

# *Inflation Monitor*

**May 2006**



**State Bank of Pakistan**

*Economic Policy and Research Departments*



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## Team

***Muhammad Farooq Arby***  
Research Department

[farooq.arby@sbp.org.pk](mailto:farooq.arby@sbp.org.pk)

***Fida Hussain***  
Economic Policy Department

[fida.hussain@sbp.org.pk](mailto:fida.hussain@sbp.org.pk)

***Syed Sarfaraz Ali Shah***  
Research Department

[syed.sarfaraz@sbp.org.pk](mailto:syed.sarfaraz@sbp.org.pk)

**Editorial Assistance**  
***Uzma Shakir***  
Research Department

[uzma.shakir@sbp.org.pk](mailto:uzma.shakir@sbp.org.pk)

## 1. Overview\*

After declining successively during the last three months, consumer price inflation resurged in May 2006 and posted at 7.1 percent year-on-year compared with 6.2 percent in the earlier month. Resurgence has also been observed in other two measures of inflation, viz. wholesale price index and sensitive price indicator. Although both food and non-food inflation increased during the month, the food group remained the key contributor to the overall inflation (see **Table 1.1**).

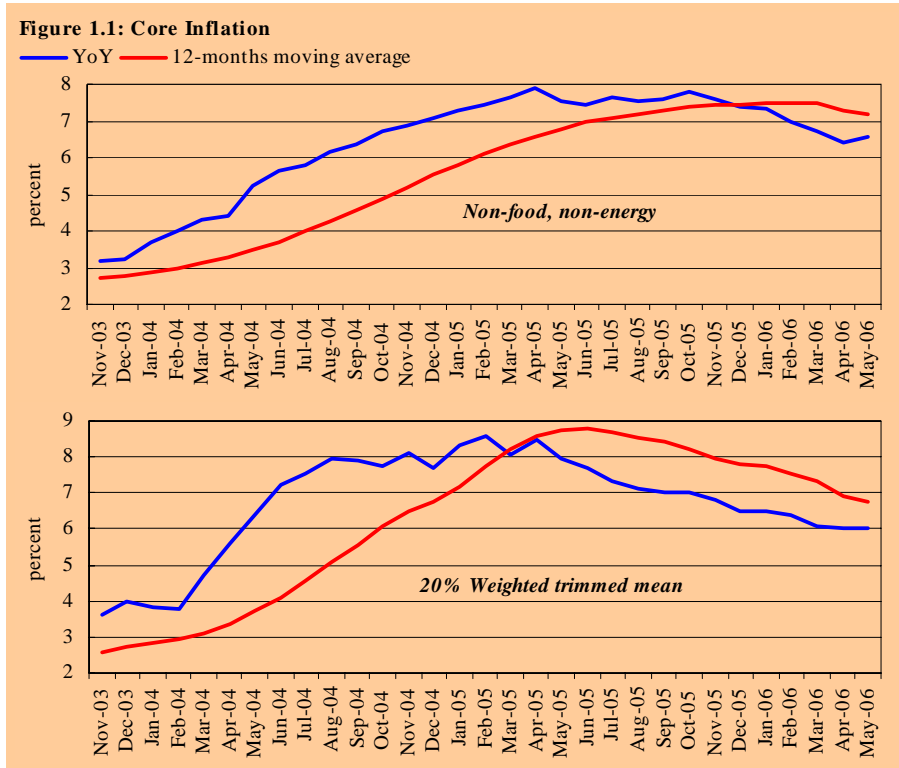
	CPI			WPI			SPI	Core Inflation	
	General	Food	Non-Food	General	Food	Non-Food		NFNE*	Trimmed mean
May-05	9.8	12.5	8.0	6	10.1	3.2	9.9	7.5	8.0
Jun-05	8.7	9.3	8.4	6.2	8.4	4.6	9.2	7.4	7.7
Jul-05	9	9.7	8.5	9.4	10.0	8.9	8.0	7.6	7.3
Aug-05	8.4	7.8	8.8	11.7	8.6	14.0	7.1	7.6	7.1
Sep-05	8.5	7.5	9.3	11.9	7.5	15.2	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

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

This sharp rise in food inflation, in May 2006, was mainly due to the weak base along with significant increase in the prices of certain food items. On the other hand, the major factor behind non-food inflation was the fuel & lighting group of the consumer price index and raw material of the wholesale price index.

A reversal in the trend of core inflation has also been witnessed, which increased in May 2006 after a continuous decline for the last several months (see **Figure 1.1**). The increase in core inflation is mainly due to the second round effect of an earlier increase in oil prices which reflected in the increase of transportation cost and consequently in general price level.

\* The analysis of price trends in Inflation Monitor is based on data compiled and provided by Federal Bureau of Statistics.



The long-run trends of price indices, measured as 12-month moving average, also indicate that inflationary pressures still exist in the economy. The long-run trend inflation albeit declining, is still significantly higher than 8 percent in case of consumer price index and close to 10 percent in case of wholesale price index (see **Figure 1.2**).

The other dimensions of inflation including period average inflation and monthly inflation also finger to high inflation and thus the existence of upward pressures on price levels (see **Table 1.2**). The average inflation in CPI during the period of July to May of the current fiscal year is recorded at 7.9 percent which is significantly higher than 5.6 percent inflation witnessed during the same periods of the past five years. Similarly, monthly CPI inflation at 0.5 percent in May 2006 was also higher than deflation observed during May 2005 as well as in the same month of the past five years.

