

# **Inflation Monitor**

**July 2006**



**State Bank of Pakistan**

*Economic Policy and Research Departments*



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## 1. Overview

The current fiscal year commenced with almost the same headline inflation as witnessed during the last month of the previous fiscal year. The consumer price inflation remained at 7.6 percent year-on-year (YoY) in July 2006 – the same rate that was recorded in June 2006. Although non-food inflation witnessed slight increase during the month, its impact on overall inflation was offset by decline in food inflation. Sensitive price indicator also maintained its last month's rate of increase. Wholesale price index, however, declined noticeably which was supported mainly by decline in WPI food inflation (see **Table 1.1**).

Table 1.1: Inflation (YoY)									
percent									
	CPI			WPI			SPI	Core Inflation	
	General	Food	Non-food	General	Food	Non-food		NFNE *	Trimmed mean
Jul-05	9.0	9.7	8.5	9.4	10.0	8.9	8.0	7.6	7.3
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	8.9	6.3	6.0
Jul-06	7.6	7.4	7.8	8.4	5.4	10.7	8.8	6.3	6.1

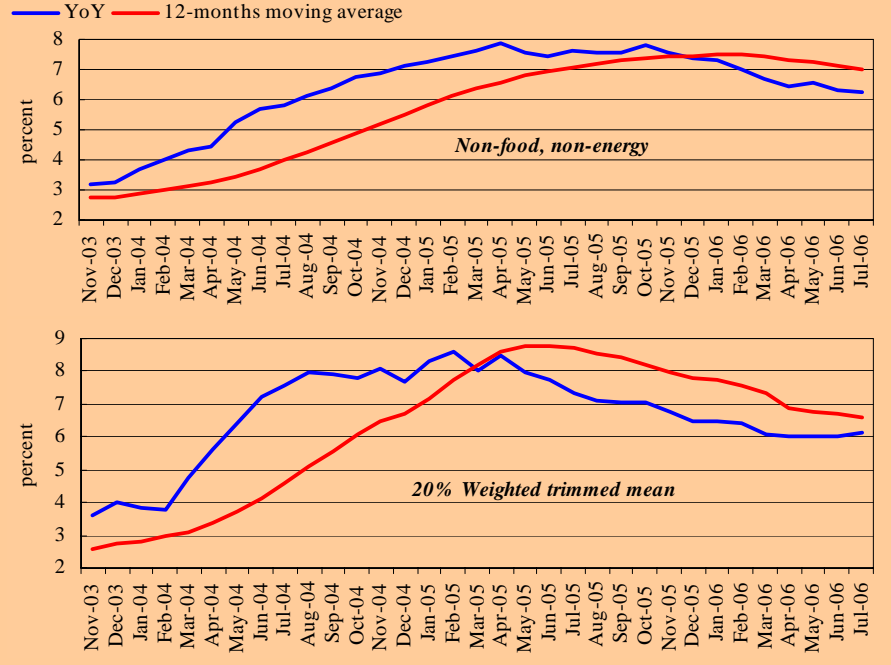
\*: NFNE is Non-food non-energy inflation; see Annexure B for more on measures of core inflation.

Core inflation measured by non-food non-energy, that had been declining for the last several months ceased to decline further in July 2006 (see **Figure 1.1**). The core inflation measured by trimmed mean, on the other hand, already has shown reversal in its past trend of decline.

The monthly inflation, i.e. percent change of price index in July over June 2006 shows that overall CPI increased by 1.6 percent which is higher than past five years average of monthly inflation (see **Table 1.2**). The long run trend of inflation measured as 12-month moving average shows that both CPI and SPI continued to be at their declining path though they are still above their historical averages<sup>1</sup> (see **Figure 1.2**).

<sup>1</sup> Average CPI inflation since 1950 has been 7 percent while average SPI inflation since 1977 (earlier data not available) has been 8.5 percent in Pakistan.

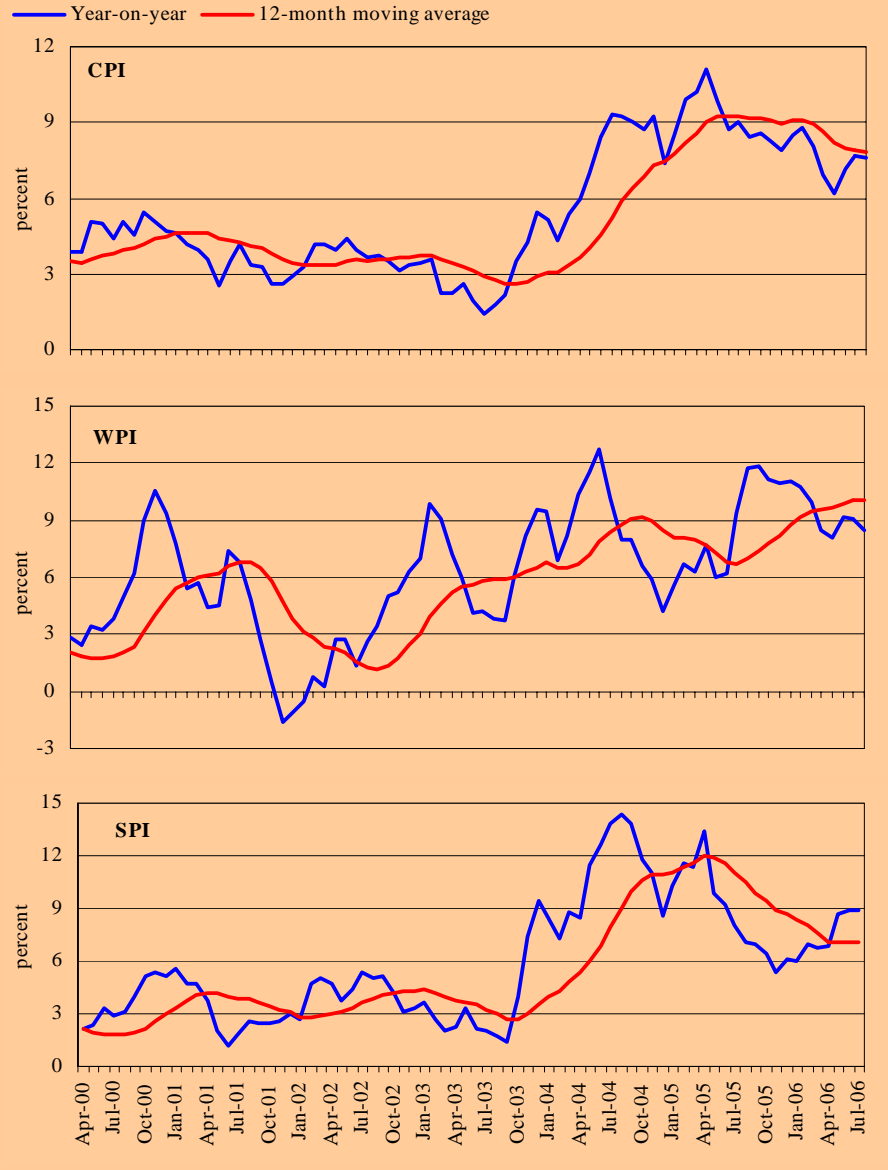
**Figure 1.1: Core Inflation**



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

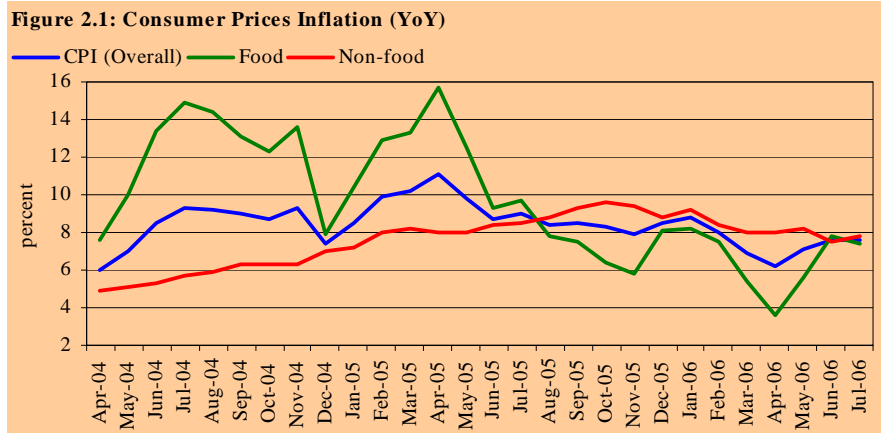
	Jul-05	Jun-06	Jul-06	5-year average
<i>Year-on-year</i>				
Overall CPI	9.0	7.6	7.6	6.3
Food group	9.7	7.8	7.4	7.5
Non-food group	8.5	7.5	7.8	5.5
<i>12-month moving average</i>				
Overall CPI	9.2	7.9	7.8	5.7
Food group	12.1	6.9	6.7	6.3
Non-food group	7.3	8.6	8.6	5.4
<i>Monthly</i>				
Overall CPI	1.6	0.6	1.6	1.3
Food group	2.9	1.18	2.6	2.4
Non-food group	0.7	0.2	0.9	0.5

**Figure 1.2: Movements in Price Indices**

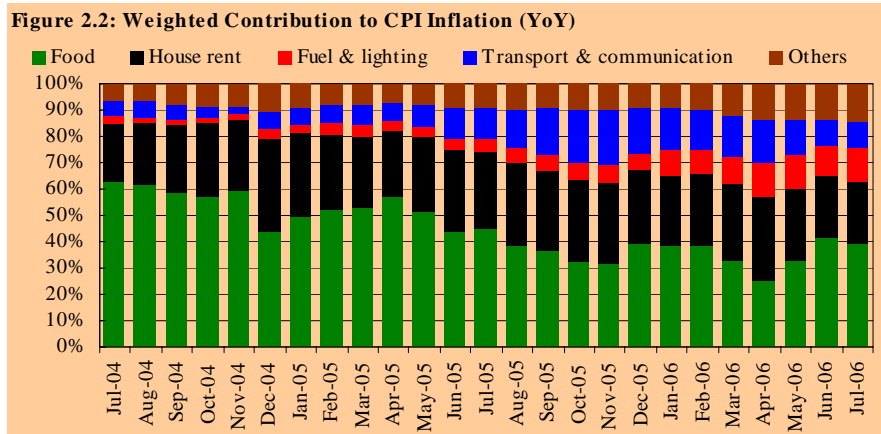


## 2. Consumer Price Inflation

The consumer price inflation in July 2006 remained almost the same at 7.6 percent (YoY) as in the month earlier; however, it was significantly lower than inflation of 9 percent during the corresponding month of last year. CPI non-food inflation increased slightly from 7.5 percent in June 2006 to 7.8 percent in July, while food inflation declined by almost the same compensatory rate (see **Figure 2.1**).



