# **Inflation Monitor**

August 2006



# **State Bank of Pakistan**

Research Department

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#### 1. Overview

Headline inflation increased in the second month of the current fiscal year due primarily to an upsurge in food inflation coming from supply disturbances on the back of recent rains and floods that not only affected production but also transportation of commodities from farm and mills to the markets. Consumer price inflation has been recorded at 8.9 percent YoY in August 2006 compared with 8.4 percent in the same month of last year. Food inflation has been registered at 11.1 percent – the highest of the last 13 months. Non-food inflation, however, declined to 7.4 percent in August 2006 from 8.8 percent in the corresponding month last year (**Table 1.1**).

Table	1.1:	Inflation	(Yo	Y
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percent		CPI			WPI			Core Inflation	
	General	Food	Non- food	General	Food	Non- food	SPI	NFNE *	Trimmed mean
Aug-05	8.4	7.8	8.8	11.7	8.6	14.0	7.1	7.6	7.1
Sep-05	8.5	7.5	9.3	11.9	7.5	15.2	7.0	7.6	7.0
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	13.7	6.2	7.4	6.5
Jan-06	8.8	8.2	9.2	10.8	7.2	13.8	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	8.5	6.3	6.0
Jul-06	7.6	7.4	7.8	8.4	5.4	10.7	8.8	6.3	6.1
Aug-06	8.9	11.1	7.4	8.2	8.2	8.2	10.6	6.2	6.5

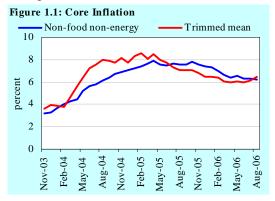
\*: NFNE is Non-food non-energy inflation

The sensitive price indicator (SPI) also followed the consumer price index with a YoY inflation of 10.6 percent in the month compared with an average 7 percent during the whole year of FY06. Like consumer prices, the wholesale prices of food items also witnessed sharp increase in August; however, overall wholesale price index (WPI) declined during the month due to deceleration in WPI non-food index.

Despite rise in headline inflation during the month, core inflation measured as *non-food non-energy* declined; it is because the main cause of recent inflation was food group which is excluded in this measure of core inflation. On the other hand, core inflation measured as trimmed mean increased significantly from 6

percent in end of FY06 to 6.5 percent in August 2006 (see **Figure 1.1**). However, this rise in trimmed mean core inflation is also due to some key food and energy items, having very high weight and high inflation, like fresh milk, beef, mutton,

potatoes and petrol supper.1 Thus recent inflation has primary been coming from while supply factors, the demand factors still remained under control with the deceleration in money and credit growth during the initial months of FY07 and rise in interest rates.



The monthly inflation, i.e. percent change of price index

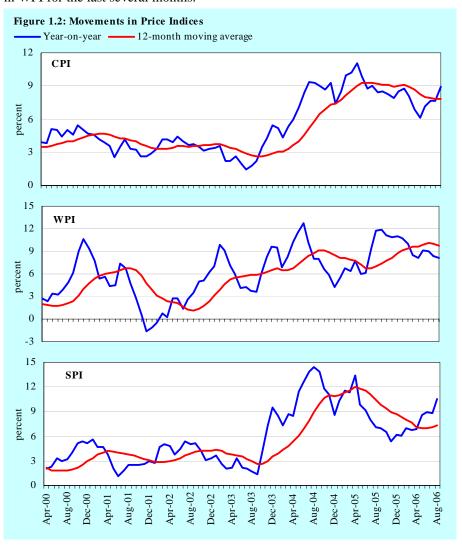
in August over July 2006 shows that overall CPI increased by 1.2 percent which is significantly higher than its past five years average. The main reason for this rise is clearly increase in food prices at the rate of 2.2 percent in August 2006 compared with a deflation of 1.1 percent in the same month last year (see **Table 1.2**).

Table 1.2: Different Dimensions of Inflation (percent)										
	Aug-04	Aug-05	Aug-06	5-year average						
Year-on-year (Aug over Aug)										
Overall CPI	9.2	8.4	8.9	6.4						
Food group	14.4	7.8	11.1	7.7						
Non-food group	5.9	8.8	7.4	5.6						
	Period av	verage (Jul-Aug over Jul	l-Aug)							
Overall CPI	9.3	11.6	7.6	6.2						
Food group	14.6	6.0	13.1	6.7						
Non-food group	5.8	5.6	6.2	4.6						
	12	month moving average								
Overall CPI	5.9	9.2	7.9	5.8						
Food group	8.5	11.5	7.0	6.4						
Non-food group	4.1	7.6	8.4	5.4						
	N	Ionthly (Aug over Jul)								
Overall CPI	0.6	0.0	1.2	0.6						
Food group	0.6	-1.1	2.2	0.6						
Non-food group	0.5	0.9	0.5	0.5						

<sup>&</sup>lt;sup>1</sup> Since the trimmed mean core inflation excludes extreme values only, it may very well happen that some important items of food and energy groups still remain in its computation.

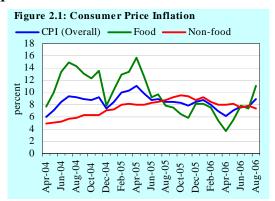
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In August 2006, the long run trend of CPI inflation (measured as 12-month moving average) rested at its last month's level after declining continuously for past several months. The long run trend in SPI, on the other hand, was turned up by the gravity of food inflation during the month; whether this shift is permanent or transitory will depend on the price movements in subsequent months (see **Figure 1.2**). Contrary to CPI and SPI, the wholesale price index, that was earlier on a rising long run path went down in the month due to persistent deceleration in WPI for the last several months.



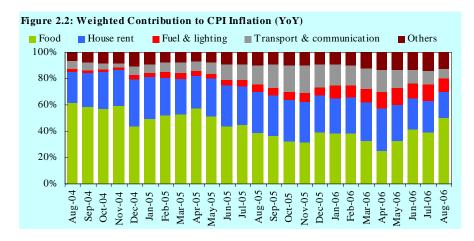
#### 2. Consumer Price Inflation

The consumer price inflation in August 2006 was recorded at 8.9 percent YoY that was the highest of the last 12 months. The upsurge in inflation was due to sharp increase in food inflation that was more than 3 percentage points higher than the previous month as well as the corresponding month last year (see **Figure 2.1**).



The contribution of food group

in overall inflation increased significantly to 50 percent in August 2006 from 35 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 30 percent during the last fiscal year to 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**).