**Figure 1.2: Movements in Price Indices**

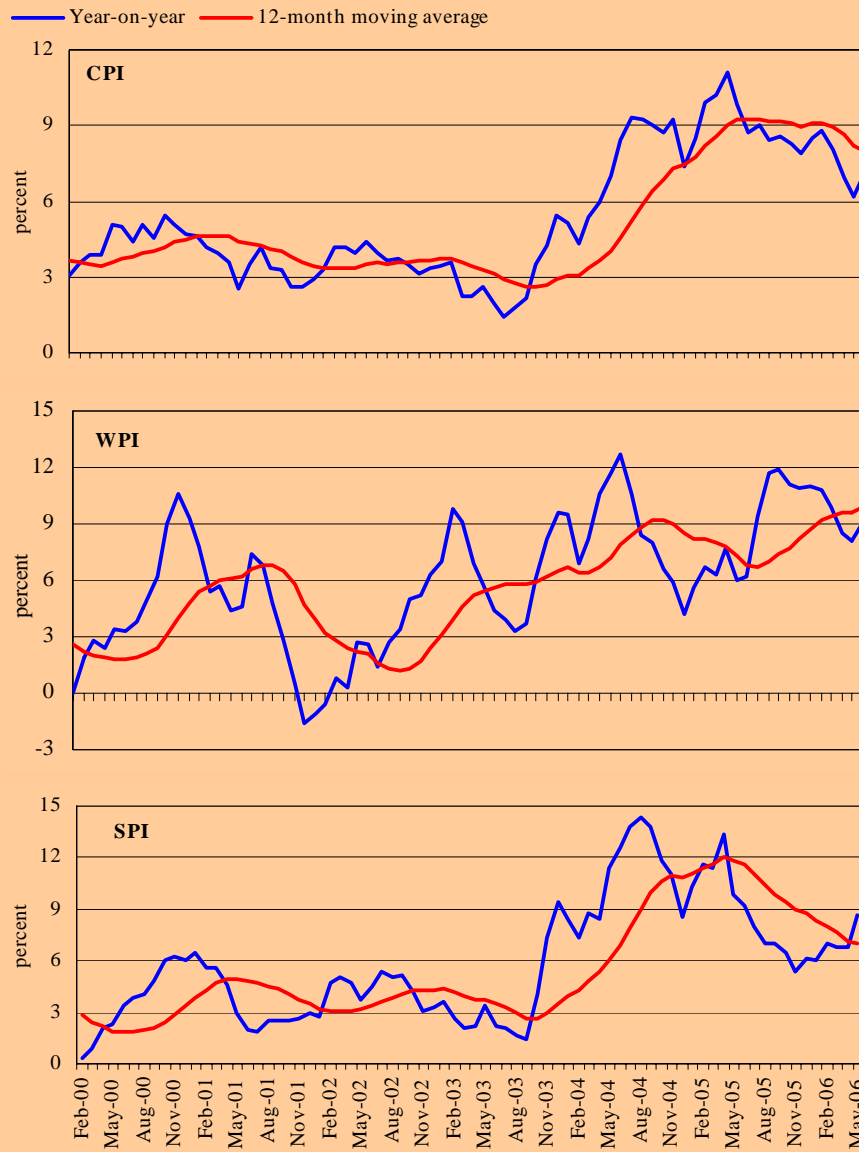
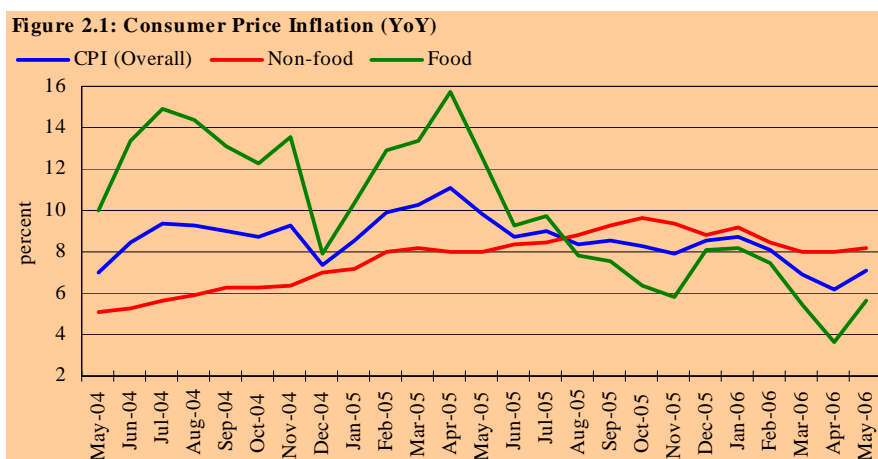


Table 1.2: Different Dimensions of Inflation (percent)				
	May-05	Apr-06	May-06	5-year average
Year-on-year (May 06 over May 05)				
Overall CPI	9.8	6.2	7.1	6.1
Food group	12.5	3.6	5.6	6.8
Non-food group	8.0	8.0	8.2	5.6
Period average ( Jul-May FY06 over Jul-May FY05)				
Overall CPI	9.3	8.0	7.9	5.6
Food group	12.8	7.0	6.8	6.1
Non-food group	7.0	8.8	8.7	5.4
12-month moving average (April 05-May 06 over April 04-May 05)				
Overall CPI	9.3	8.2	8.0	5.6
Food group	12.8	7.6	7.0	6.0
Non-food group	6.8	8.7	8.7	5.3
Monthly (May 06 over April 06)				
Overall CPI	-0.4	1.0	0.5	-0.05
Food group	-1.8	1.5	0.04	-0.9
Non-food group	0.6	0.7	0.7	0.6