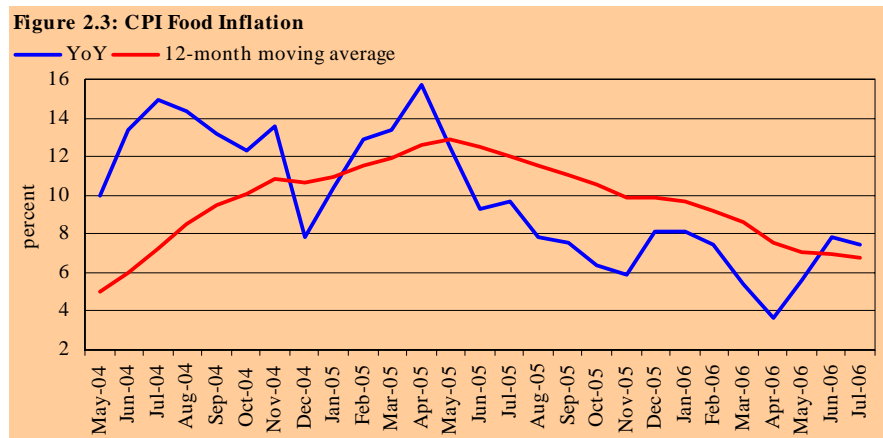
The contribution of food group in overall inflation declined to 39.3 percent during July 2006 from 45 percent in the corresponding month last year and 41 percent in June 2006. Within the non-food group, the contribution of house rent index also declined from 30 percent in July 2005 to 24 percent in July 2006, while other sub-indices witnessed slight increases in their contributions to the overall inflation (see **Figure 2.2**).





## 2.1 Food Inflation

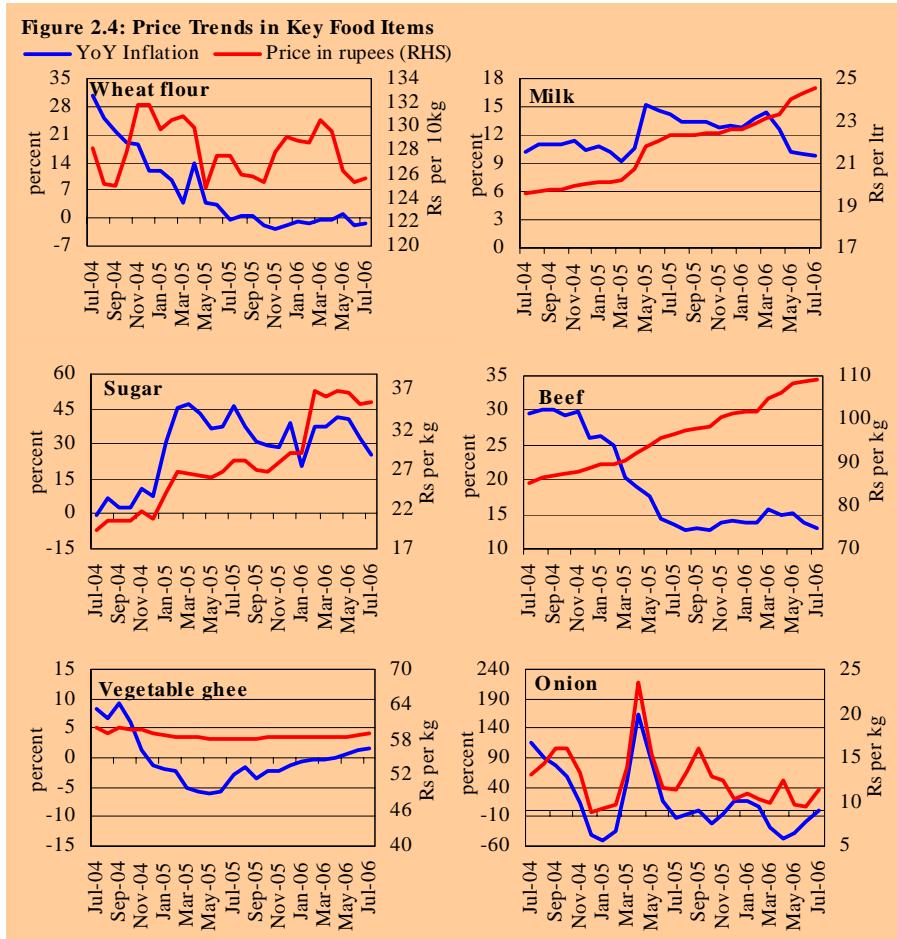
After being recorded at 7.8 percent in June 2006, food inflation declined slightly to 7.4 percent YoY in July 2006, supported mainly by reduction in prices of some pulses and deceleration in YoY increase of sugar and milk prices (see **Figure 2.3**).



Price movements of individual items in the CPI food group show that prices of 26 food items including eggs, pulse masur, wheat, apple, etc. have shown YoY decline during July 2006. On the other hand, prices of 31 items exhibited double digit YoY inflation like beef, sugar, pulses gram, mash and moong, potato, tomato, etc; however, the rate of increase in prices of most of these items declined as compared to June 2006. The rest of items, having a weight of 47 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 125.64 rupees per 10 kg bag during July 2006 which was about 1.5 percent less than that in corresponding month last year. Fresh milk price increased by 9.9 percent YoY against more than 14 percent increase in July 2005, and increases in prices of sugar and beef were lower in July 2006 than those in corresponding month last year (see **Figure 2.4**). Within the food group, price of tomato has shown the highest increase of more than 100 percent in July 2006 followed by pulses moong and mash prices of which increased by more than 50 percent.

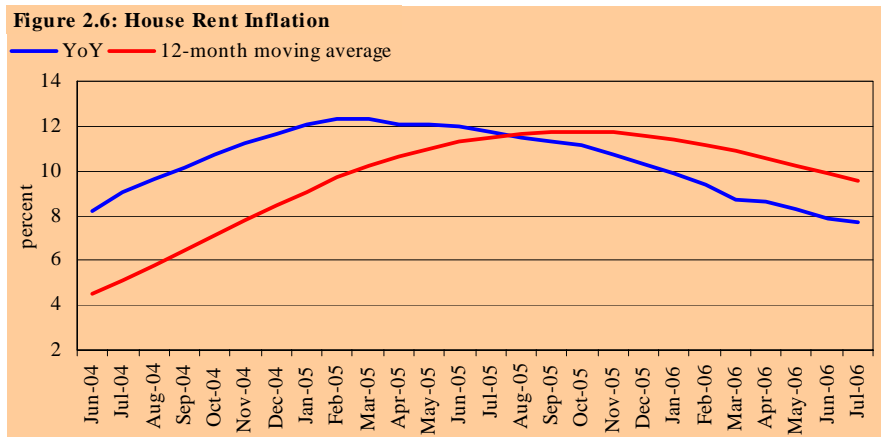
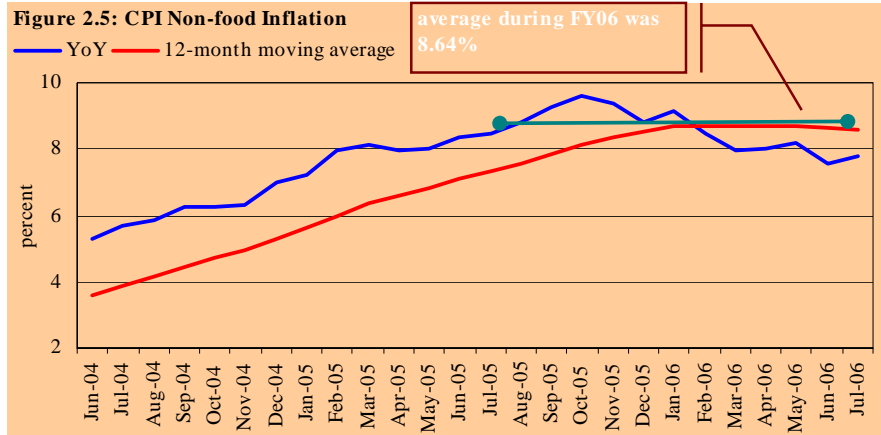
In terms of percent contribution to food inflation, fresh milk remained the highest contributor during June 2006, like in previous several months, followed by sugar, tomato and beef (see **Table A4** in the Annexure).