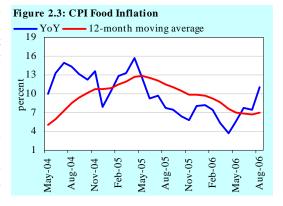


## 2.1 Food Inflation

After being recorded at less than 7 percent on average during FY06, food inflation increased significantly to 11 percent YoY in August 2006, driven mainly by increase in prices of wheat flour, bread, cooking oil and ghee, chicken, eggs and vegetables including onion, tomatoes, and green chillies along with persistent

pressure on prices of some pulses. This sharp increase in actual food inflation in August 2006 also shoved up its long run trend that has earlier been decelerating since May 2005 (see **Figure 2.3**).

A closer look at price movements of individual items included in the CPI food group reveals that prices of 46 commodities including fresh



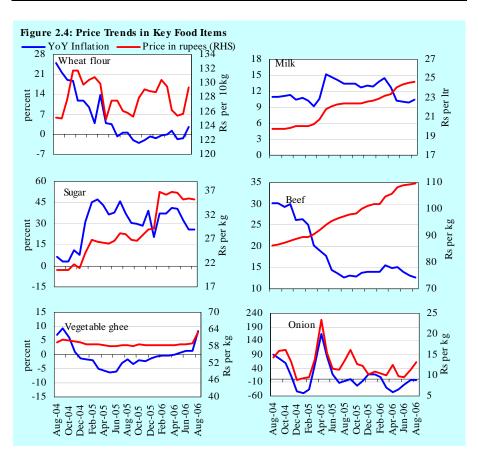
milk, beef, sugar, chicken, pulses gram, mash and moong, green chillies, tomatoes, etc. exhibited inflation in the range of 10 to 130 percent YoY in August 2006. The combined weight of such commodities (with double digit inflation) is about 50 percent of the food group. On the other hand, prices of 14 commodities like apple, onion, pulse masoor declined during the month. The rest of items, having a weight of 38 percent in food group exhibited subdued or moderate inflation (see **Table A2** in Annexure for distribution of CPI items).

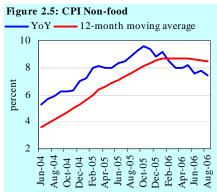
Among the key food items, average price of wheat flour was recorded at Rs 129.33 per 10 kg bag during August 2006 which was about 3 percent higher than that in the previous month. Fresh milk price showed a YoY increase of 10.4 percent in the month compared with 9.9 percent in July, while increases in prices of sugar and beef were lower in August than those in the previous month (see **Figure 2.4**). The price of tomato has shown the highest increase of more than 130 percent in August 2006 followed by mango (80 percent), pulse mash (65 percent), chillies (52 percent) and pulse moong (50 percent).

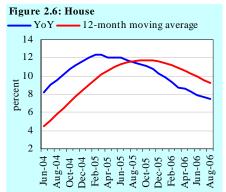
In terms of percent contribution to overall inflation, fresh milk and tomatoes were the second and third highest contributors (house rent index of non-food group being the first) with 7.6 percent and 6.4 percent share in overall YoY inflation of CPI (see **Table A4** in the Annexure).

# 2.2 Non-food Inflation

Contrary to food inflation, non-food inflation declined from 8.8 percent in August 2005 to 7.4 percent in the month under review primarily due to decline in inflation of transport & communication sub-index 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 7.5 percent in August 2006 compared with about 12 percent in the corresponding month last year (see **Figure 2.6**).

In addition to HRI, sub-indices of fuel and lighting, transport and communication and education also decelerated in the month. Transport and communication showed a YoY inflation of 8 percent in August 2006 that was about half of its rate in the corresponding month last year. Inflation of fuel and lighting declined marginally in August, though its rate (at 13%) is still very high compared with just over 6 percent YoY inflation in August 2005. The sub-indices showing acceleration in YoY changes in August included apparel, textile & footwear, household furniture & equipment, recreation & entertainment, cleaning, laundry & personal appearance, and medicare. The most notable increase was in medicare that registered an increase of 7.9 percent in August 2006 compared with 1.3 percent a year earlier (see **Figure 2.7**).

Of the 250 non-food commodities included in the CPI basket, 39 commodities witnessed double digit inflation which include items like gents shoe, house rent index, gas cylinder, mattress, fares of different modes of transportation, primary school fee (English medium), gold tezabi, and doctor clinic fee, etc. There were 46 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 internet charges, computer, video casset player, refrigrator, sewing machines, etc.

### 2.3 City-wise Inflation

The highest inflation was recorded in Attock (12.6%) that was primarily due to food inflation in August 2006. The capital city of Islamabad, which usually remains at top of the list in inflation ranking, was at seventh place in August with YoY inflation of 10.9 percent.<sup>2</sup> The cities like D.G.Khan, Mardan, and Bannu experienced higher inflation compared with the capital city. The lowest inflation has been recorded in Larkana like in previous month. Of the 35 cities covered in the consumer price index, 21 cities had more than average inflation which included Islamabad, Lahore, Multan, D.G. Khan, Peshawar, Attock, etc. The cities witnessing below the average inflation included Mianwali, Karachi, Hyderabad, Faisalabad, Larkana, etc. (see **Table 2.1**). The highest non-food

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<sup>&</sup>lt;sup>2</sup> The weight of food group in CPI basket of Islamabad is relatively less than other cities, thus a rise in food inflation affects Islamabad's CPI less severely.

inflation has been observed in Okara, while Larkana remained at the bottom also for non-food inflation in the month.