## 2. Consumer Price Inflation

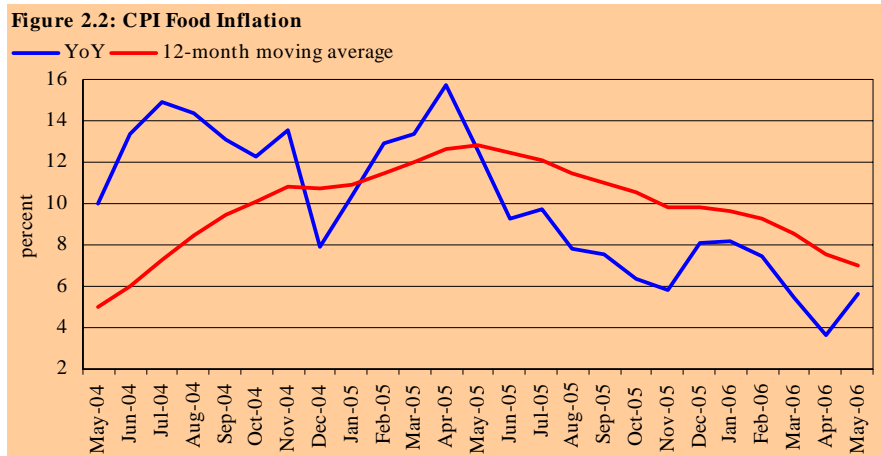
The consumer price index (CPI) resurged sharply during May 2006, and was recorded at 7.1 percent (YoY) as compared to 6.2 percent during the earlier month. While non-food inflation almost maintained its previous month's rate, food inflation played a key role in raising the overall inflation during the month (see **Figure 2.1**).





## 2.1 Food Inflation

After being recorded at 3.6 percent YoY during April 2006, CPI food inflation rose to 5.6 percent in May 2006. Although increase in the prices of milk, meat, sugar, pulses and cold drinks played its role in the current resurge, the impact of weak base of the corresponding month last year was significant enough to push CPI food inflation up to the current level (see **Figure 2.2**).<sup>1</sup>



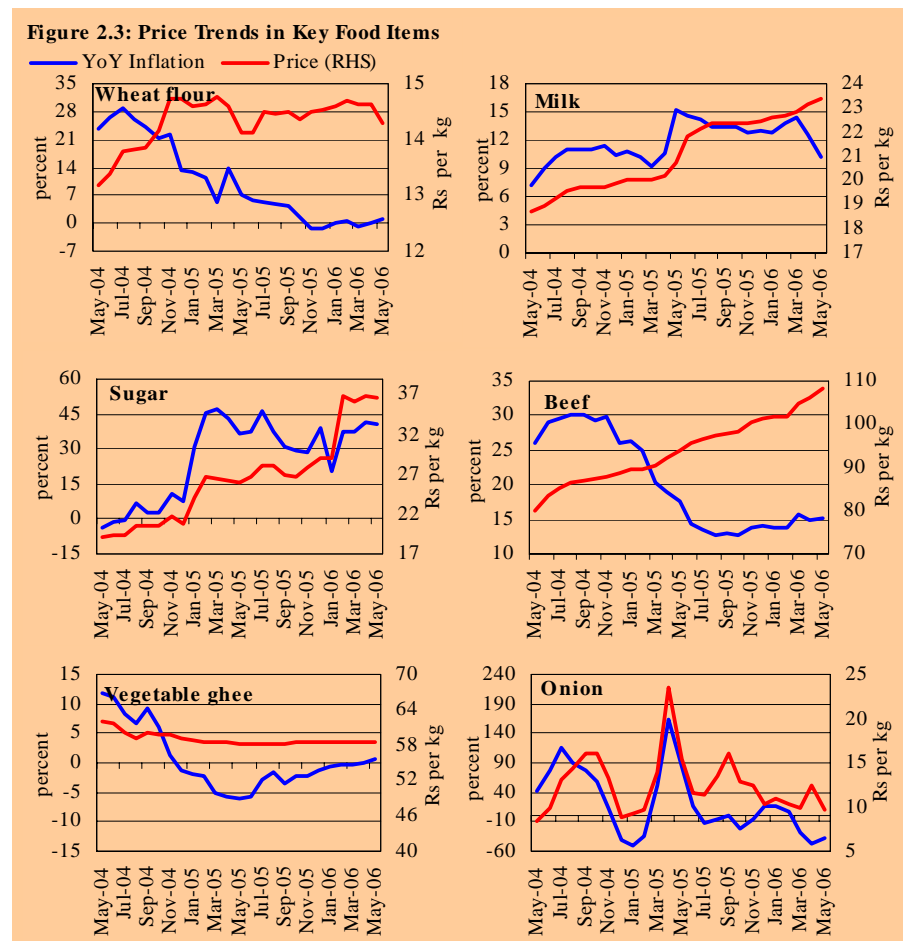
Price movements of individual items in the CPI food group show that YoY rise in prices of wheat and its products, pulses, *besan*, milk, meat, and sugar overshadowed the impact of the YoY decline in prices of vegetable ghee, cooking oil, poultry, onion, and tomatoes, along with a subdued inflation in number of other items.<sup>2</sup>

Prices of wheat, that have been showing YoY deflation since October 2005, increased by about 1 percent in May 2006 over the corresponding month last year. However, the wheat prices are still lower than those in the last six months of the current fiscal year.<sup>3</sup> The average price of pulses also recorded more than 60 percent increase over May 2005. Price of sugar, though slightly lower as compared with the last month, is still 40 percent higher than that during May 2005. Other commodities showing double digit inflation are milk, meat, cold drinks, ice cream, potatoes and bananas.