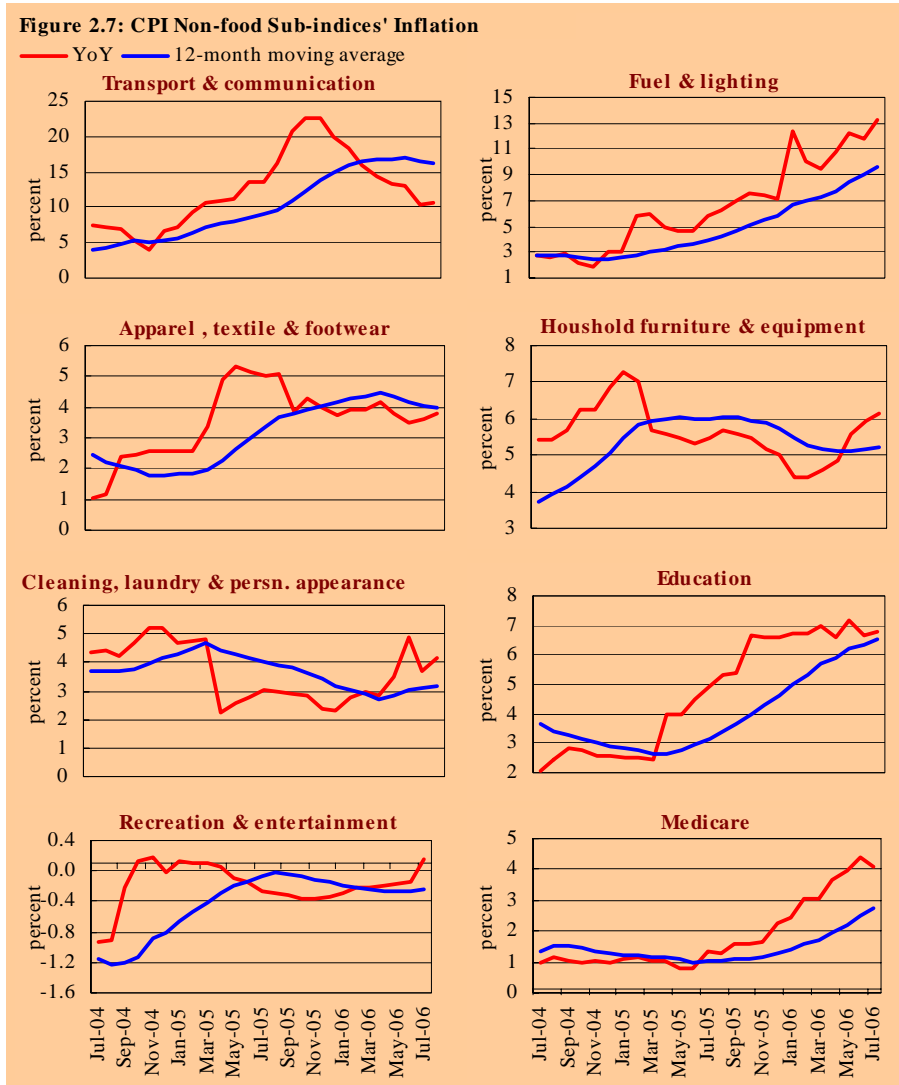
## 2.2 Non-food Inflation

Non-food inflation increased slightly from 7.5 percent YoY in June 2006 to 7.8 percent in the month under review primarily due to rise in gas charges and train and air fares. However, as the main component of non-food inflation, i.e. house rent index continued to decelerate, it remained significantly lower than average non-food inflation during FY06 (see **Figure 2.5**).

House rent index (HRI) maintained its declining trend which started after February 2005, and recorded a moderate increase of 7.7 percent in July 2006 compared with about 12 percent in the corresponding month last year (see **Figure 2.6**).



Almost all other sub-indices of non-food group showed higher inflation in July 2006 as compared with that in the month earlier. The most significant increase was in fuel & lighting inflation which leaped up by 1.5 percentage points from June 2006 level and more than 7 percentage points from July 2005 level (see **Figure 2.7**). Transport and communication was the other sub-group that continued to show double digit inflation; however, its rate of increase in July 2006 at 10.6 percent YoY was significantly lower than average inflation of about 17 percent during FY06.



Of the 250 non-food commodities included in the CPI basket, 37 commodities witnessed double digit inflation which include items like gas, petrol, high speed diesel, rickshaw and taxi fares, train and air fares, laundry services, primary school fees, some books, etc. There were 48 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 motorcycle, computer, VCP, refrigerator, sewing machines, etc.

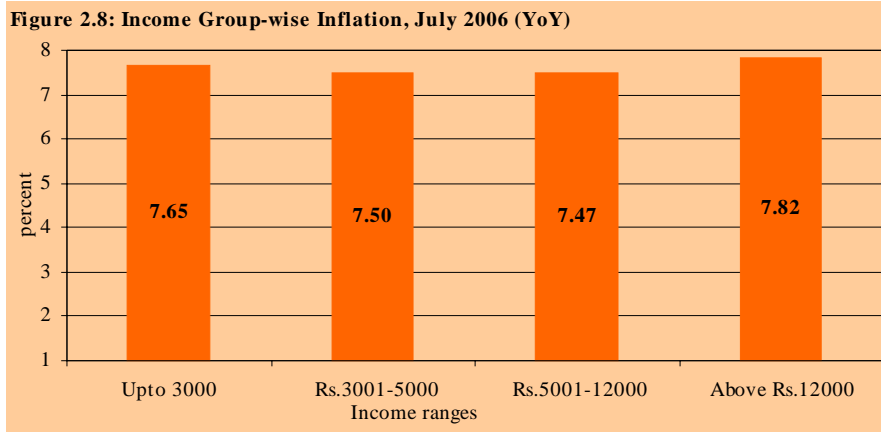
### 2.3 City-wise Inflation

The highest inflation was recorded, as usual, in Islamabad (10.7%) during July 2006 and the lowest inflation in Larkana (3.4%). Like in the previous month, the highest food inflation was witnessed in Kunri – big chillies market of Sind, while the highest non-food inflation in Okara. Of the 35 cities covered in the consumer price index, 22 cities had more than average inflation which included Islamabad, Lahore, Multan, D.G. Khan, Peshawar, Quetta, etc. The cities witnessing below the average inflation included D.G.Khan, Karachi, Faisalabad, Larkana, etc. (see **Table 2.1**).

	High inflation cities			Low inflation cities			
	General	Food	Non-food	General	Food	Non-food	
Islamabad	10.7	11.2	10.3	Jhang	7.6	7.3	7.8
Attock	10.6	11.0	10.3	Shahdadpur	7.4	7.7	7.2
Rawalpindi	10.2	10.9	9.7	Gujranwala	7.3	7.5	7.2
Kunri	10.1	12.5	8.4	D.G. Khan	7.0	6.4	7.5
Khuzdar	9.6	11.3	8.4	Faisalabad	6.7	6.8	6.6
Vehari	9.6	8.9	10.1	Karachi	6.7	5.3	7.6
Mardan	9.2	10.2	8.5	Sialkot	6.6	4.5	8.1
Bannu	9.1	8.9	9.2	Nawabshah	6.4	5.6	6.9
Jhelum	9.1	9.3	8.9	Sargodha	6.3	6.0	6.5
D.I.Khan	9.0	9.8	8.5	Hyderabad	6.3	6.5	6.1
Loralai	9.0	11.9	7.0	Samundari	5.9	5.1	6.4
Turbat	8.7	8.9	8.6	Sukkur	4.6	3.0	5.7
Okara	8.7	5.3	11.3	Larkana	3.4	2.0	4.5
Bahawalnagar	8.6	7.8	9.2				
Bahawalpur	8.5	8.9	8.3				
Lahore	8.5	7.0	9.6				
Peshawar	8.3	9.5	7.5				
Quetta	8.1	8.5	7.9				
Mirpur Khas	8.0	8.4	7.7				
Multan	7.9	6.2	9.1				
Abbotabad	7.7	8.5	7.1				
Mianwali	7.6	5.7	9.1				

### **2.4 Income Group-wise Inflation**

The highest income group having income above Rs 12000<sup>2</sup> experienced the highest inflation during July 2006. The lowest income group also witnessed higher than average inflation, while inflation for middle income groups remained below the average (see **Figure 2.8**).

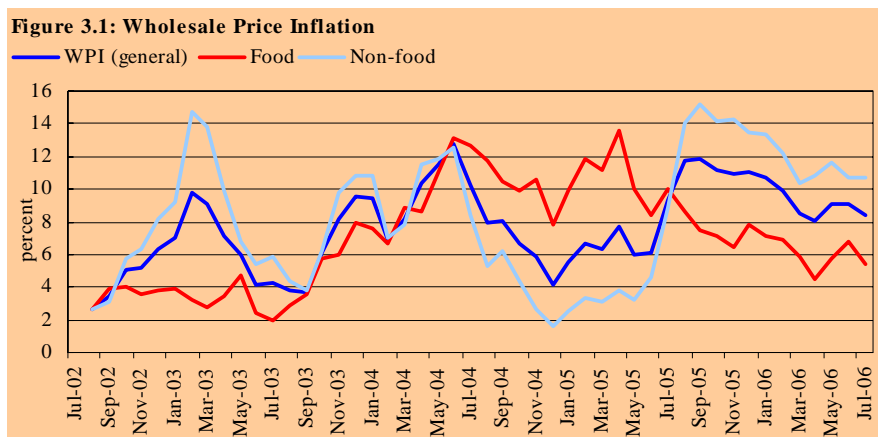


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<sup>2</sup> Income per month per household.

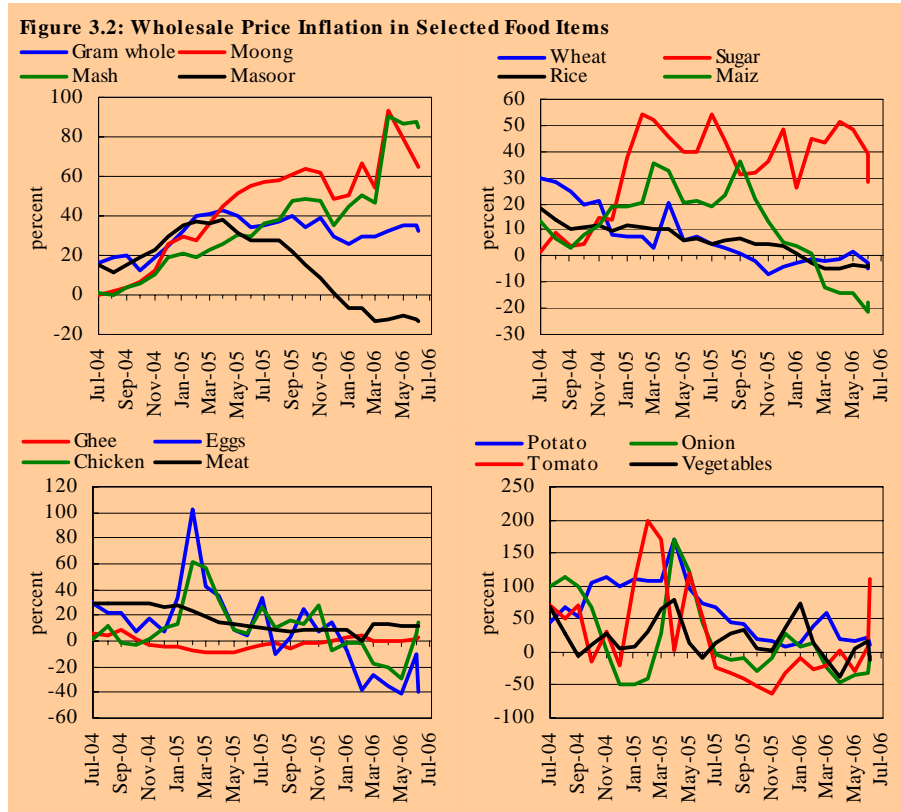
### 3. Wholesale Price Inflation

Wholesale price index (WPI) recorded 8.4 percent YoY growth in July 2006, which is observed vividly lower as compared to that of 9.4 percent growth in the corresponding month of last year and 9.0 percent in June 2006. This slowdown in wholesale prices was observed mainly on the back of decline in WPI food inflation which was recorded at 5 percentage points lower in July 2006 than 10 percent YoY inflation in July 2005. WPI non-food inflation maintained its rate of 10.7 percent in July 2006 as was observed in June; however, it was higher than that in July 2005 (see **Figure 3.1**).