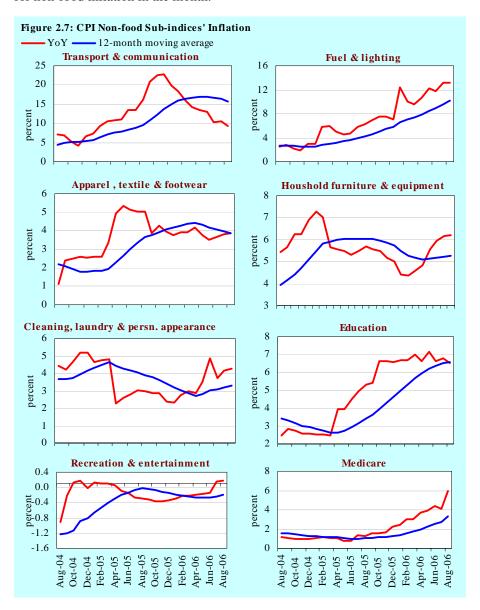
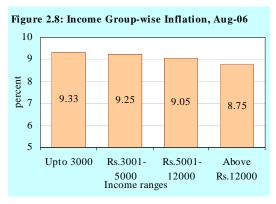


Table 2.1: City v	Table 2.1: City wise Inflation in CPI (YoY), August 2006										
	High	inflatio	n cities		Low	inflation	cities				
	General	Food	Non-food		General	Food	Non-food				
Attock	12.6	17.3	9.5	Mianwali	8.8	7.7	9.5				
Mardan	12.3	16.1	9.7	Khuzdar	8.4	10.0	7.3				
Rawalpindi	11.7	16.7	8.3	Mirpur Khas	8.3	9.7	7.3				
Bannu	11.3	11.8	11.0	Quetta	8.2	9.4	7.4				
Okara	11.3	11.4	11.2	Loralai&Cantt	8.2	11.2	6.3				
D.G. Khan	11.1	13.9	8.9	Samundari	8.1	10.5	6.5				
Islamabad	10.9	15.0	8.0	Shahdadpur	8.0	9.6	6.8				
Jehlum	10.6	13.6	8.5	Sialkot	7.9	8.2	7.7				
Bahawalpur	10.5	14.1	8.0	Faisalabad	7.7	10.2	6.0				
Gujranwala	10.5	13.5	8.4	Hyderabad	7.6	9.8	6.1				
Kunri	10.5	14.2	7.9	Karachi	7.6	8.9	6.8				
Lahore	10.5	13.3	8.4	Nawabshah	7.1	7.7	6.7				
Multan	10.3	11.8	9.2	Sukkur	6.4	5.8	6.8				
D.I.Khan	10.3	13.4	8.2	Larkana	5.0	4.7	5.3				
Vehari	10.2	9.7	10.6								
Peshawar	10.1	14.4	7.2								
Jhang	9.8	12.3	8.1								
Bahawalnagar	9.7	10.5	9.2								
Sargodha	9.3	11.5	7.7								
Turbat	9.2	8.9	9.4								
Abbotabad	9.1	11.9	7.0								

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

# 2.4 Income Group-wise Inflation

Except the highest income group having income above Rs 12000,<sup>3</sup> all other income groups experienced the higher than average inflation during August 2006. The lowest income group with income up to Rs 3000 witnessed inflation of 9.33 percent that was highest of all income classes (see **Figure 2.8**). The reason for high inflation incidence on low income classes is massive

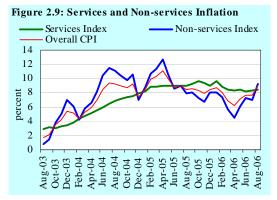


<sup>&</sup>lt;sup>3</sup> Monthly household income

increase in prices of food items that have very high weight in their consumption baskets.

### 2.5 Services and Non-services Inflation

Within the overall basket of consumer price index, the items related to services sector<sup>4</sup> have been showing a stable inflation around 8 percent for the last several months. However, a sharp increase has been observed in price inflation of non-services commodities sector (see Figure **2.9**). Non-services inflation was 9.3 percent in August 2006 compared with 7

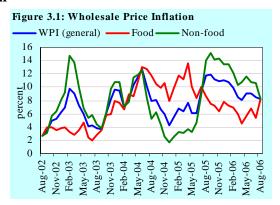


percent in July and 7.9 percent in August 2005. As the commodity sector constitutes about 57 percent of CPI basket, overall inflation in consumer price index is mostly driven by commodity inflation.

<sup>&</sup>lt;sup>4</sup> Consumer services include items like house rent index, electricity charges, marriage hall, house hold servant, transport fare, communication, recreation, tution fees, laundry charges, hair cut & beauty parlour charges, doctor's fee, readymade food, tailoring charges, etc.

#### 3. Wholesale Price Inflation

Like CPI, wholesale prices of food group increased sharply and witnessed inflation of 8.2 percent YoY in August 2006 that was highest of last 11 months. However, WPI nonfood inflation with the highest weight in wholesale price index appeared to offset the inflationary pressures in WPI inflation in August 2006. Wholesale price index (WPI) recorded 8.2 percent YoY

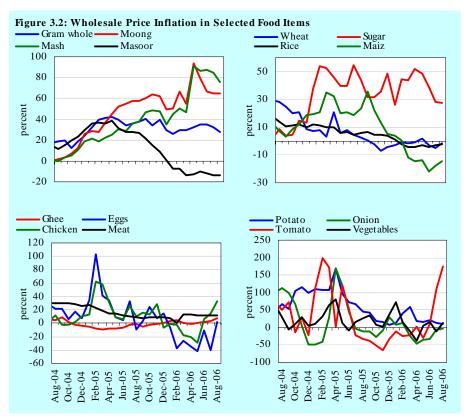


growth in the month that was significantly lower than 11.7 percent growth in the corresponding month of last year. This deceleration in wholesale prices was observed mainly on the back of sharp decline in WPI non-food inflation which was recorded at 2.5 percentage points lower in August 2006 than its rate in the previous month. WPI food inflation, on the other hand, was 2.8 percentage points higher than its rate in the month earlier (see **Figure 3.1**).

A disaggregated analysis of wholesale price index shows that prices of gram split, moong, edible oil, chicken products, vegetables and fresh fruits increased significantly and contributed to food inflation during August 2006 relative to the preceding month inflation. There were some items, however, that witnessed deceleration or negative growth in prices like sugar, wheat and rice, etc. (see **Figure 3.2**).

Similar to July 2006, a frequency distribution of price changes shows that 15 food items included in the WPI basket (of 43 total) witnessed YoY double digit inflation and 9 items showed subdued inflation of 0 to 5 percent during August 2006. The number of items showing decline or almost no change was 10; however the rest of the items showed moderate inflation (see **Figure A2** in the Annexure A). The commodities showing double digit increase in wholesale prices were pulses, meat, vegetables and sweeteners etc.

