	308.6	154.7	282.5	266.8	259.3
Jan-06	284.9	311.2	156.0	286.1	267.9	261.2
Feb-06	287.4	311.4	156.2	287.4	267.9	262.1
Mar-06	286.5	312.1	157.7	287.8	269.6	262.8
Apr-06	290.9	313.9	159.4	291.0	274.3	265.9
May-06	293.4	319.9	163.6	292.7	297.7	273.5
Jun-06	299.2	329.4	165.6	297.8	302.0	278.8
Jul-06	303.9	332.7	168.9	301.7	302.0	281.8
Aug-06	306.0	334.5	170.4	305.7	303.6	284.0
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

Source: Federal Bureau of Statistics

## Annexure A

Table A1: CPI Inflation (YoY) by Groups						
	Weights	Oct-02	Oct-03	Oct-04	Oct-05	Oct-06
<b>I. Food Group</b>	<b>40.3</b>	<b>3.6</b>	<b>4.6</b>	<b>12.3</b>	<b>6.4</b>	<b>10.5</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>3.4</b>	<b>2.8</b>	<b>6.3</b>	<b>9.6</b>	<b>6.4</b>
Apparel, textile, etc.	6.1	2.0	4.2	2.5	4.3	3.8
House rent	23.4	0.7	2.7	10.8	11.1	6.9
Fuel & lighting	7.3	9.3	3.2	2.2	7.6	11.3
Household furniture & equipt	3.3	2.1	3.0	6.2	5.5	6.5
Transport & com.	7.3	7.3	0.6	5.2	22.7	3.7
Recreation & entert.	0.8	0.6	-0.9	0.1	-0.4	0.3
Education	3.5	4.2	4.4	2.7	6.6	7.1
Cleaning, laundry, etc.	5.9	3.6	4.2	4.7	2.8	3.5
Medicines	2.1	3.8	1.7	1.0	1.6	9.8
<b>Headline</b>	<b>100</b>	<b>3.5</b>	<b>3.5</b>	<b>8.7</b>	<b>8.3</b>	<b>8.1</b>

Table A2: Distribution of Price Changes of CPI Basket, October 2006 (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>10.5</b>	<b>112</b>	<b>14</b>	<b>23</b>	<b>26</b>	<b>49</b>
<b>II. Non-Food Group</b>	<b>6.4</b>	<b>250</b>	<b>67</b>	<b>100</b>	<b>55</b>	<b>28</b>
Apparel, textile, etc.	3.8	42	6	21	13	2
House rent	6.9	1	0	0	1	0
Fuel & lighting	11.3	15	7	1	1	6
Household furniture & equipt	6.5	44	2	23	17	2
Transport & com.	3.7	43	12	12	7	12
Recreation & entert.	0.3	16	11	3	2	0
Education	7.1	24	9	9	3	3
Cleaning, laundry, etc.	3.5	36	6	19	9	2
Medicines	9.8	29	14	12	2	1
<b>Overall</b>	<b>8.1</b>	<b>362</b>	<b>81</b>	<b>123</b>	<b>81</b>	<b>77</b>