WPI food inflation which has been declining since April 2005 resumed its decelerating trend in July 2006 after witnessing an upsurge in June. However, some of the components of WPI food inflation for example tomatoes, tea, beverages, mineral water, and fruits recorded atypically higher growth during July 2006 as compared with the corresponding month of earlier years. The other components which observed relatively lower or negative YoY growth during July 2006 included crops like wheat, maize, rice, vegetables and eggs (see **Figure 3.2**).

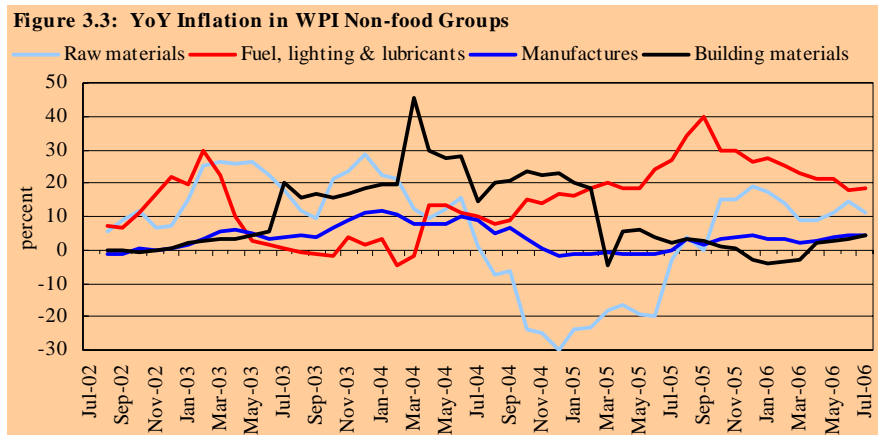
A frequency distribution of price changes shows that 15 food items included in the WPI food basket (of 43 food items) witnessed YoY double digit inflation and 9 items showed subdued inflation of 0 to 5 percent during July 2006. The items showing decline or almost no change were 12; however the rest of the items showed moderate inflation (see **Figure A2** in the Annexure A). The commodities showing double digit increase in wholesale prices were pulses moong, mash, gram, sugar, meat, tomatoes and chicken etc.



All of the non-food sub indices of WPI except raw material showed higher YoY growth in July 2006 as compared with preceding month (see **Figure 3.3**). Inflation in raw materials was recorded at 11.1 percent in July 2006 down from 14.6 percent in June 2006; however, it was still 14 percentage points higher than deflation of 3.1 percent in July 2005. The main deriving factors of raw material inflation have been prices of wool, sugarcane and tobacco.

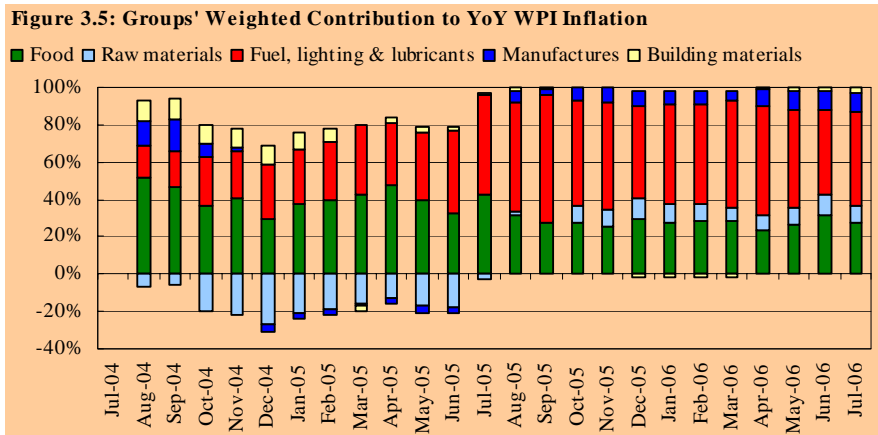
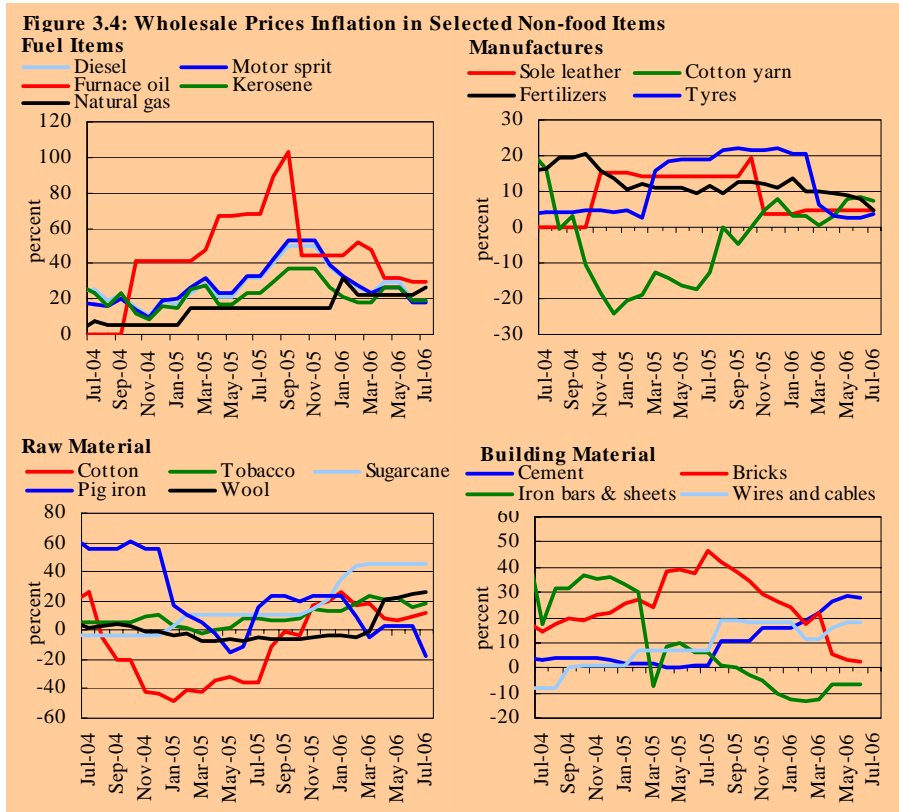
The sub-groups of manufactures and building materials also observed vigorous increase in prices, 4.1 percent and 4.2 percent respectively, during July 2006 as compared with less than 1 percent increase in each of the sub-indices in the corresponding month of the last year. However, fuel, lighting & lubricants depicted relatively lower growth by 18.4 percent in July 2006 as compared with the higher growth in the corresponding month of July 2005.





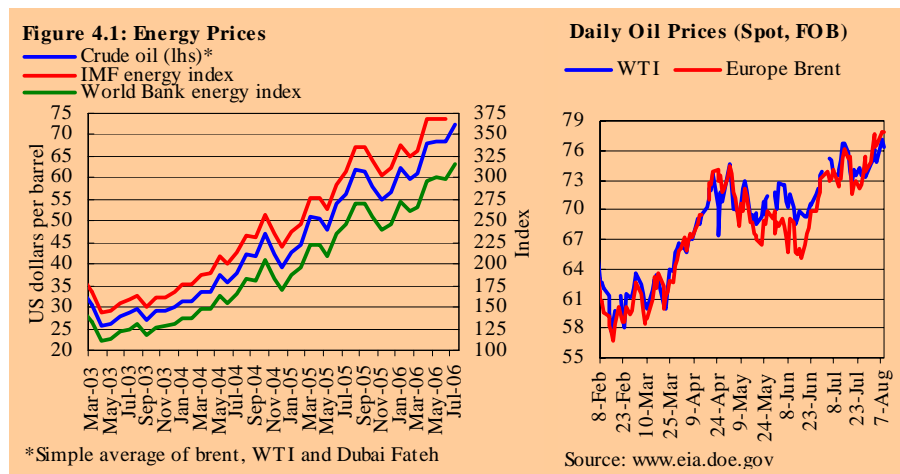
Inflation in *building materials* sub-index rose modestly by 4.2 percent in July 2006 compared to 3.3 percent increase in the previous month reflecting rise in the prices of tiles, timber, glass sheets and wires & cables. The prices of other major building materials including sanitary wires and pipe fittings etc. recorded the minimal increase in July 2006 as in previous month of the year, while prices of cement and cement blocks showed marginal deceleration at the rate of 27.8 percent and 3.4 respectively relative to somewhat higher growth of 27.9 percent and 4.7 during the last month of Jun 2006 (see **Figure 3.4**).