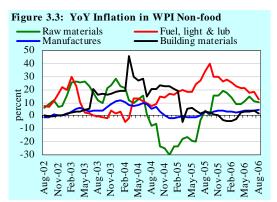
All of the non-food sub indices of WPI, except manufactures showed lower YoY growth in August 2006 as compared with the preceding month. The sub-index of manufactures recorded YoY inflation at the rate of 4.7 percent in the month – higher than 3.1 percent YoY inflation in the corresponding month of last year. Within the manufactures group, cotton yarn, mattresses, fertilizers, pesticides &



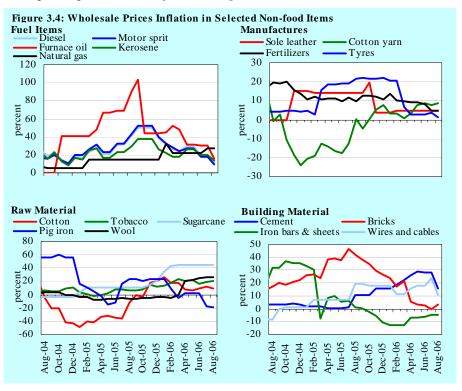
insecticides, and cigarettes observed high inflation in August 2006. Inflation in building materials was recorded at 1.6 percent in August 2006 down from 4.6 percent in the month earlier and 3.2 percent in the corresponding month last year.

The impetus of slowdown was observed on the back of cement prices which observed a significantly lower rate of increase (15.9 percent) in August 2006 compared with 27.8 percent in the preceding month (see **Figure 3.3**).

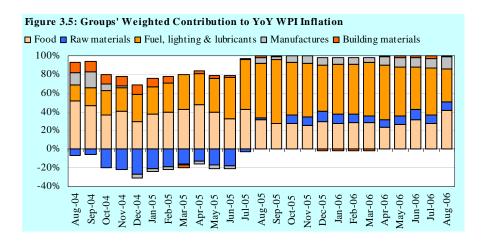
The sub-groups of fuel, lighting & lubricants and raw materials also observed



deceleration with a rate of increase of 12.2 percent and 10.1 percent respectively during August 2006 as compared with the corresponding inflation rates of 18.4 percent and 11.1 percent in Jul 2006. Inflation in fuel, lighting & lubricants subindex remained in double digit during August 2006 yet lower as compared with the preceding month. However, it is noticed that the sub-index of raw materials witnessed YoY higher inflation at 6.3 percentage points in the month as compared with the lower rate of 3.8 percent in August 2005. The components of raw materials like cotton, tobacco, sugarcane and wool has witnessed considerably high growth in prices in August 2006 as compared with the corresponding month of last year (see **Figure 3.4**).

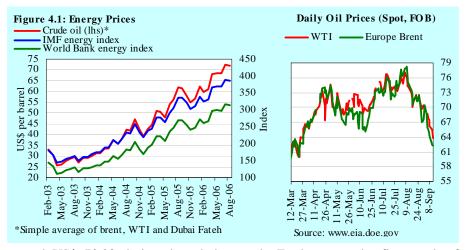


In terms of contributions, food inflation remained the main contributor to WPI inflation in August 2006 with a share of 42 percent compared with less than 30 percent on average during FY06. Among the non-food sub indices, the contribution of manufactures increased in overall WPI inflation in the month, while other sub-indices contributed less compared with the month earlier (see **Figure 3.5**).



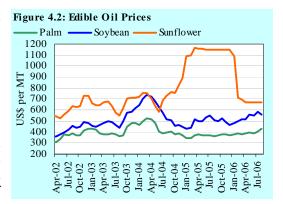
# 4. Global Commodity Prices

In the international market crude oil prices declined slightly in August 2006 compared with the month earlier, and thus the energy indices measured both by IMF and World Bank also showed deceleration. The crude oil prices recorded a year-on-year increase of 16.1 percent in August 2006 compared with 28.6 percent in July 2006 and 47 percent in the corresponding month of last year. The daily average prices of Europe Brent Crude oil also started downward movement from US\$ 77.26 per barrel during the first week of August 2006 and hovered



around US\$ 73.23 during the whole month. Furthermore, the first week of September 2006 also witnessed slowdown in Europe Brent Crude oil prices that is evident from the daily average of US\$ 65 per barrel as compared with relatively high prices in the last week of August 2006 (see **Figure 4.1**).

Among the selected food items, the prices of palm oil recorded 20.6 percent inflation in August 2006 and it has been observed that this price hike in palm oil is the highest on average since May 2004 (see **Figure 4.2**). Moreover, YoY prices of palm oil witnessed steep rise as compared with the deflationary rate of 8.5 percent in the corresponding month of

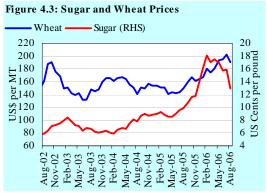


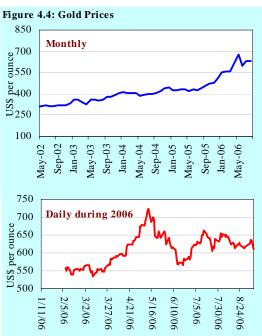
last year. Similarly, soybean oil recorded YoY sharp increase at the rate of 11.4 percent in August 2006 as compared with the rate of -2.9 percent in the corresponding month of last year; it showed higher inflation at 4.1 percentage points relative to preceding month. Sunflower, on the other hand, has been persistently reflecting deflation since February 2006 and recorded YoY price change at -41.6 percent in August 2006 as compared with the rate at 58.4 in the corresponding month of last year.

Wheat prices have been observing steep rise since August 2005 and recorded YoY inflation at 27.2 percent during August 2006 as compared with vividly lower inflation at 5.7 percent in the corresponding month of last year. This persistent price hike was observed due to adverse weather conditions in the

major wheat producing countries and equally rising wheat demand from the importing countries. Sugar price declined in the international market from a peak of US cents 18.1 per pound in February 2006 to US cents 13 per pound in the month under review. However, compared with the August last year, current sugar price is still 30 percent higher (see **Figure 4.3**).

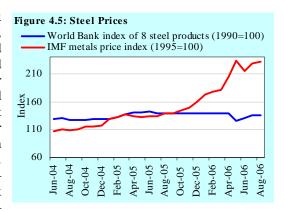
Gold price declined slightly in August 2006 compared with the earlier month; however, it is still 44.4 percent higher than price in August 2005 (see **Figure 4.4).** The gold prices





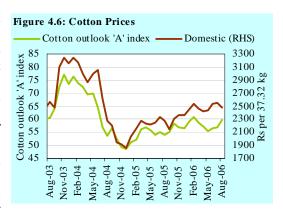
varied during the month around a mean of US\$ 632.33 per ounce with a standard deviation of 13.4, with a slightly lower variation compared with the last month. Customarily the ups and downs in the gold prices are related with the trajectory of investment portfolio connected with the speculative motives.