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

Table A3: Distribution of Price Changes - Selected CPI Items, October 2006

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Eggs Farm, Apple Chowkelate Candy (Small Size) Pulse Masoor (Washed) Ginger	Wheat Flour Bag Wheat Flour Fine/Superior. Wheat Rice Basmati Broken Av.Qlty	Vegetable Ghee (Loose) Toffee (Hilal) Tea Loose Kenya Av.Qlty 250G Bread Plain Medium Size, Cooking Oil (Dalda)	Tomatoes Chillies Green Pulse Mash (Washed) Onion Sugar Refined
<b>Apparel &amp; Textile</b>	Ladies Sandal Bata Child Shoe Power Lite Bata, Nylon Jogger 27 Size 2-5	Shirting Av.Qlty. School Uni. Kameez,Shal.Girl	Lawn Av.Qlty. Tailoring Coat-Pant Suit Tailoring Suit Female	Nylon Jogger 27 Size 2-5, Gents Shoe, Art 1109 Service
<b>House Rent Index</b>	HRI			
<b>Fuel &amp; Lighting</b>	Tube Light Philips 40 Watts, Elect.Charges Above 1000 Uni Elect.Charges 301 - 1000 Uni	Bulb Philips 100- Watts	Kerosene Oil	Gas Chrg10.1157 - 13.4876Mmb Gas Chrg 6.7438 - 10.1157Mmb Gas Chrg Upto 3.3719 Mmbtu
<b>H/hold Furniture</b>	Refg. Dawlence 10 Cft. D.Doo Sewing Machine(Singer)	Quilt (Lihaf) 3 Kg. Cotton, Tea Set Pak. Chinaware 21 Pc, Bedsheet Single Bed Sup.Qlty	Household Servant Female P/T Celing Fan 48" Super Qlty, Bucket(Balti) Plastic Med.Si	Pedestal Fan 22" Super Qlty Mattress Single(4"Thick)
<b>Transport &amp; Comm.</b>	Telephone Charges Local Call Tel Charges Out Side City, Bus Fare Outside City, Car Suzuki 800 Cc (W/O. A/C)	Petrol Super Car Service Charges High Speed Diesel Hsd, Auto Rickshaw Fares	Tyre Car With Tube General Bus Fare Max (Within Cit, Minibus Fare Max.With In Cit	Train Fare Eco. > 500 Km. Cng Filling Charges Taxi 4 Seater Fare Air Fare Economy Class.
<b>Recreation</b>	Daily "Jang" Daily "Nawa-E-Waqt" Video Game Sega 16 Byte	T.V. 20" Colored With R/Cont Tape Recorder Cassette Blan Cinema Non-A/C High Class	Cinema A/C. Highest Class Dry Cell 1.5 Volt(Local)	
<b>Education</b>	Govt. College Fee Ist. Year, Maths Book Class Ix Or X Govt. Med. College Fee Mbbs	Paper Foolscape (27"X17"), Exercise.Book Lined 80/100 P Urdu Book Class Ix/X(T.B.B)	School Fee 2Nd-Ry Eng.Med. English Book Class Ix Or X Ball Pen (Local)	School Fee Primary Eng.Med. Eng. Book Ist.Yr Complete Se Govt. University Fee Msc.
<b>Cleaning &amp; Laundry</b>	Toilet Soap Lux 95 Grams Surf (Medium) 160 Grm Toothpaste Macklines 70 Grm	Washing Soap Nyl(135-160Gms) Shampoo Plain Medora 200 Ml. Washing Powder 1000 Grm	Haircut Charges For Men Dry Cleaning Suit Coat Pant Wrist Watch Ladies Citizen	Gold Tezabi 24 Ct Silver Tezabi 24 Ct
<b>Medicare</b>	Cac. 1000 Tab Betnesol Eye Drops Hydryllin Syrup 120 Ml.	Amoxil Capsule 250 Mg.S Renitec Tab. 5 Mg. Thermometer China	Jouhar Joshanda Galxos-D (450 Grms)	Doctor (Mbbs) Clinic Fee

Table A4: Top Ten CPI Items (Ranked by Inflation Contribution)							
Items		Unit	weights	Price	YoY change		Weighted Contribution
				Oct-06	Oct-05	Oct-06	
A. Ranked by Weighted Contribution							
1	House Rent Index	Month	23.43	139.53	11.12	6.88	19.88
2	Milk Fresh (Unboiled)	Ltr.	6.53	24.94	13.42	11.39	9.18
3	Tomatoes	Kg	0.44	26.92	-55.96	108.36	5.84
4	Sugar Refined	Kg.	1.95	32.87	29.55	23.11	5.55
5	Gas Chrg10.1157 - 13.4876Mmb	Mmbtu	0.93	387.90	14.54	27.00	3.10
6	Gas Cylinder Stand. Size	Each	0.68	18.18	-20.87	42.25	3.01
7	Beef With Bone Av.Qlty.	Kg	1.61	42.52	3.61	51.10	2.69
8	Pulse Gram	Kg.	0.43	110.45	12.83	12.20	2.42
9	Gas Chrg Upto 3.3719 Mmbtu	Mmbtu	0.84	102.38	0.00	20.39	2.11
10	Train Fare Eco. > 500 Km.	P/Km.	0.48	0.51	5.56	34.21	2.03
Total			37.3				55.8
B. Ranked by Percentage Change							
1	Tomatoes	Kg	0.44	26.92	-55.96	108.36	5.84
2	Pulse Mash (Washed)	Kg. 10	0.20	51.28	2.77	89.36	1.59
3	Silver Tezabi 24 Ct	Gm.	0.03	68.50	27.81	54.45	1.35
4	Pulse Moong (Washed)	Kg.	0.22	42.52	3.61	51.10	2.69
5	Besan Av. Qlty.	Kg.	0.13	46.13	6.43	50.60	0.82
6	Pulse Gram	Kg. 10	0.43	24.45	-3.94	45.19	0.39
7	Gold Tezabi 24 Ct	Gm.	0.20	219.15	11.60	44.86	0.16
8	Air Fare Economy Class.	P/Km.	0.10	56.53	44.11	42.64	1.17
9	Chillies Green	Kg	0.14	18.18	-20.87	42.25	3.01
10	Guava	Kg	0.11	79.19	0.68	41.16	0.58
Total			2.0				17.6