High inflation in the fuel, lighting & lubricants and manufactures sub-indices of wholesale price index resulted in higher contribution to WPI by 50 percent and 11.1 percent in July 2006 as compared with the preceding month figures of 45.1 percent and 10.4 percent respectively (see **Figure 3.5**). On the other hand, the contribution of food and raw materials declined to 27 percent and 9.4 percent in July as compared with 31.3 percent 11.2 percent respectively in June 2006.



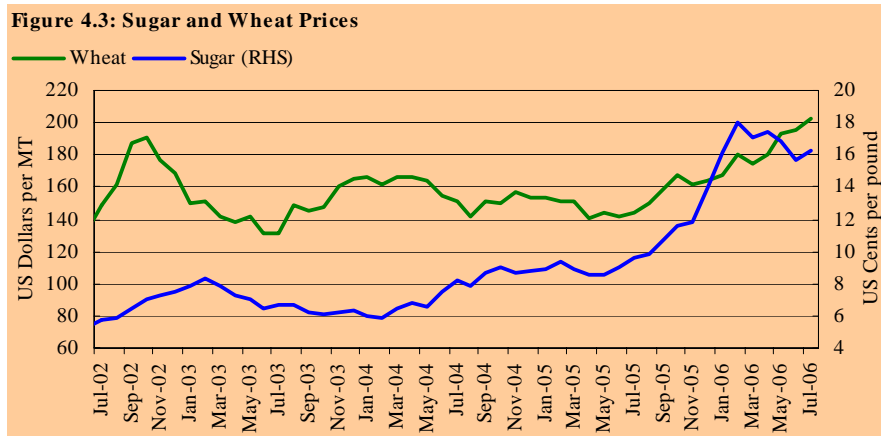
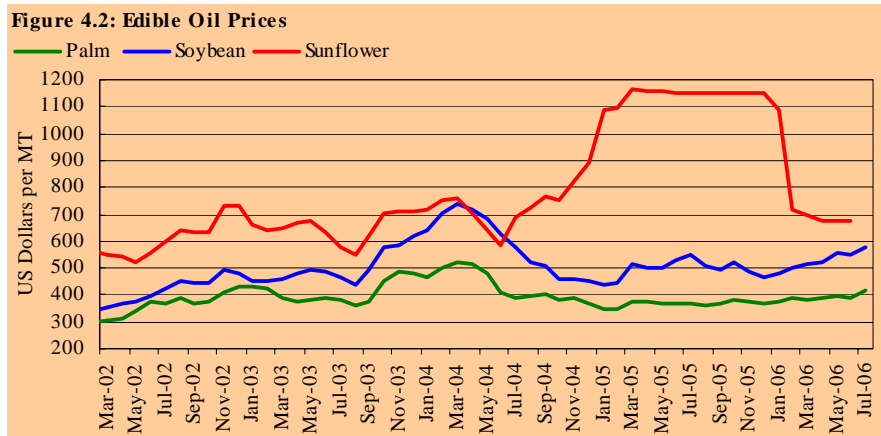
#### 4. Global Commodity Prices

In the international market oil prices increased as reflected in the daily average prices of Europe Brent Crude oil that increased to US\$ 77.1 per barrel in the first week of Aug 2006 from US\$ 73.3 per barrel during the whole month of July 2006. In fact the aggressive increase in crude oil prices can be mainly attributed to a few supply side factors as mentioned in the previous *Inflation Monitor*, Jun 2006. Following the increase in crude oil prices in world markets, World Bank energy index also witnessed sharp growth by 6.1 percent in July 2006 as compared with the negative change of 0.6 percent in the preceding month of 2006 (see **Figure 4.1**).



Among the selected food items, the prices of palm and soybean oil showed a sharp rise by 8.5 percent and 5 percent respectively in July 2006 over those in Jun 2006 respectively; moreover, these prices were much higher than those observed in the corresponding month last year (see **Figure 4.2**).

Wheat prices also observed sharp increase by 40.7 percent in July 2006 as compared with negative change of 4.5 percent in the corresponding month of 2005. In fact this steep hike in wheat prices can mainly be attributed to low production due to unfavorable weather conditions in some major wheat producing countries and over the time growing demand from importing countries. Similarly, sugar price witnessed enormous growth by 68.9 percent in the month of July 2006 as compared with the relatively lower change 17.5 percent in the corresponding month of 2005 (see **Figure 4.3**).

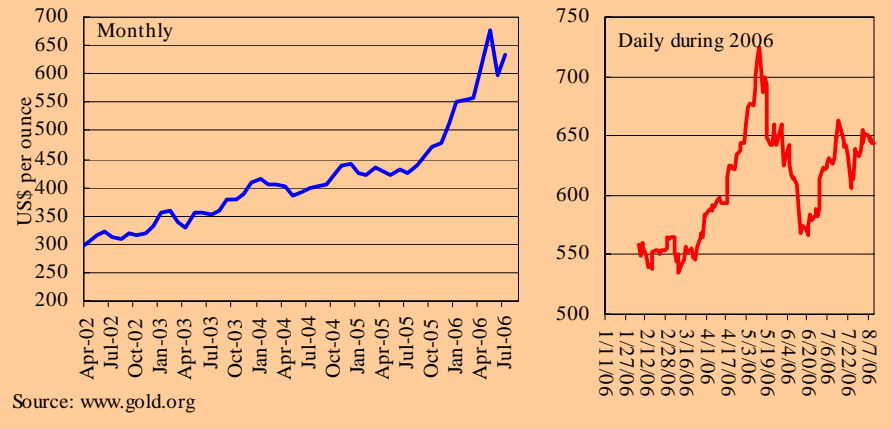


After increasing by 11 percent in May 2006 due to increased demand for investment and hedging against high oil prices, gold prices declined sharply by 12 percent in June 2006. However, gold prices bounced back and increased by 49.3 percent in July 2006 much higher to 6.6 percent in comparison to that of July 2005 (see **Figure 4.4**). The current increase in gold prices and slight strengthening of US dollar reflects the speculative activities connected with the investment portfolio.

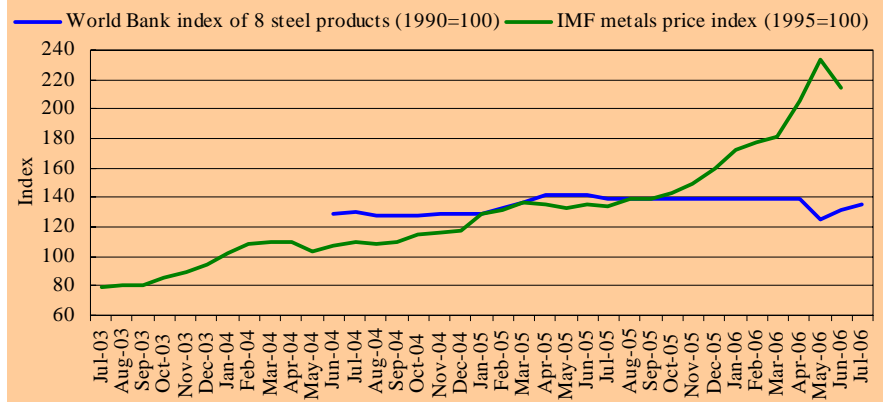
The IMF metal price index witnessed sharp growth of 59.47 percent in June 2006 obviously higher as compared with 22.3 percent in the respective month of 2005. Moreover, steel prices – as measured by World Bank index of 8 steel products –

depicted upward movement towards its earlier sustained growth pattern visible from July 2005 however reflected a negative change by 2 percent in July 2006 against vividly higher growth of 6 percent in the corresponding month of July 2005 (see **Figure 4.5**).

**Figure 4.4: Gold Prices**

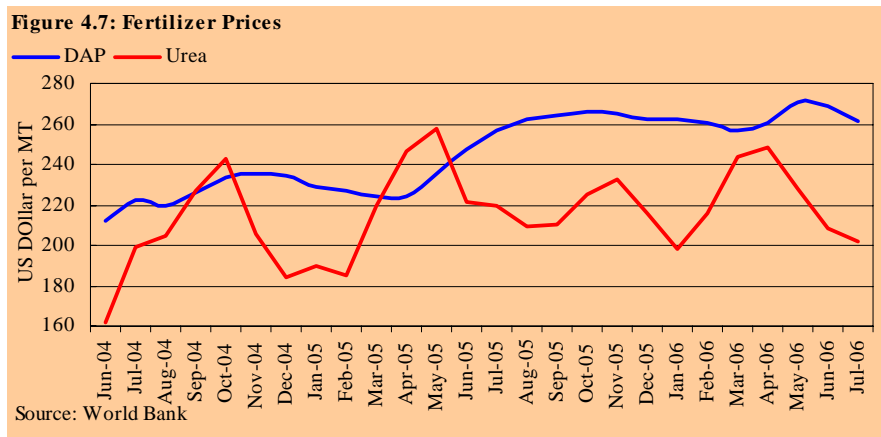
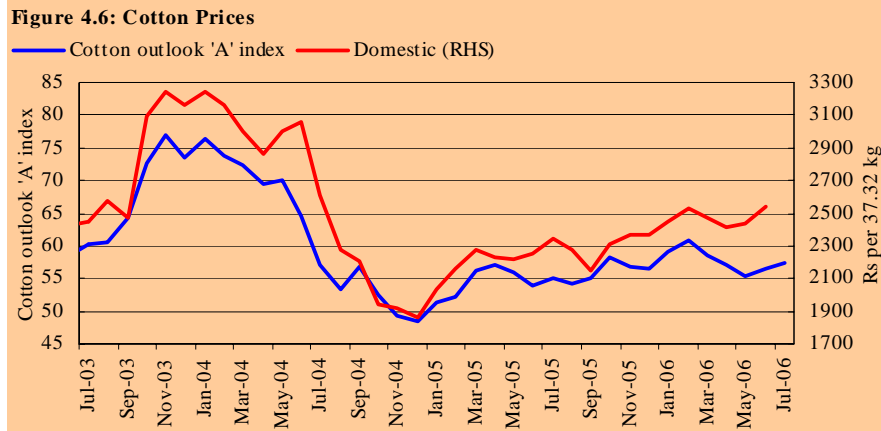