The metal price index comprising copper, aluminum, iron ore, tin, nickel, zink, lead and uranium prices constructed by IMF has been increasing for the last four months and witnessed 65.6 percent inflation rate - much higher compared with 28.3 percent in the same month of last year. However, steel prices measured by World Bank index of 8 steel products -



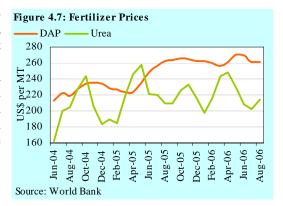
showed YoY deflationary trend since April 2006 and recorded negative change of 2 percent as compared with high price inflation at the rate of 8.2 percent in the corresponding month of last year (see **Figure 4.5**).

Cotton prices showed upward drive in the international market during August 2006 and recorded YoY double digit inflation at the rate of 10.7 percent which is 9.6 percentage points higher as compared with the corresponding month of last year. It has also been noticed that cotton prices in the international market were showing deceleration by the beginning of Q4-FY06 after



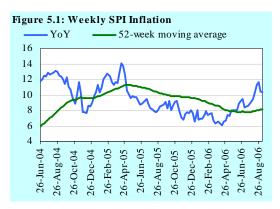
touching a peak during Q3-FY06. However, it bounced back to the higher rate in August 2006. Following the international trends, cotton prices in domestic market were also showing upward momentum during this course of time and recorded at 9.1 percent YoY inflation in August 2006, which 9 percentage points higher than that observed in the August 2005 (see **Figure 4.6**). In fertilizers, urea prices which were showing increasing trend since January 2006 first dropped

down at 8.7 percent in June 2006 and then recorded a negative growth of 0.4 percent in August 2006. In contrast, The DAP prices increased sharply at 2.1 percent in August 2006 compared with the negative rate observed in the preceding month (see **Figure 4.7**).



#### 5. Sensitive Price Indicator

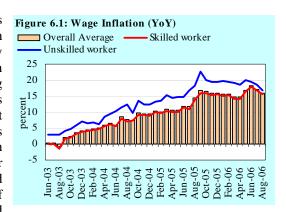
The sensitive price indicator recorded an increase of 10.6 percent YoY in August 2006 that was the highest of the past 15 months. Weekly SPI also witnessed high average inflation during the month; however, some deceleration has been observed since the third week of August (see Figure 5.1). The major items contributing to the SPI inflation were pulses,



vegetables, gas and other liquid fuel prices. About 40 percent of the total items in the SPI basket recorded double-digit YoY inflation during August 2006 with some of the items like pulses moong, gram and mash, tomato, L.P.G. cylinders, etc. witnessing inflation of more than 30 percent (see **Table A8** in Annexure A).

# 6. Wage Inflation

Wages of construction workers showed a YoY decline in August 2006 due to temporary slowdown in the construction work because of rains during the month. Wage inflation has been recorded at 15.9 percent in the month that was lower as compared with 17 percent in the preceding month; however it was higher than that recorded in the corresponding month of last year. On the disaggregated

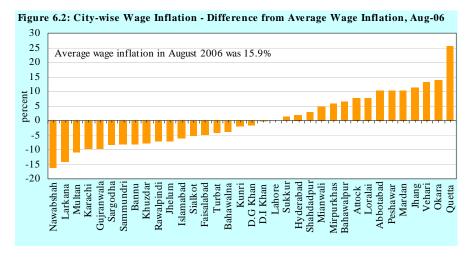


level, both skilled workers and laborers witnessed lower growth in wage inflation by 15.7 percent and 16.9 percent respectively in August 2006 compared with relatively higher inflation of 16.8 percent and 18.5 percent respectively in the preceding month (see **Figure 6.1**). Deceleration in overall wage inflation likewise reflected in all of the four components of the skilled workers (see **Table 6.1**).

	Aug -05	Sep- 05	Oct- 05	Nov- 05	Dec- 05	Jan- 06	Feb- 06	Mar -06	Apr- 06	May -06	Jun- 06	Jul- 06	Aug- 06
Overall	14.4	16.7	16.5	15.9	16.0	15.5	15.6	14.6	14.6	16.9	18.2	17.0	15.9
Skilled:													
Carpenter	14.1	16.1	16.9	16.3	16.9	14.7	15.8	14.4	14.9	14.6	15.9	15.0	13.4
Mason	15.8	19.7	17.6	17.2	18.0	18.2	17.2	16.0	16.4	17.2	19.7	18.4	17.8
Plumber	14.6	16.9	17.2	15.8	16.0	16.4	17.0	15.1	13.9	14.0	15.2	14.0	13.2
Electrician	10.8	10.8	12.1	12.0	11.0	10.4	10.4	10.3	10.8	20.2	21.4	19.8	18.6
Unskilled:													
Laborer	18.3	22.6	20.1	19.5	19.5	19.6	19.3	19.0	18.6	19.9	19.5	18.5	16.9

As the nominal wages decelerated and CPI inflation increased, real wage inflation went down significantly and recorded at 6.9 percent in August 2006 compared with a higher rate of 9.4 percent during a month earlier. Following the overall real wage inflation, real wages of skilled workers also depicted deceleration with 6.8 percent increase in August 2006 compared with 9.2 percent in the preceding month. Similarly, inflation in real wages of unskilled workers also decreased to 7.9 percent in August 2006 from 10.9 percent in July.

A city-wise distribution of average monthly wage inflation has been presented in **Figure 6.2**, while a detail of actual wages, in rupees, for different kinds of construction workers is given in **Table 6.2**.