Table A5: City-wise Inflation (YoY) by Income Groups, October 2006							
		Upto Rs:3000			Rs 3001-5000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	9.3	12.9	6.8	9.3	12.3	7.2
2	Faisalabad	5.6	7.2	4.4	5.7	7.0	4.8
3	Rawalpindi	9.4	11.7	7.8	9.4	11.3	8.1
4	Multan	10.2	11.1	9.7	9.9	10.6	9.4
5	Gujranwala	11.1	15.3	8.0	10.6	13.7	8.5
6	Islamabad	9.2	9.9	8.7	9.7	10.7	9.0
7	Sargodha	10.1	13.1	8.0	9.4	11.8	7.7
8	Sialkot	7.3	7.9	6.9	7.8	8.3	7.4
9	Bahawalpur	9.1	10.1	8.4	9.1	10.1	8.4
10	Karachi	8.4	11.7	6.1	9.0	12.8	6.5
11	Hyderabad	9.0	11.6	7.1	9.0	12.1	6.8
12	Sukkur	5.7	5.6	5.8	6.2	5.9	6.4
13	Larkana	8.1	10.1	6.6	7.9	9.7	6.6
14	Peshawar	11.4	17.3	7.5	10.9	14.8	8.2
15	Bannu	8.6	9.7	7.9	9.8	11.4	8.7
16	Quetta	8.8	10.4	7.6	8.7	11.4	6.8
17	Khuzdar	9.3	13.6	6.4	9.8	13.8	7.1
		Rs 5001-12000			above Rs 12000		
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	9.0	12.0	6.8	8.4	11.9	5.8
2	Faisalabad	5.9	7.3	5.0	5.5	6.9	4.4
3	Rawalpindi	9.5	11.6	8.0	9.7	12.0	8.0
4	Multan	9.4	10.5	8.6	9.0	10.8	7.7
5	Gujranwala	10.5	13.8	8.3	9.9	13.3	7.5
6	Islamabad	9.6	10.9	8.7	10.2	12.0	8.9
7	Sargodha	8.8	10.8	7.3	7.3	10.3	5.2
8	Sialkot	7.3	7.7	7.0	6.9	7.2	6.6
9	Bahawalpur	8.5	10.2	7.4	7.2	10.1	5.2
10	Karachi	8.9	12.7	6.4	8.4	11.9	6.1
11	Hyderabad	8.3	11.1	6.3	7.9	11.0	5.8
12	Sukkur	6.0	5.7	6.2	6.1	5.7	6.4
13	Larkana	7.4	8.9	6.3	6.6	8.3	5.4
14	Peshawar	9.8	13.5	7.3	8.5	12.7	5.8
15	Bannu	9.7	12.2	8.0	9.3	12.3	7.2
16	Quetta	8.2	10.6	6.6	7.9	9.9	6.6
17	Khuzdar	9.0	14.2	5.5	8.5	13.9	4.7