**Figure 4.5: Steel Prices**



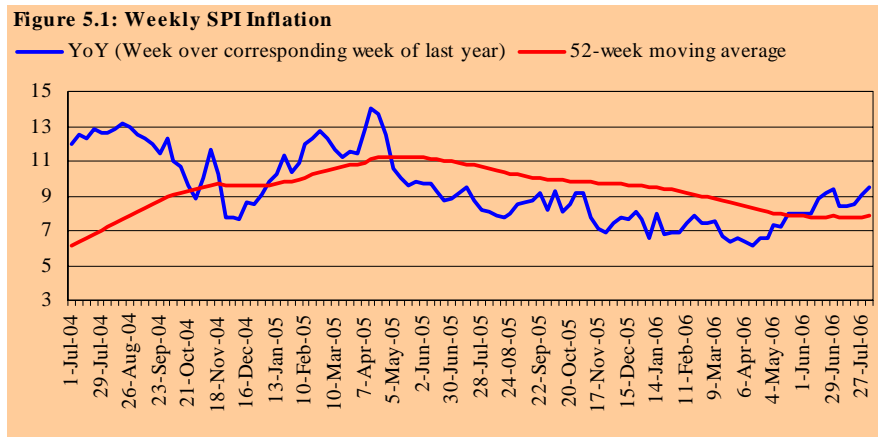
Cotton prices gained momentum in the international market and increased to a YoY growth rate of 4.1 percent in July 2006 as compared with negative growth of 3.6 percent in July 2005. However, growth in Cotton 'A' Index recorded a growth rate of 4.1 percent in July 2006 little lower as compared with the 4.5 percent in the preceding month. Similarly, cotton prices in Pakistan witnessed upward movement and recorded a sharp growth of 12.8 percent in June 2006 as compared with negative growth of 26.3 percent during June 2005 (see **Figure 4.6**). In

fertilizers, both urea prices and DAP prices showed slowdown and recorded growth of 1.9 percent and negative 7.9 percent respectively in July 2006 as compared with higher growth by 15.2 percent and 10.1 percent likewise in the corresponding month of 2005 (see **Figure 4.7**).



## 5. Sensitive Price Indicator

On average, weekly inflation in SPI remained almost constant to 8.6 percent in two consecutive months June and July 2006 (see **Figure 5.1**); however, it was below the inflation witnessed in the corresponding period last year. The major items contributing to the SPI inflation were pulses, vegetables, gas and other liquid fuel prices. More than one-third of the total items in the SPI basket recorded double-digit YoY inflation during June 2006 with some of the items like pulses moong, gram and mash, tomato, diesel, L.P.G. cylinders, etc. witnessing inflation of more than 20 percent (see **Table A8** in Annexure A).

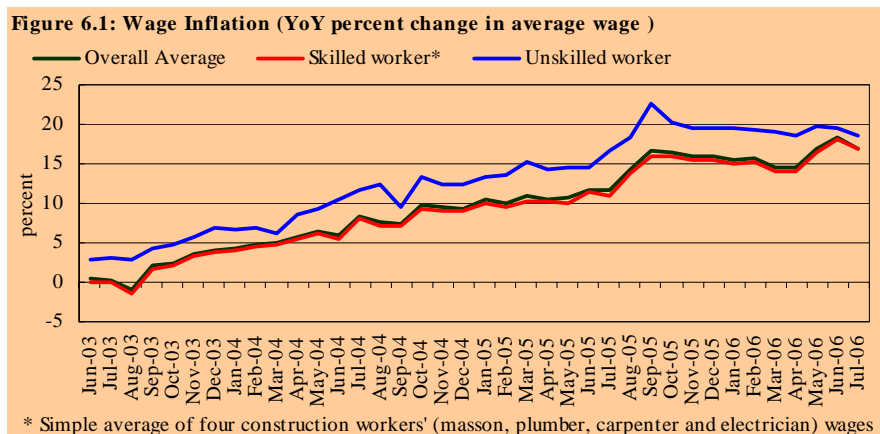


## 6. Wage Inflation

The wage inflation recorded at 17.0 percent in July 2006 appeared relatively higher as compared with 11.6 percent in the corresponding month of 2005. However, it was observed that wage inflation on average decelerated by 1.2 percentage points in July 2006 in comparison with the 18.2 percent in the preceding month. Similarly both skilled workers and laborers also witnessed lower growth in wage inflation by 16.8 percent and 18.5 percent respectively during July 2006 as compared with relatively higher wage inflation 18.1 percent and 19.5 percent respectively in the preceding month (see **Figure 6.1**). Furthermore, the deceleration in overall wage inflation reflected in all of the four components of the skilled workers (see **Table 6.1**).

The average real wage inflation kept rising but with the slow rate of 9.4 percent in July 2006 as compared with 10.6 percent in the preceding month. Moreover, real wages of skilled workers depicted acceleration in growth by 9.2 percent in July 2006, as compared with the relatively lower growth of 2 percent in the

corresponding month of 2005. Similarly, the real wages of unskilled workers increased by the rate of 10.9 percent in July 2006 higher than the growth rate 7.7 percent in July 2005.



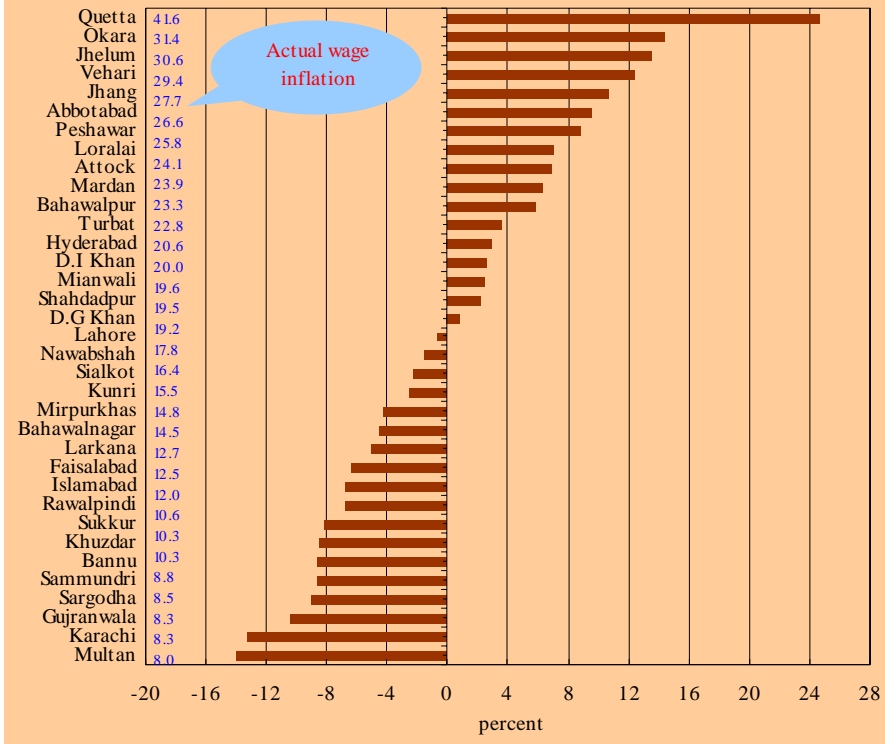
**Table 6.1: Wage Inflation**

	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06
<b>Overall</b>	11.6	14.4	16.7	16.5	15.9	16.0	15.5	15.6	14.6	14.6	16.9	18.2	17.0
<b>Skilled:</b>													
Carpenter	12.3	14.1	16.1	16.9	16.3	16.9	14.7	15.8	14.4	14.9	14.6	15.9	15.0
Mason	11.3	15.8	19.7	17.6	17.2	18.0	18.2	17.2	16.0	16.4	17.2	19.7	18.4
Plumber	12.6	14.6	16.9	17.2	15.8	16.0	16.4	17.0	15.1	13.9	14.0	15.2	14.0
Electrician	7.8	10.8	10.8	12.1	12.0	11.0	10.4	10.4	10.3	10.8	20.2	21.4	19.8
<b>Unskilled:</b>													
Laborer	16.7	18.3	22.6	20.1	19.5	19.5	19.6	19.3	19.0	18.6	19.9	19.5	18.5

In addition, **Figure 6.2** presents the picture of city-wise variations in average monthly wages during the current month and average monthly wages by type of construction workers are given in **Table 6.2**.



Figure 6.2: City-wise Wage Inflation--Difference from Mean in July 2006



<b>Table 6.2: Daily Labor Wages (Rs. per day) --Average in 35 Cities</b>						
	<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

**ANNEXURES**

Annexure A

	Weights	Jul-02	Jul-03	Jul-04	Jul-05	Jul-06
<b>I. Food Group</b>	<b>40.3</b>	<b>5.8</b>	<b>-0.5</b>	<b>14.9</b>	<b>9.7</b>	<b>7.4</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>2.8</b>	<b>2.7</b>	<b>5.7</b>	<b>8.5</b>	<b>7.8</b>
Apparel, textile, etc.	6.1	2.7	4.2	1.0	5.0	3.8
House rent	23.4	0.9	1.4	9.0	11.7	7.7
Fuel & lighting	7.3	6.5	4.7	2.7	5.8	13.2
Household furniture & equipt	3.3	3.1	3.0	5.4	5.5	6.2
Transport & com.	7.3	2.6	2.0	7.5	13.5	10.6
Recreation & entert.	0.8	0.7	0.2	-0.9	-0.3	0.2
Education	3.5	4.2	5.0	2.1	4.9	6.8
Cleaning, laundry, etc.	5.9	3.7	4.2	4.3	3.0	4.2
Medicines	2.1	6.4	-0.7	0.9	1.3	4.1
<b>Headline</b>	<b>100</b>	<b>4.0</b>	<b>1.4</b>	<b>9.3</b>	<b>9.0</b>	<b>7.6</b>

Groups	% Changes	Total Number of Items	No. of Items in each Inflation Range			
			Decrease or no change	Subdued increase	Moderate increase	Double digit increase
			(0 % or less)	(0 to 5%)	(5 to 10%)	(over 10%)
<b>I. Food Group</b>	<b>5.6</b>	<b>111</b>	<b>26</b>	<b>28</b>	<b>26</b>	<b>31</b>
<b>II. Non-Food Group</b>	<b>7.5</b>	<b>250</b>	<b>69</b>	<b>96</b>	<b>48</b>	<b>37</b>
Apparel, textile, etc.	3.6	42	5	23	12	2
House rent	7.9	1	0	0	1	0
Fuel & lighting	11.7	15	7	1	0	7
Household furniture & equipt	6.0	44	2	25	16	1
Transport & com.	10.4	43	12	5	7	19
Recreation & entert.	-0.1	16	11	3	2	0
Education	6.6	24	6	10	5	3
Cleaning, laundry, etc.	3.7	36	9	20	3	4
Medicines	4.4	29	17	9	2	1
<b>Overall</b>	<b>7.6</b>	<b>361</b>	<b>95</b>	<b>124</b>	<b>74</b>	<b>68</b>

Note: Prices of 13 seasonal items were not reported during the month.