	Carpenter	Mason	Laborer	Plumber	Electrician	Average
			Annual Avera	iges		
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 avera	ages		
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

# **ANNEXURES**

#### Annexure A

Table A1: CPI Inflation (YoY) by Groups percent Weights Aug-02 Aug-03 Aug-05 Aug-06 Aug-04 I. Food Group 40.3 4.7 0.4 14.4 **7.8** 11.1 II. Non-Food Group 59.7 3.0 2.7 5.9 8.8 7.4 Apparel, textile, etc. 6.1 2.1 4.2 1.1 5.1 3.9 House rent 23.4 0.8 1.9 9.6 11.5 7.5 Fuel & lighting 7.3 8.6 3.5 2.6 6.2 13.0 Household furniture & equipt 3.3 1.9 3.1 5.4 5.7 6.2 Transport & com. 7.3 3.6 2.0 7.2 16.2 8.0 Recreation & entert. 0.8 0.8 0.1 -0.9 -0.3 0.2 Education 4.2 4.9 3.5 2.4 5.3 6.3 Cleaning, laundry, etc. 5.9 4.1 4.4 3.0 4.4 3.6 Medicines 2.1 6.5 -0.8 1.1 1.3 7.9 100 3.7 Headline 1.8 9.2 8.4 8.9

 $\textbf{Table A2: Distribution of Price Changes of CPI Basket, August 2006 (YoY) } \\ \textbf{percent}$ 

			No. of	Items in eac	h Inflation R	ange	
Groups	% Changes	Total Number of Items	Decrease or no change	Subdued increase	Moderate increase	Double digit increase	
			(0 % or less)	(0 to 5%)	(5 to 10%)	(over 10%)	
I. Food Group	11.1	113	14	28	25	46	
II. Non-Food Group	7.4	250	72	93	46	39	
Apparel, textile, etc.	3.9	42	7	21	12	2	
House rent	7.5	1	0	0	1	0	
Fuel & lighting	13.0	15	8	0	0	7	
Household furniture & equip.	6.2	44	2	26	14	2	
Transport & com.	8.0	43	11	5	8	19	
Recreation & entert.	0.2	16	11	3	2	0	
Education	6.3	24	7	11	2	4	
Cleaning, laundry, etc.	4.4	36	8	19	5	4	
Medicines	7.9	29	18	8	2	1	
Overall	8.9	363	86	121	71	85	

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

Table A3: Di	istribution of Price C	hanges - Selected CPI	Items, August 2006	
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
Food Group	Pulse masoor; Onion; Apple; Wheat flour; Pulse masoor	Eggs; Rice basmati broken Av.Qlty; Bread Tandoori	Toffee (Hilal); Cigarettes; Vegetable Ghee (Loose); Cooked Mutton	Milk fresh; Mutton; Sugar; Pulse Moong, Mash; Tomatoes
Apparel & Textile	Boot polish ; Ladies sandal; Child shoe	Fish-Rahu; Long Cloth; Lawn	Tailoring Coat- Pant; Shirting	Gents shoe; Nylon Jogger 27
House Rent Index			HRI	
Fuel & Lighting	Bulb; Tube Light; Elect. Charges			Kerosene Oil; Gas; Gas Cylinder
H/hold Furniture	Sewing Machine Refrigerator	Elect. Iron; Tea Set; Bed sheet	Washing machine; Table Shesham wood; Household servant (Female P/T)	Mattress; Pedestal Fan
Transport & Comm.	Internet Charges; Car Suzuki 800; Telephone charges Postal Envelope domestic	Motorcycle Yamaha ; Car service charges; Train Fare	Bus fare outside city; Train Fare A/C Slp; Full Tonga Charges; Petrol Super	Auto Rickshaw Fares; High Speed Diesel; CNG Filling Charges; Air Fare Economy Class.
Recreation	Video Game Sega; Radio; Daily Dawn	T.V. 20" Colored; Tape Recorder; Cassette Blank; Dry Cell	Cinema Non-A/C High Class; Cinema A/C. Highest Class	
Education	English Book Class V1; Pen Ink; Govt. College Fee	Pencil; Fountain Pen; Ball Pen (Local)	School Fee 2ndry (Eng. Med) English Book Class Ix Or X	School Fee Primary (Eng. Med) Govt. University Fee
Cleaning & Laundry	Toilet Soap Lux 95 Grams Shaving Cream Touch-Me/Adm. Surf (Medium)	Lipstick S.Miss/Medora Shampoo Plain Medora 200 Ml. Toilet Paper Roll	Artificial Jewellary Set Wrist Watch Ladies Citizen Haircut Charges	Washing Ch. (Kamiz- Shalwar) Washing Ch. Shirt Gold Tezabi 24 Ct
Medicare	Panadol Tab. Extra/Plain Disprin Tab. Amoxil Capsole	Calpol Syrup 60 Ml. Daonil Tab. 5 Mg.; Flagyl Tab.	Jouhar Joshanda Galxos-D (450 Grms)	Doctor (Mbbs) Clinic Fee

Tab	le A4: Top Ten CPI Items (Ran	ked by Infl	lation Cont		YoY C	hange	****
	Items	Unit	Weights	Price Aug-06	Aug-05	Aug-06	Weighted Contribution
A. Ranked by Weighted Contribution							
1	House Rent Index	Month	23.43	138.1	11.5	7.5	19.7
2	Milk Fresh (Unboiled)	Ltr	6.53	24.7	13.4	10.4	7.6
3	Tomatoes	KG	0.44	37.6	-30.6	130.2	6.4
4	Sugar Refined	KG.	1.95	35.3	37.2	25.6	5.6
5	Gas Cylinder Stand. Size	Each	0.68	626.5	-1.1	49.9	3.8
6	Gas Chrg10.1157 - 13.4876Mmb	TU MMBT U	0.93	387.9	14.5	27.0	2.8
7	Chicken Farm Broiler (Live)	KG	0.92	89.5	9.5	27.0	2.8
8	Beef With Bone Av.Qlty.	KG	1.61	109.6	12.6	12.7	2.3
9	Mango Kalmi Gas Chrg Upto 3.3719	KG MMBT	0.22	47.6	-21.6	79.7	2.0
10	Mmbtu	U	0.84	102.4	0.0	20.4	1.9
	Total		37.5				54.8
B. R	anked by Percentage Change						
1	Tomatoes	KG	0.44	37.6	-30.6	130.2	6.4
2	Mango Kalmi	KG	0.22	47.6	-21.6	79.7	2.0
3	Pulse Mash (Washed)	KG.	0.20	69.9	22.6	65.3	1.5
4	Chillies Green	KG	0.14	32.5	-8.3	52.5	0.8
5	Silver Tezabi 24 Ct	10 GM.	0.03	224.5	16.3	51.7	0.2
6	Pulse Moong (Washed)	KG.	0.22	60.8	46.7	51.0	1.3
7	Gas Cylinder Stand. Size	EACH	0.68	626.5	-1.1	49.9	3.8
8	Gold Tezabi 24 Ct	10 GM.	0.20	12560.9	13.2	47.1	1.1
9	Air Fare Economy Class.	P/KM.	0.10	8.1	-5.0	40.0	0.4
10	Sweet melon (Sarda)	KG	0.04	22.6	-3.7	36.5	0.2
	Total		2.3				17.6