<sup>1</sup> The base for YoY inflation in May 2006 is May 2005; this base is weak in the sense that CPI fell to 130.0 during this month from 132.4 in April 2005.

<sup>2</sup> See **Table A3** in Annexure A for distribution of CPI items in terms of their YoY inflation.

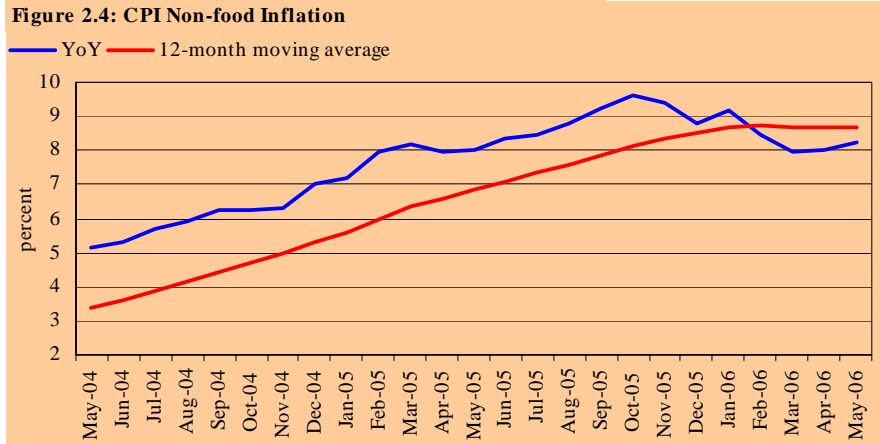
<sup>3</sup> Price of 10Kg wheat flour bag was Rs 129.57 in April 2006 and Rs 126.22 in May 2006 compared with Rs 124.85 in May 2005.



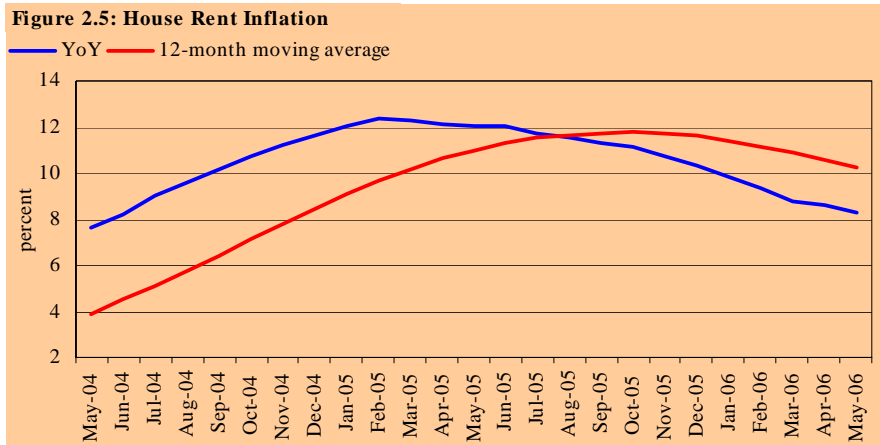
In terms of percent contribution to food inflation, sugar was the highest contributor during May 2006, followed by milk, beef and grams (see **Table A4** in the Annexure A).

## 2.2 Non-food Inflation

The non-food inflation also increased, though slightly during May 2006; it rose to 8.2 percent during the month up from 8 percent recorded during the corresponding month last year as well as in April 2006 (see **Figure 2.4**).