<b>Table A3: Distribution of Price Changes - Selected CPI Items, July 2006</b>				
<b>Groups</b>	<b>Decrease or no change</b>	<b>Subdued increase (upto 5%)</b>	<b>Moderate increase (5 to 10%)</b>	<b>Increase of over 10%</b>
<b>Food Group</b>	Eggs Farm; Apple Ice Cream Walls Wheat; Onion Cooking Oil (Dalda) Pulse masurr	Vegetable Ghee (Loose) Rice Basmati Sup. Qty. Fish-Rahu Medium Size Bread Tandoori St. Size Bread Plain Medium Size	Milk Tetra Pack 1/2 Ltr. Cigarettes Morven Gold 20'S Toffee (Hilal) Bananas; Milk Fresh (Unboiled)	Beef With Bone Av.Qlty. Mutton Av.Qlty. Sugar Refined Pulse Gram, Moong, Mash Tomatoes
<b>Apparel &amp; Textile</b>	Gents Sandal Bata Ladies Sandal Bata Child Shoe Power Lite Bata	Linen Av.Qlty School Uni. Kameez,Shal.Girl Lawn Av.Qlty.	Brassier Av.Qlty. Vest For Men Av.Qlty. Tailoring Shirt	Gents Shoe, Art 1109 Service Nylon Jogger 27 Size 2-5
<b>House Rent Index</b>			HRI	
<b>Fuel &amp; Lighting</b>	Bulb Philips 100-Watts Elect.Charges	Tube Light Philips 40 Watts Gas Chrg Gas Cylinder Stand. Size		
<b>H/hold Furniture</b>	Sewing Machine(Singer)	Tea-Set S.Steel 3 Pcs. M.Siz; D-Freezer Waves 8 Cft.; Table Spoon S.Steel Sup.Qlty	Towel(3'X2') Av. Qty; Thermos Starvac 1 Ltr Sofaset Wooden With Foam Sea	Pedestal Fan 22" Super Qty
<b>Transport &amp; Comm.</b>	Internet Charges Postal Envelope Domestic U.M.S. Reg Charges Min.	Motorcycle Yamaha 100cc. Car Service Charges	Train Fare A/C Slp.101-500Km A/C Bus Fare Outside City Full Tonga Charges	Minibus Fare Max.With In Cit Auto Rickshaw Fares Petrol Super
<b>Recreation</b>	Video Game Sega 16 Byte Daily "Dawn" Tv.Licence Feedomestic	T.V. 20" Colored With R/Cont Dry Cell 1.5 Volt(Local)	Cinema Non-A/C High Class Cinema A/C. Highest Class	

Contd...

Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Education</b>	English Book Class VI Govt. College Fee Ist. Year	Com. C.D. (Tdk/Imation) Maths Book Class IX Or X Ball Pen (Local)	Urdu Book Class V (T.B.Bord) Maths Book Calss V (T.B.B) English Book Class IX Or X	School Fee Primary Eng.Med. Govt. University Fee Msc.
<b>Cleaning &amp; Laundry</b>	Toilet Soap Lux 95 Grams Toothpaste Macleans 70 Gm Surf (Medium) 160 Gm	Finis 500 Ml Toilet Paper Roll (R.Petal) Brylcream 210 Ml. Blade Treet Ordinary 10'S	Beauty Parl Hair Styl Charge Haircut Charges For Men	Washing Ch. (Kamiz-Shalwar) Gold Tezabi 24 Ct
<b>Medicare</b>	Panadol Tab. Extra/Plain Brufen Tabs 200-Mg. Polyfax Eye Ointment	Renitec Tab. 5 Mg. Daonil Tab. 5 Mg. O.R.S. (Nimcol)	Doctor (Mbbs) Clinic Fee	Glaxos-D (450 Grms)

Table A4: Top Ten CPI Items (Ranked by Inflation Contribution)							
Items	Unit	Weights	Price Jul-06	YoY Change		Weighted Contribution	
				Jul-05	Jul-06		
<b>A. Ranked by Weighted Contribution</b>							
1	House rent index	Month	23.43	137.4	11.7	7.7	23.7
2	Milk fresh (unboiled)	Ltr	6.53	24.5	14.2	9.9	8.5
3	Sugar refined	Kg	1.95	35.4	45.9	25.7	6.5
4	Tomatoes	Kg	0.44	33.2	-12.5	107.8	6.2
5	Gas cylinder stand. size	Each	0.68	542.9	-4.9	55.6	5.0
6	Petrol super	Ltr	1.73	57.9	32.5	17.9	4.0
7	Gas chrg10.1157 - 13.4876mmbtu	Mmbtu	0.93	387.9	14.5	27.0	3.3
8	Beef with bone av.qlty.	Kg	1.61	109.1	13.5	13.1	2.8
9	Gas chrg upto 3.3719 mmbtu	Mmbtu	0.84	102.4	0.0	20.4	2.2
10	Train fare eco. > 500 km.	P/km	0.48	0.5	5.6	34.2	2.2
<b>Total</b>			<b>38.6</b>				<b>64.3</b>
<b>B. Ranked by Percentage Change</b>							
1	Tomatoes	Kg	0.44	33.2	-12.5	107.8	6.2
2	Pulse mash (washed)	Kg	0.20	69.7	19.8	69.8	1.8
3	Silver tezabi 24 ct	10 gm	0.03	231.6	18.1	56.6	0.2
4	Gas cylinder stand. size	Each	0.68	542.9	-4.9	55.6	5.0
5	Pulse moong (washed)	Kg	0.22	59.9	44.1	52.2	1.5
6	Gold tezabi 24 ct	10 gm	0.20	12469.0	12.9	47.1	1.3
7	Train fare eco. 101-500 km.	P/km	0.01	0.6	5.0	35.7	0.1
8	Gram whole yellow av.qlty	Kg	0.15	61.6	32.1	35.6	0.7
9	Train fare eco. > 500 km.	P/km	0.48	0.5	5.6	34.2	2.2
10	Mango kalmi	Kg	0.22	35.1	2.8	31.0	0.9
<b>Total</b>			<b>2.6</b>				<b>19.8</b>

<b>Table A5: City-wise Inflation (YoY) by Income Groups, July 2006</b>							
		<b>Upto Rs:3000</b>			<b>Rs 3001 to 5000</b>		
		<b>General</b>	<b>Food</b>	<b>Non-Food</b>	<b>General</b>	<b>Food</b>	<b>Non-Food</b>
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
		<b>Rs 5001 to12000</b>			<b>above Rs 12000</b>		
		<b>General</b>	<b>Food</b>	<b>Non-Food</b>	<b>General</b>	<b>Food</b>	<b>Non-Food</b>
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



<b>Table A6 : Income Group-wise Inflation (YoY)</b>								
	<b>Dec-05</b>	<b>Jan-06</b>	<b>Feb-06</b>	<b>Mar-06</b>	<b>Apr-06</b>	<b>May-06</b>	<b>Jun-06</b>	<b>Jul-06</b>
<u>Up to Rs. 3000</u>								
General	8.4	8.4	8.2	6.9	6.0	7.5	8.0	7.6
Food	8.5	8.5	8.2	6.2	4.5	7.2	8.4	7.8
Non-food	8.3	8.4	8.1	7.4	7.1	7.7	7.6	7.6
<u>Rs. 3001-5000</u>								
General	8.2	8.5	8.0	6.7	5.8	7.1	7.7	7.5
Food	8.2	8.3	7.8	5.7	4.0	6.5	8.0	7.5
Non-food	8.2	8.6	8.1	7.4	7.1	7.6	7.5	7.5
<u>Rs. 5000-12000</u>								
General	8.2	8.5	7.9	6.7	5.8	6.9	7.6	7.5
Food	8.1	8.2	7.6	5.5	3.8	5.9	7.9	7.4
Non-food	8.2	8.8	8.1	7.6	7.3	7.6	7.3	7.5
<u>Above Rs. 12000</u>								
General	8.9	9.0	8.2	7.1	6.5	7.3	7.7	7.8
Food	8.1	8.1	7.2	5.1	3.2	4.8	7.6	7.4
Non-food	9.5	9.6	8.8	8.5	9.0	9.2	7.8	8.1
<u>All income groups</u>								
General	8.5	8.8	8.0	6.9	6.2	7.1	7.6	7.6
Food	8.1	8.2	7.5	5.4	3.6	5.6	7.8	7.4
Non-food	8.8	9.2	8.4	8.0	8.0	8.2	7.5	7.8