Table A5: City-wise Inflation (YoY) by Income Groups, August 2006

		Upto Rs:3000			R	s 3001 to 50	000
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	8.2	7.2	9.0	8.2	6.7	9.2
2	Faisalabad	5.9	6.2	5.7	5.9	5.8	5.9
3	Rawalpindi	10.2	11.8	9.0	9.6	10.3	9.1
4	Multan	8.4	6.8	9.6	7.7	6.1	8.9
5	Gujranwala	7.1	7.6	6.7	6.8	6.7	6.8
6	Islamabad	9.7	9.1	10.1	9.8	9.7	9.9
7	Sargodha	6.4	6.0	6.6	6.4	6.3	6.5
8	Sialkot	6.3	4.5	7.7	6.5	4.9	7.7
9	Bahawalpur	8.7	8.7	8.7	8.6	8.4	8.8
10	Karachi	5.6	5.3	5.8	5.8	5.2	6.1
11	Hyderabad	6.7	7.1	6.4	6.5	6.9	6.2
12	Sukkur	4.7	3.5	5.6	4.6	3.2	5.7
13	Larkana	3.7	2.0	4.9	3.2	1.8	4.2
14	Peshawar	7.5	8.8	6.6	8.5	10.0	7.5
15	Bannu	9.4	9.5	9.3	9.5	9.3	9.6
16	Quetta	7.6	8.1	7.3	8.3	9.7	7.4
17	Khuzdar	9.2	12.3	7.1	9.9	12.3	8.3

		R	s 5001 to120	000	al	ove Rs 120	00
		General	Food	Non-Food	General	Food	Non-Food
1	Lahore	8.2	6.8	9.3	8.8	7.4	9.9
2	Faisalabad	6.3	6.5	6.2	7.1	7.4	6.8
3	Rawalpindi	9.8	10.6	9.2	10.6	11.3	10.1
4	Multan	7.5	5.8	8.8	8.3	6.8	9.5
5	Gujranwala	7.3	7.3	7.2	8.0	8.5	7.6
6	Islamabad	9.8	10.1	9.6	10.8	11.4	10.3
7	Sargodha	6.3	6.1	6.5	6.1	5.5	6.6
8	Sialkot	6.4	4.5	7.8	6.7	4.5	8.3
9	Bahawalpur	8.7	9.0	8.4	8.3	9.1	7.6
10	Karachi	5.9	5.3	6.4	7.4	5.3	8.9
11	Hyderabad	6.1	6.3	5.9	6.5	6.7	6.4
12	Sukkur	4.6	3.1	5.6	4.7	2.7	6.2
13	Larkana	3.4	2.0	4.5	3.5	2.0	4.6
14	Peshawar	8.4	9.7	7.4	8.2	9.1	7.6
15	Bannu	9.1	9.1	9.2	8.7	8.2	9.1
16	Quetta	7.9	8.7	7.4	8.3	8.1	8.5
17	Khuzdar	9.1	12.2	6.9	8.2	11.9	5.5

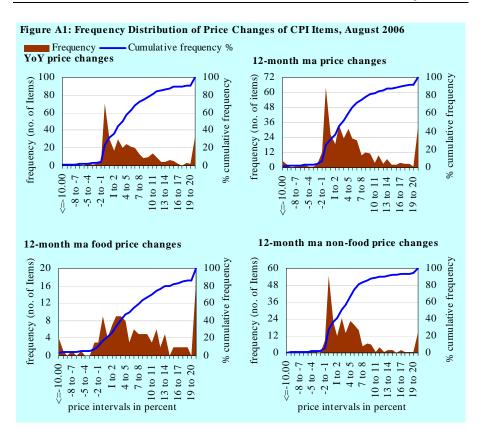
	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06
<u>Up to Rs. 3000</u>								-
General	8.4	8.2	6.9	6.0	7.5	8.0	7.6	9.3
Food	8.5	8.2	6.2	4.5	7.2	8.4	7.8	11.0
Non-food	8.4	8.1	7.4	7.1	7.7	7.6	7.6	8.1
Rs. 3001-5000								
General	8.5	8.0	6.7	5.8	7.1	7.7	7.5	9.2
Food	8.3	7.8	5.7	4.0	6.5	8.0	7.5	10.9
Non-food	8.6	8.1	7.4	7.1	7.6	7.5	7.5	8.1
Rs. 5000-12000								
General	8.5	7.9	6.7	5.8	6.9	7.6	7.5	9.0
Food	8.2	7.6	5.5	3.8	5.9	7.9	7.4	11.0
Non-food	8.8	8.1	7.6	7.3	7.6	7.3	7.5	7.7
Above Rs. 12000								
General	9.0	8.2	7.1	6.5	7.3	7.7	7.8	8.7
Food	8.1	7.2	5.1	3.2	4.8	7.6	7.4	11.3
Non-food	9.6	8.8	8.5	9.0	9.2	7.8	8.1	7.0
All income groups								
General	8.8	8.0	6.9	6.2	7.1	7.6	7.6	8.9
Food	8.2	7.5	5.4	3.6	5.6	7.8	7.4	11.1
Non-food	9.2	8.4	8.0	8.0	8.2	7.5	7.8	7.4