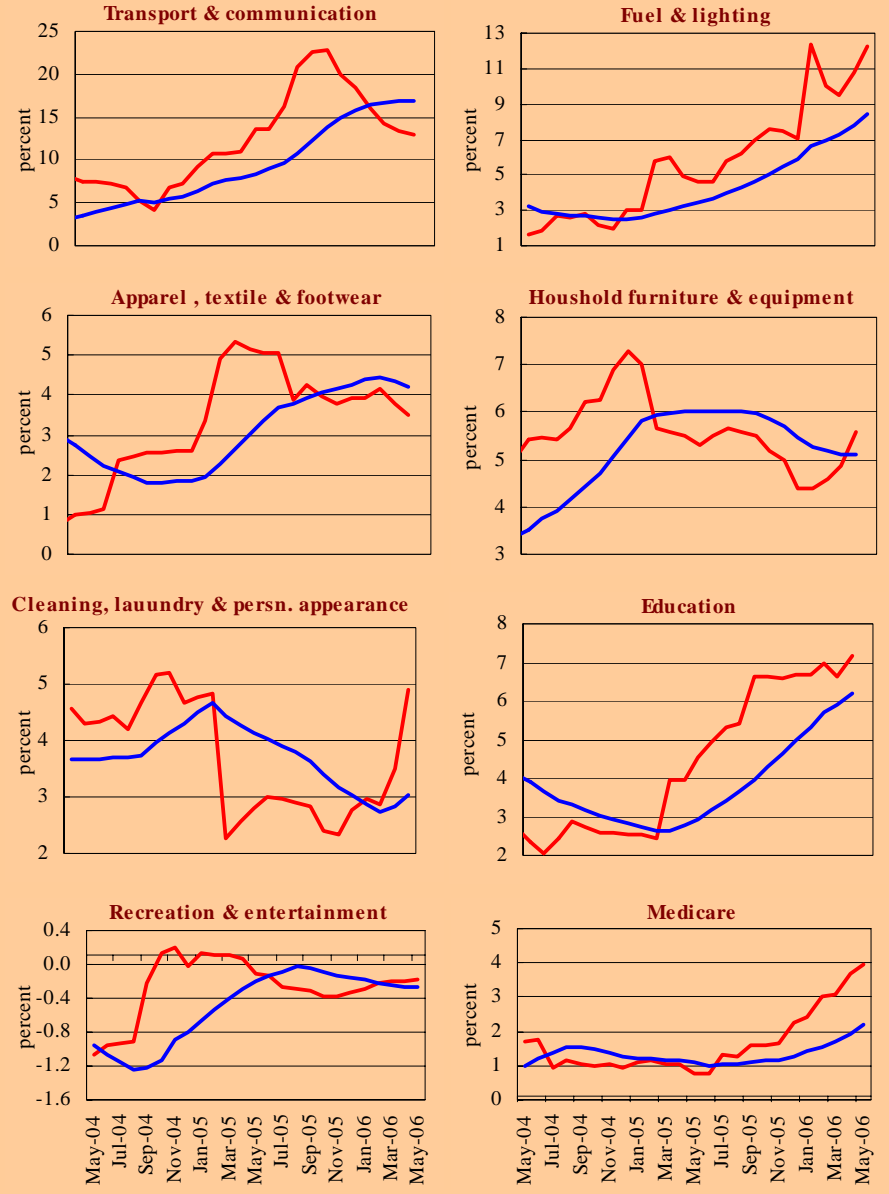


Increase in non-food inflation during the month under review was contributed by higher inflation in fuel & lighting, household furniture & equipments, cleaning, laundry & personal appearance and education. Inflation in other two groups including HRI and transport & communication declined during the month; however, their impact has been subsumed by sub-groups showing accelerated inflation (see **Figure 2.5** for HRI and **Figure 2.6** for inflation in other sub-groups).



**Figure 2.6: CPI Non-food Sub-indices' Inflation**

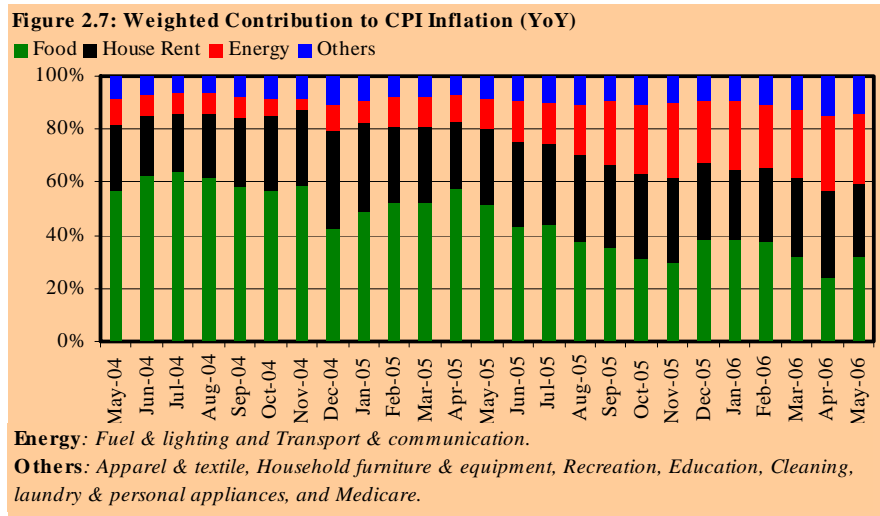
— YoY — 12-month moving average



Increase in fuel & lighting resulted primarily due to significant increase in gas cylinder prices; higher prices of air conditioners and fans caused rise in household furniture & equipment sub-group; record high gold and silver prices pushed up inflation in cleaning, laundering & personal appearance; and higher inflation in education was the result of an increase in university fees.

### 2.3 Major Contributions

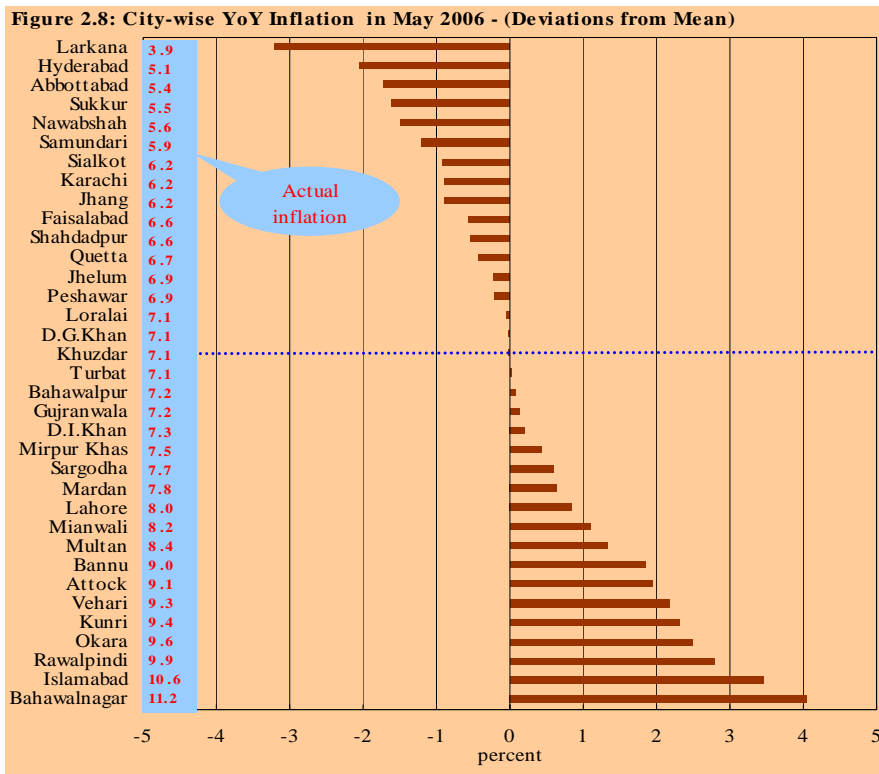
During May 2006, due to the resurgence in CPI food inflation, the contribution of the food group to overall inflation rose to 31.7 percent, which although considerably lower than its contribution of 51.4 percent during the same month last year, was higher than 23.8 percent during April 2006. On the other hand, the contribution of non-food inflation squeezed over the same period with HRI as the largest contributor followed by the energy sector (see **Figure 2.7**).