<b>Table A6 : Income Group-wise Inflation (YoY)</b>								
	<b>Mar-06</b>	<b>Apr-06</b>	<b>May-06</b>	<b>Jun-06</b>	<b>Jul-06</b>	<b>Aug-06</b>	<b>Sep-06</b>	<b>Oct-06</b>
<u>Up to Rs. 3000</u>								
General	6.9	6.0	7.5	8.0	7.6	9.3	9.4	8.8
Food	6.2	4.5	7.2	8.4	7.8	11.0	11.5	11.0
Non-food	7.4	7.1	7.7	7.6	7.6	8.1	8.0	7.3
<u>Rs. 3001-5000</u>								
General	6.7	5.8	7.1	7.7	7.5	9.2	9.3	8.7
Food	5.7	4.0	6.5	8.0	7.5	10.9	11.3	10.8
Non-food	7.4	7.1	7.6	7.5	7.5	8.1	7.9	7.3
<u>Rs. 5000-12000</u>								
General	6.7	5.8	6.9	7.6	7.5	9.0	9.0	8.4
Food	5.5	3.8	5.9	7.9	7.4	11.0	11.2	10.6
Non-food	7.6	7.3	7.6	7.3	7.5	7.7	7.5	6.8
<u>Above Rs. 12000</u>								
General	7.1	6.5	7.3	7.7	7.8	8.7	8.3	7.7
Food	5.1	3.2	4.8	7.6	7.4	11.3	11.3	10.3
Non-food	8.5	9.0	9.2	7.8	8.1	7.0	6.3	5.8
<u>All income groups</u>								
General	6.9	6.2	7.1	7.6	7.6	8.9	8.7	8.1
Food	5.4	3.6	5.6	7.8	7.4	11.1	11.3	10.5
Non-food	8.0	8.0	8.2	7.5	7.8	7.4	7.0	6.4

**Table A7: Distribution of Price Change (YoY)--WPI Items: October 2006**

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

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

S.No	Items	Unit	Price Oct -06	Percentage change over	
				Oct-05	Sep-06
1	Wheat	Kg.	11.8	3.3	0.7
2	Wheat flour a.qlt.	Kg.	13.1	1.1	-2.2
3	Rice basmti.broken	Kg.	20.4	3.3	-0.7
4	Rice irri-6	Kg.	16.1	0.9	-0.5
5	Masur pulse washed	Kg.	41.7	-6.9	0.3
6	Moong pulse washed	Kg.	56.4	40.1	-4.8
7	Mash pulse washed	Kg.	69.0	53.2	-1.8
8	Gram pulse washed	Kg.	42.7	52.8	4.9
9	Beef	Kg.	115.8	13.4	0.1
10	Mutton	Kg.	220.1	13.1	-0.4
11	Egg hen (farm)	Doz.	35.7	-12.8	-0.1
12	Bread plain m.s.	Each	15.4	8.7	1.1
13	Sugar	Kg.	32.9	23.1	-1.7
14	Gur	Kg.	43.6	16.0	-0.6
15	Milk fresh	Litr	26.0	10.9	0.5
16	Milk powdered nido	400g	110.4	2.8	-0.5
17	Curd	Kg.	30.6	9.7	0.1
18	Veg.ghee tin	2.5k	212.9	4.5	0.8
19	Veg.ghee loose	Kg.	63.9	8.4	-0.9
20	Mustard oil	Kg.	70.9	6.8	0.4
21	Cooking oil	2.5l	213.3	4.3	0.8
22	Potatoes	Kg.	23.2	23.8	5.3
23	Onions	Kg.	23.8	78.0	<b>51.4</b>
24	Tomatoes	Kg.	27.9	59.3	-16.0
25	Bananas	Doz.	32.6	19.6	0.4
26	Salt powdered	Kg.	4.7	23.6	2.8
27	Red chillies(powd)	Kg.	83.0	14.1	6.6
28	Garlic	Kg.	60.2	7.4	4.1
29	Tea packet	250g	68.9	12.2	-0.3
30	Tea (prepared)	Cup	6.2	11.3	0.2