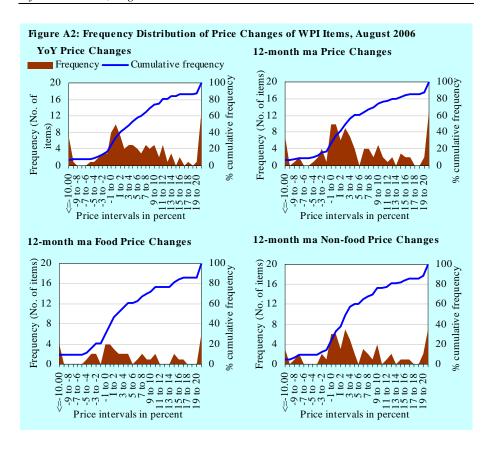
Table A7: Distribution of Wholesale Price Changes (YoY), August 2006							
	Decrease or no change	Subdued increase (up to 5%)	Moderate increase (5 to 10%)	More than 10% increase			
Food	Wheat, Maida, Rice, Maize, Jowar, Bajra, Masoor, Onions, Dry, Fruits Fish	Wheat Flour, Mustard & Rapeseed Oil, Cotton Seed Oil, Cooking Oil, Eggs, Spices, condiments, Mineral Water, Sugar, Confectionary	Fresh Fruits, Fresh Milk Powdered Milk, Milk Food, Vegetable Ghee, Salt, Tea, Beverages Vegetables, Prepared/Preserved	Besan, Beans Gram Whole, Gram Split, Mash, Moong Potatoes, Tomatoes Vegetables, Oil Cakes Gur, Sugar Refined Chicken, Meat Fruit Prepared /Preserved			
Raw material	Hides, Skins, Pig Iron	Cotton Seeds	Cotton, Mustard/Rapeseeds	Tobacco, Sugar Cane, Wool			
Fuel & lighting	Coke, Electricity Ind. Supply Tariff-B, Elec. Agriculture Tariff-D		Mobil Oil	Motor Sprit, Mobil Oil, Diesel Oil, Furnace Oil, Kerosine Oil, Natural Gas, Fire Wood			
Manufactures	Chrome Leather, Blended Yarn, Nylon Yarn, Glass Products, Dying Materials, Audio-Visual Instruments, Other Electrical Goods, Matches	Sole Leather Cotton Textiles, Hosiery, Silk & Reyon Textiles, Woolen Textiles, Ready Made Garment,s Utensils, Plastic Products, Soaps Cosmetics, Drugs & Medicines, Fertilizers Machinery, Tyres Tubes, Paper, Foot Wear	Cotton Yarn, Mattresses Pesticides & Insecticised, Transports, Cigarettes	Jute Manufactures, Chemicals			
Building material	Iron Bars & Sheets	Bricks, Cement Blocks Paints & Varnishes, Sanitary Wares	Tiles, Pipe Fittings, Timber, Glass Sheets	Cement, Wires And Cables			

Iten	ns Unit	Price	Percentage	change over	
Iten	us Cint	Aug-06	Aug-05	Jul-06	
1 Wheat	Kg.	11.6	1.4	3.0	
2 Wheat flour a.ql	lt. Kg.	13.3	2.1	3.1	
3 Rice basmti.bro	ken Kg.	20.4	0.6	0.5	
4 Rice irri-6	Kg.	16.1	-0.2	0.1	
5 Masur pulse wa	shed Kg.	41.4	-10.1	0.0	
6 Moong pulse wa	ashed Kg.	60.9	48.7	2.0	
7 Mash pulse was	hed Kg.	70.5	64.0	0.3	
8 Gram pulse was	hed Kg.	39.0	36.9	7.2	
9 Beef	Kg.	115.4	13.2	0.5	
10 Mutton	Kg.	221.3	14.6	0.3	
11 Egg hen (farm)	Doz.	33.9	-1.7	15.5	
12 Bread plain m.s	s. Each	15.1	9.1	3.5	
3 Sugar	Kg.	35.0	25.6	-0.2	
4 Gur	Kg.	42.8	19.1	3.9	
5 Milk fresh	Litr	25.7	9.8	0.3	
6 Milk powdered	nido 400g	111.0	2.8	0.0	
7 Curd	Kg.	30.4	9.4	0.3	
8 Veg.ghee tin	2.5k	206.8	1.5	1.5	
19 Veg.ghee loose	Kg.	63.7	8.7	6.0	
20 Mustard oil	Kg.	69.9	6.1	3.2	
21 Cooking oil	2.51	206.8	1.1	1.4	
22 Potatoes	Kg.	21.6	12.5	0.7	
23 Onions	Kg.	13.9	0.3	15.0	
24 Tomatoes	Kg.	42.8	156.4	35.1	
25 Bananas	Doz.	32.5	16.1	-4.3	
26 Salt powdered	Kg.	4.4	18.4	0.2	
27 Red chillies(pov	wd) Kg.	71.0	-4.4	1.3	
8 Garlic	Kg.	56.6	3.6	-6.6	
9 Tea packet	250g	67.5	9.1	2.5	
0 Tea (prepared)	Cup	6.2	11.8	1.1	
Cooked beef pla	nte Each	28.8	12.9	2.5	
32 Cooked dal plat	e Each	17.4	14.6	3.2	

Continued ...

Items		Unit	Price	Percentage	change over
	Items	Unit	Aug-06	Aug-05	Jul-06
33	Cigarettes k-2	10's	8	8.9	0.0
34	Coarse latha	Mtr.	35	3.9	-0.8
35	Lawn (avg.+s.qlty)	Mtr.	80	5.5	-0.3
36	Voil printed	Mtr.	38	4.1	-0.1
37	Shirting	Mtr.	65	6.7	1.3
38	Sandel gents bata	Pair	399	0.0	0.0
39	Sandel ladies bata	Pair	299	0.0	0.0
40	Chappal spng. Bata	Pair	89	0.0	0.0
41	Kerosene	Litr	39	18.5	0.0
42	Firewood	40kg	181	21.7	-0.4
43	Elec. Bulb 60-wats	Each	12	0.3	2.6
44	Match box	Each	1	8.3	0.0
45	Washing soap	Cake	8	6.2	2.0
46	Bath soap lifebuoy	Cake	14	0.1	0.0
47	Chicken (farm)	Kg.	89	27.3	2.8
48	Gas chrg. All clb. Comb	D.mmbt	244	26.3	2.3
49	L.p.g .(cylender 11kg.)	Each	592	32.6	12.8
50	Elec.chrg.all slabs com	Bd. Unit	5	0.0	0.0
51	Petrol	Litr	58	17.9	0.0
52	Diesel	Litr	39	21.9	0.0
53	Telephone local	Call	2	0.0	0.0
Max:				156.4	35.1
Median				8.7	0.5
Min:				-10.1	-6.6





#### 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:

$$\pi_{t} = (\frac{I_{t}}{I_{t-12}} - 1) \times 100$$

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:

$$\overline{\pi}_{t} = \left(\frac{\sum_{i=0}^{t-\nu} I_{t-i}}{\sum_{i=0}^{t-12-\nu} I_{t-12-i}} - 1\right) \times 100$$

where v is the serial number of the month of July of current fiscal year in a given time series.

6. 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:

$$\widetilde{\pi}_{t} = \left(\frac{\sum_{i=0}^{11} I_{t-i}}{\sum_{i=0}^{11} I_{t-12-i}} - 1\right) \times 100$$

- 7. 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:
  - 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:
    - 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.