During May 2006, inflation in the prices of ten out of the 374 items in the CPI basket, contributed to about 75 percent of the overall inflation. As in the previous months, except HRI, all these items belong to either *food* or *energy* groups of CPI. Within the *food* group, milk and sugar, beef, and pulses contributed 29 percent to the overall CPI inflation. The contribution by heavy weight HRI stood at 27.3, lower than its contribution of 28.7 percent in the same month last year, and that of 32.7 percent in April 2006 (see **Table A4** in Annexure A).

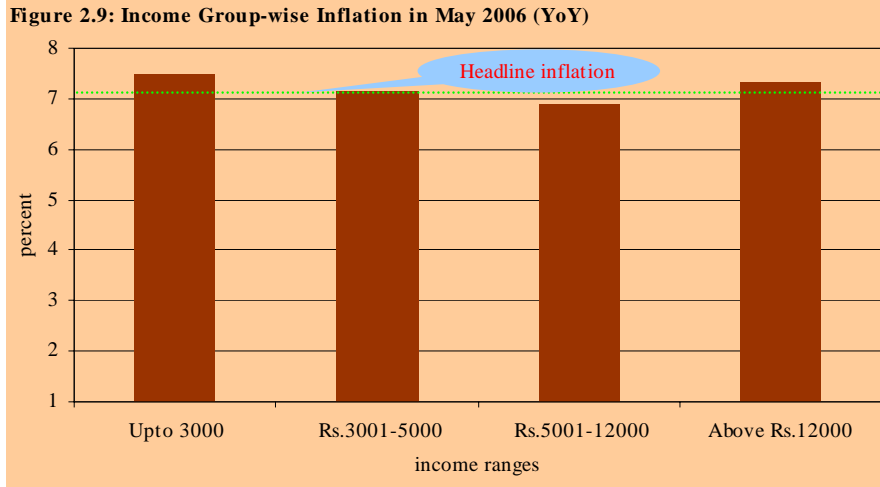
### 2.4 Regional Incidence of Inflation

During May 2006, Bahawalnagar recorded the highest YoY inflation followed by Islamabad; Larkana witnessed the lowest inflation of about 4 percent during the same period. Three out of four provincial capitals recorded lower-than-mean inflation. Still the number of cities that recorded above the average inflation was more than the number of cities showing below mean inflation (see **Figure 2.8**).



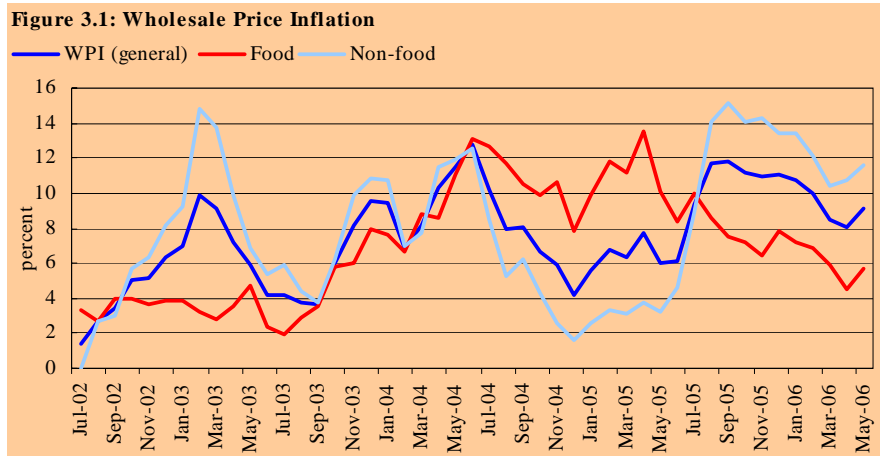
### 2.5 Socio-economic Incidence of Inflation

In contrast to the previous months, the lowest income group recorded above average inflation during May 2006. Since the current wave of inflation was mainly due to the food group and food has a relatively higher weight in the consumption basket of the low income segment of population, the incidence of inflation was higher as compared to those of other income groups during the month (see **Figure 2.9**).



### 3. Wholesale Price Inflation

Wholesale price inflation rebounded in May 2006 after observing a declining trend since October 2005. Annual rate of change in Wholesale Price Index (WPI) was 9.1 percent in May, up from 8.1 percent in April 2006 and 6.0 percent in May 2005. Increase in wholesale price inflation in May 2006 was contributed both by food and non-food groups of WPI (see **Figure 3.1**).