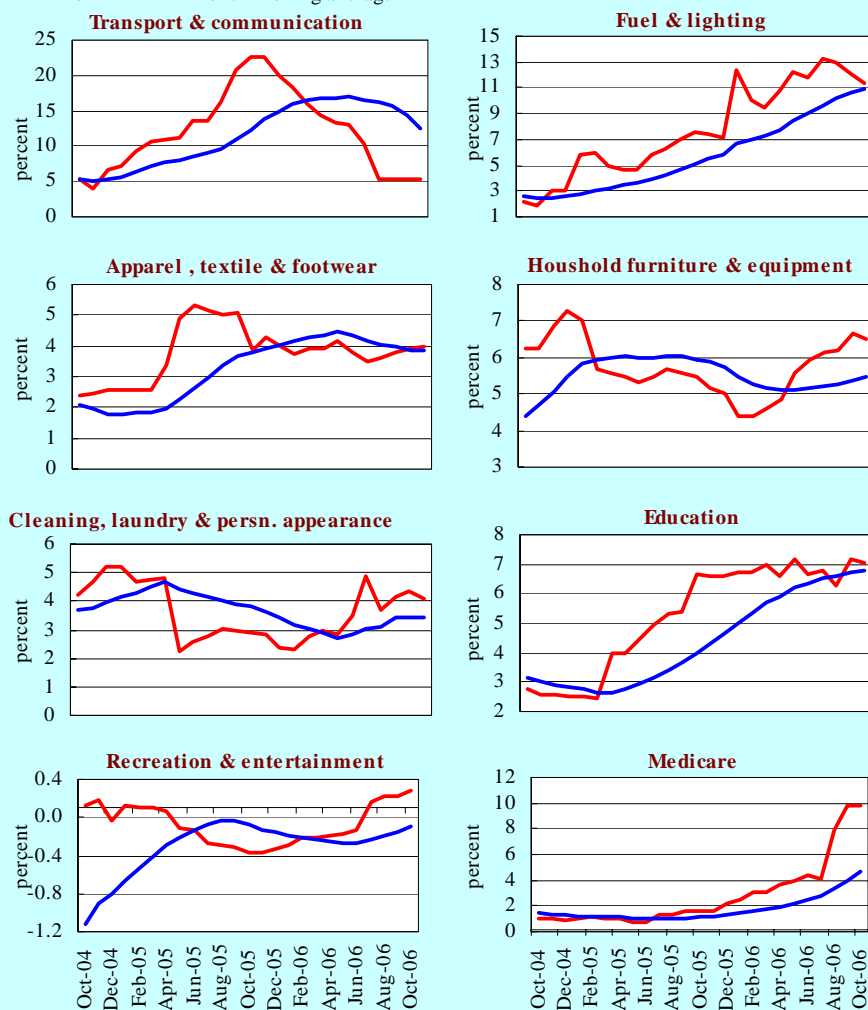
**continued**



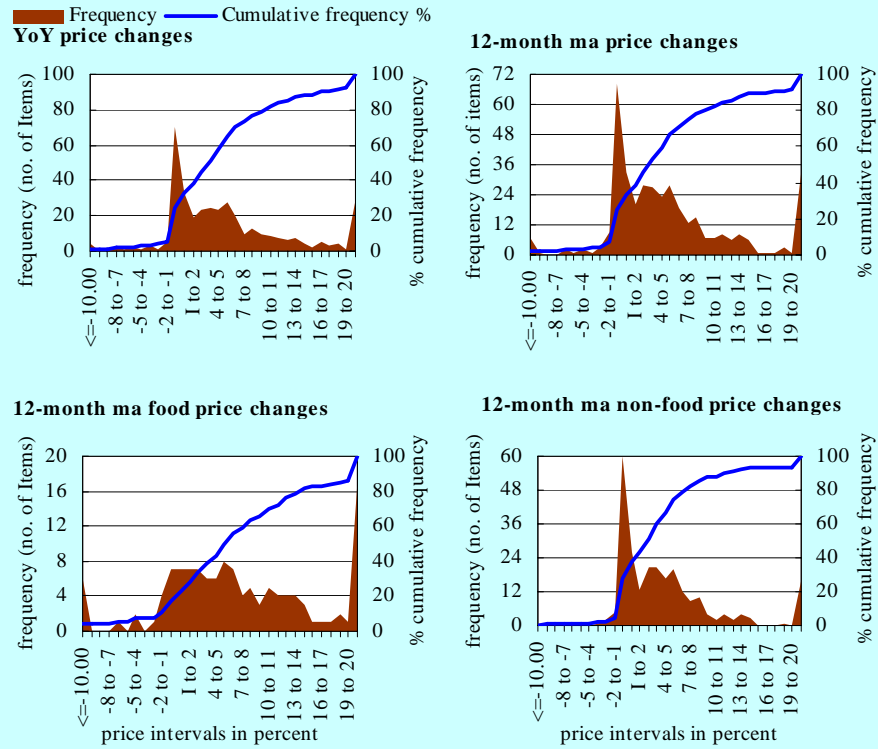
S.No	Items	Unit	Price Oct 2006	Percentage change over	
				Oct-05	Sep-06
31	Cooked beef plate	Each	29.4	14.7	0.1
32	Cooked dal plate	Each	17.8	15.9	0.2
33	Cigarettes k-2	10's	7.9	8.9	0.0
34	Coarse latha	Mtr.	34.9	2.1	0.1
35	Lawn (avg.+s.qlty)	Mtr.	78.7	4.1	-0.1
36	Voil printed	Mtr.	37.7	3.2	-0.4
37	Shirting	Mtr.	65.4	5.2	0.0
38	Sandel gents bata	Pair	399.0	0.0	0.0
39	Sandel ladies bata	Pair	299.0	0.0	0.0
40	Chappal spng. Bata	Pair	89.0	0.0	0.0
41	Kerosene	Litr	39.1	7.0	0.0
42	Firewood	40kg	185.4	20.9	0.9
43	Elec. Bulb 60-wats	Each	12.0	4.6	0.0
44	Match box	Each	0.7	8.1	-1.5
45	Washing soap	Cake	8.1	5.8	0.0
46	Bath soap lifebuoy	Cake	13.9	0.2	-0.1
47	Chicken (farm)	Kg.	80.7	13.7	0.5
48	Gas chrg. All clb. Comb	D.mmbt	243.7	186.6	0.0
49	L.p.g .(cylender 11kg.)	Each	608.9	23.2	-4.1
50	Elec.chrg.all slabs com	Bd. Unit	4.7	93.4	0.0
51	Petrol	Litr	57.8	2.5	0.0
52	Diesel	Litr	38.9	4.2	0.0
53	Telephone local	Call	2.3	0.0	0.0
<b>Max:</b>				<b>38629.0</b>	<b>38961.0</b>
<b>Median</b>				<b>8.5</b>	<b>0.0</b>
<b>Min:</b>				<b>-12.8</b>	<b>-16.0</b>