<b>Table A7: Distribution of Wholesale Price Change (YoY), July 2006</b>				
<b>Groups</b>	<b>Decrease or no change</b>	<b>Subdued increase (upto 5%)</b>	<b>Moderate increase (5 to 10%)</b>	<b>More than 10% increase</b>
<b>Food</b>	Bajra	Cotton Seed Oil	Powdered Milk	Salt
	Onions	Fish	Tea	Meat
	Maize	Spices	Mineral Water	Beans
	Jowar	Vegetable Ghee	Vegetables	Chicken
	Masurr	Sugar Confectionary	Prepared/Preserved	Oil Cakes
	Eggs	Mustard & Rapeseed	Fresh Milk	Potatoes
	Rice	Oil	Milk Food	Gur
	Wheat	Condiments	Beverages	Besan
	Wheat Flour	Fresh Fruits		Gram Whole
	Maida	Dry Fruits		Sugar Refined
	Vegetables			Gram Split
	Cooking Oil			Moong
				Mash
			Tomatoes	
<b>Raw material</b>				Fruit Prepared/Preserved
	Skins	Mustard/Rapeseeds	Cotton	Tobacco
	Hides	Cotton Seeds		Wool
	Pig Iron			Sugar Cane
<b>Fuel &amp; lighting</b>	Coke		Mobil Oil	Coal
	Electricity Ind. Supply			Motor Sprit
	Tariff-B			Diesel Oil
	Elec. Agriculture Tariff-D			Kerosene Oil
				Fire Wood
				Natural Gas
				Furnace Oil

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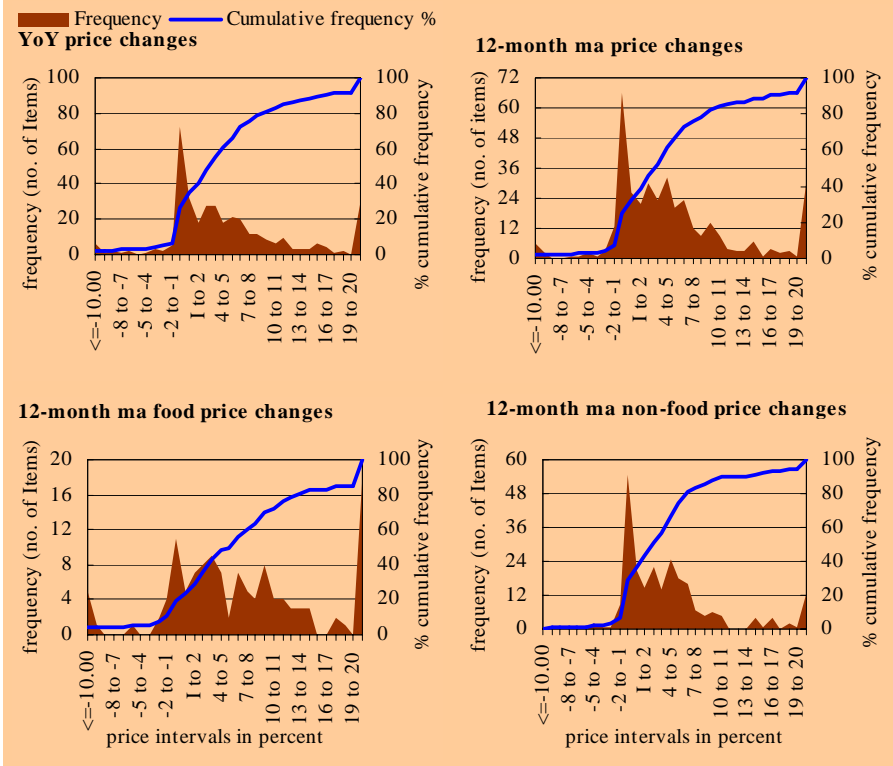
<b>Manufactures</b>	Blended Yarn	Drugs & Medicines	Audio-Visual Instruments	Jute Manufactures
	Other Electrical Goods	Utensils	Cigarettes	
	Nylon Yarn	Plastic Products	Pesticides & Insecticides	
	Paper	Foot Wear	Cotton Yarn	
	Glass Products	Hosiery	Mattresses	
	Chrome Leather	Cotton Textiles	Transports	
	Matches	Silk & Rayon Textiles	Tubes	
		Dying Materials		
		Woolen Textiles		
		Ready Made Garments		
		Tyres		
		Machinery		
		Sole Leather		
		Chemicals		
<b>Building material</b>	Iron Bars & Sheets	Tiles	Timber	Wires And Cables
	Paints & Varnishes	Cement Blocks	Sanitary Wares	Cement
	Bricks	Pipe Fittings	Glass Sheets	

<b>Table A8: SPI Item-wise Price Movements</b>					
	Items	Unit	Price Jul-06	Percentage change over	
				Jul-05	Jun-06
1	Wheat	Kg.	11.3	-3.3	1.3
2	Wheat flour a.qlt.	Kg.	12.9	-0.8	1.0
3	Rice basmti.broken	Kg.	20.3	0.0	0.4
4	Rice irri-6	Kg.	16.1	-0.4	0.2
5	Masur pulse washed	Kg.	41.4	-10.3	-2.6
6	Moong pulse washed	Kg.	59.8	49.3	1.0
7	Mash pulse washed	Kg.	70.3	67.3	-0.7
8	Gram pulse washed	Kg.	36.4	27.8	-1.8
9	Beef	Kg.	114.8	12.8	0.4
10	Mutton	Kg.	220.6	14.7	1.2
11	Egg hen (farm)	Doz.	29.4	-31.9	5.8
12	Bread plain m.s.	Each	14.6	5.4	0.7
13	Sugar	Kg.	35.1	24.9	0.4
14	Gur	Kg.	41.2	22.4	0.1
15	Milk fresh	Litr	25.6	9.6	0.4
16	Milk powdered nido	400g	111.0	3.4	0.0
17	Curd	Kg.	30.3	9.3	0.5
18	Veg.ghee tin	2.5k	203.7	0.0	0.0
19	Veg.ghee loose	Kg.	60.1	2.3	1.4
20	Mustard oil	Kg.	67.7	2.9	0.2
21	Cooking oil	2.5l	204.0	-0.3	-0.2
22	Potatoes	Kg.	21.4	10.2	0.4
23	Onions	Kg.	12.1	0.0	19.2
24	Tomatoes	Kg.	31.7	98.6	44.9
25	Bananas	Doz.	33.9	9.9	-1.2
26	Salt powdered	Kg.	4.4	18.1	1.4
27	Red chillies(powd)	Kg.	70.1	-5.7	-0.4
28	Garlic	Kg.	60.6	4.5	3.8
29	Tea packet	250g	65.9	6.5	0.9
30	Tea (prepared)	Cup	6.1	11.3	0.3
31	Cooked beef plate	Each	28.1	10.4	0.5
32	Cooked dal plate	Each	16.9	11.3	0.5

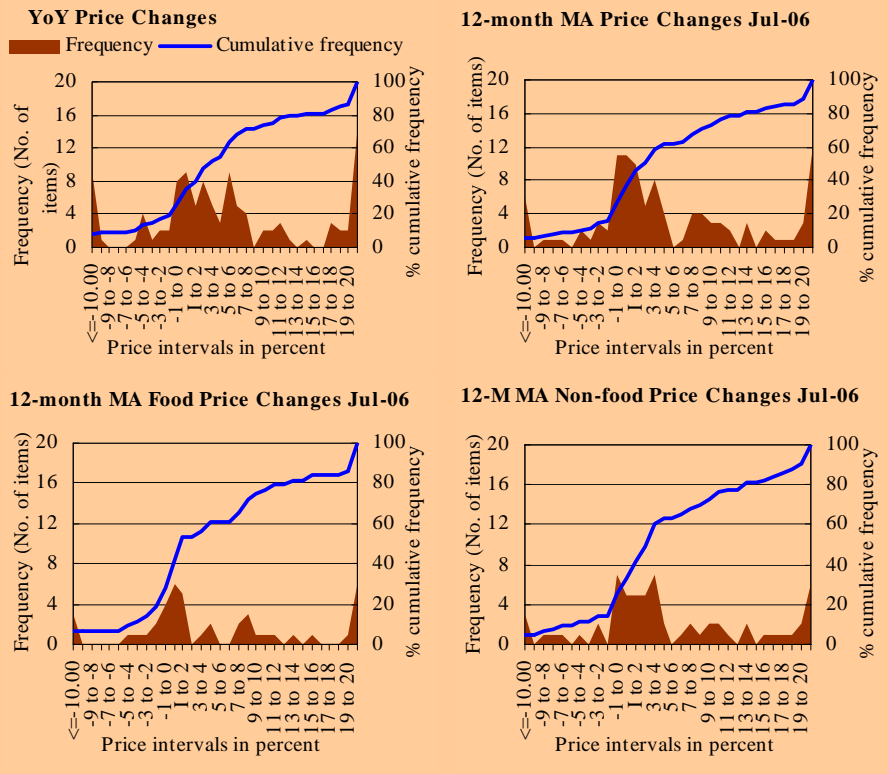
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	Items	Unit	Price Jul-06	Percentage change over	
				Jul-05	Jun-06
33	Cigarettes k-2	10's	8	8.9	3.3
34	Coarse latha	Mtr.	35	4.7	0.1
35	Lawn (avg.+s.qlty)	Mtr.	80	5.5	0.0
36	Voil printed	Mtr.	38	3.3	-0.1
37	Shirting	Mtr.	65	5.3	1.4
38	Sandal gents bata	Pair	399	0.0	0.0
39	Sandal 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	182	23.2	0.0
43	Elec. Bulb 60-wats	Each	11	-2.2	0.1
44	Match box	Each	1	10.2	1.6
45	Washing soap	Cake	8	4.3	0.9
46	Bath soap lifebuoy	Cake	14	0.2	0.0
47	Chicken (farm)	Kg.	86	16.4	16.4
48	Gas chrg. All clb. Comb	D.mmbt	238	24.9	7.5
49	L.P.G. (cylinder 11kg.)	Each	525	44.4	-8.5
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	22.0	0.0
53	Telephone local	Call	2	0.0	0.0
<b>Max:</b>				<b>98.6</b>	<b>44.9</b>
<b>Median</b>				<b>5.5</b>	<b>0.3</b>
<b>Min:</b>				<b>-31.9</b>	<b>-8.5</b>

Figure A1: Frequency Distribution of Price Changes of CPI Items, July 2006



**Figure A2: Frequency Distribution of Price Changes of WPI Items, Jul 2006**



**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. 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:



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

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:
- 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.