Average inflation in wholesale prices during the period Jul-May FY06 remained in double-digits, which has largely been contributed by higher prices of energy and certain raw materials including cotton, sugarcane and tobacco on the back of a shortfall in the production of these crops. Food inflation, on the other hand, remained subdued during Jul-May FY06 compared to more than 10 percent increase in the same period last year (see **Table 3.1**).

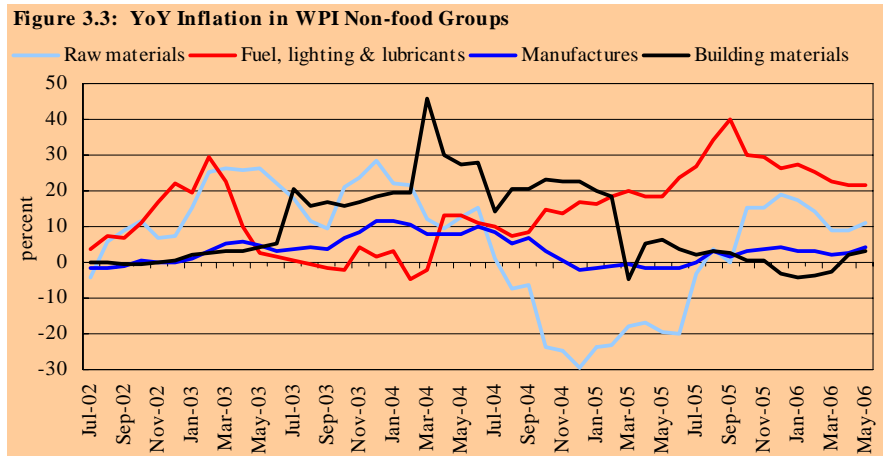
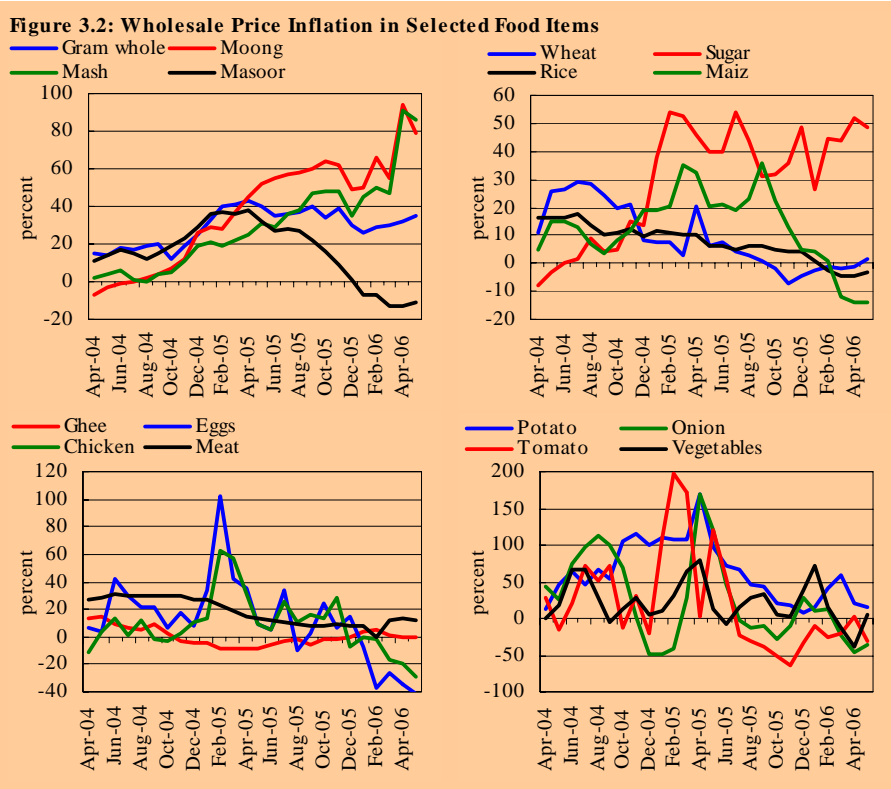
<b>Table 1: Group-wise WPI Inflation</b>						
Annual percentage changes						
WPI and its components	FY03	FY04	FY05	Jul-May		
				FY04	FY05	FY06
Food	3.5	7.0	10.7	6.4	10.9	7.0
Raw materials	14.4	17.0	-18.1	17.1	-17.9	9.7
Fuel, lighting & lubricants	12.5	2.8	15.8	2.1	15.0	27.4
Manufactures	1.7	7.9	1.1	7.7	1.3	2.8
Building materials	1.7	22.9	13.7	22.4	14.7	0.0
<b>Overall index</b>	<b>5.6</b>	<b>7.9</b>	<b>6.8</b>	<b>7.5</b>	<b>6.8</b>	<b>10.2</b>
<i>Overall excl. food</i>	<i>7.3</i>	<i>8.7</i>	<i>3.6</i>	<i>8.2</i>	<i>4.0</i>	<i>12.5</i>
<i>Overall excl. fuel</i>	<i>3.9</i>	<i>9.2</i>	<i>4.5</i>	<i>8.9</i>	<i>4.8</i>	<i>5.5</i>
<i>Overall excl. food and fuel</i>	<i>4.3</i>	<i>11.7</i>	<i>-1.8</i>	<i>11.5</i>	<i>-1.5</i>	<i>3.8</i>

When compared with the previous month, the annual rate of growth in food sub-index increased from 4.5 percent to 5.7 percent in May 2006. Increase in food inflation in May 2006 is attributable to the sharp increase in the wholesale prices of pulses, particularly gram split and besan, while price inflation in other food items remained almost same as in the previous month. Despite improved supply of pulses through imports<sup>4</sup>, prices of almost all pulses showed YoY increase in the range of 30 to 87 percent during the month. Sugar, meat, milk and potato prices also maintained the rising trend. The prices of wheat and vegetables that showed a declining trend during the last few months, also witnessed increase in May 2006 over the previous month (see **Figure 3.2**).