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

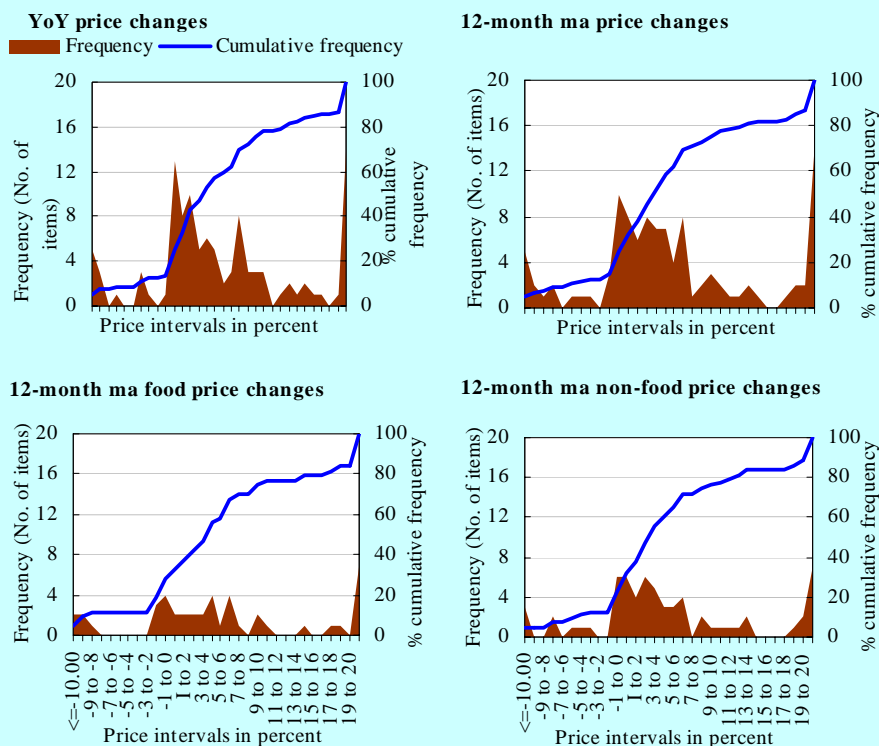
— YoY — 12-month moving average



**Figure A2: Frequency Distribution of Price Changes of CPI Items, October 2006**



**Figure A3: Frequency Distribution of Price Changes of WPI Items, October 2006**



## 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, list of which is given in Table A3.
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 and energy items 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 changes in their prices 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 price changes of the rest of the items is core inflation.