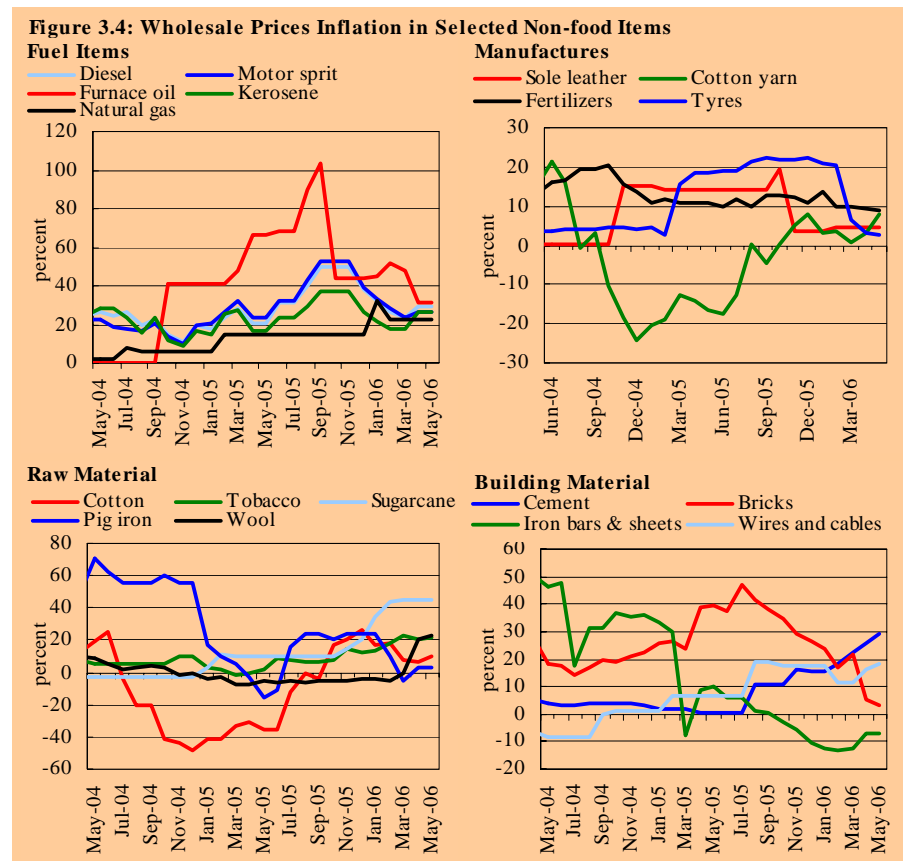
Within the non-food group, all the sub-indices witnessed an increased annual growth rate except *fuel, lighting & lubricants* sub-index, which maintained its previous month's rate at 21.4 percent (see **Figure 3.3**). Prices of all the major oil products remained same as in the last month because domestic prices were not adjusted to increase in crude oil prices in world market during May 2006. The annual rate of change in *raw material* sub-index accelerated in May 2006 to 11.3 percent from 9.0 percent in the previous month, mainly contributed by relatively higher cotton and wool prices, while YoY increase in the price indices of other

<sup>4</sup> Import of pulses increased by 19.7 percent during Jul-Apr FY06.



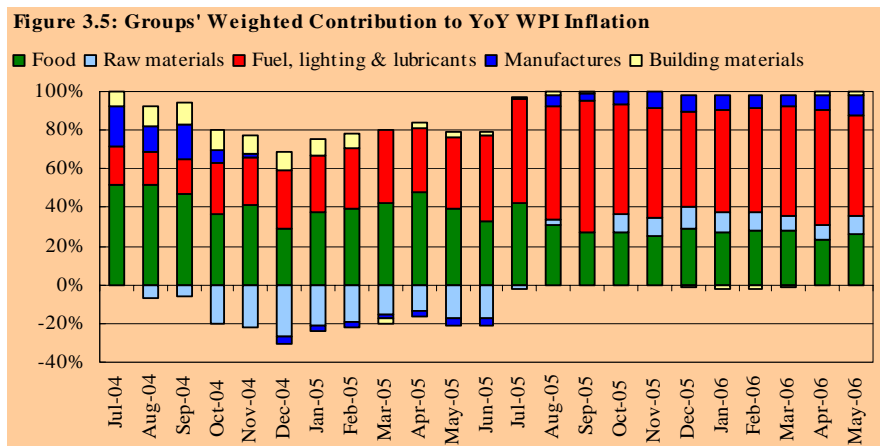


raw material continued to rise at the same rate as in April 2006. Inflation in manufactures sub-index rose modestly by 4.1 percent in May 2006 compared to 2.9 percent increase in the previous month. Increase in manufactures inflation reflects rise in the prices of cotton-based products (cotton yarn, cotton textile, hosiery, etc.) on the back of higher cotton prices. The prices of other major manufactures including fertilizer, pesticides, cigarettes, etc. continued to rise by close to the previous month's rate (see **Figure 3.4**).



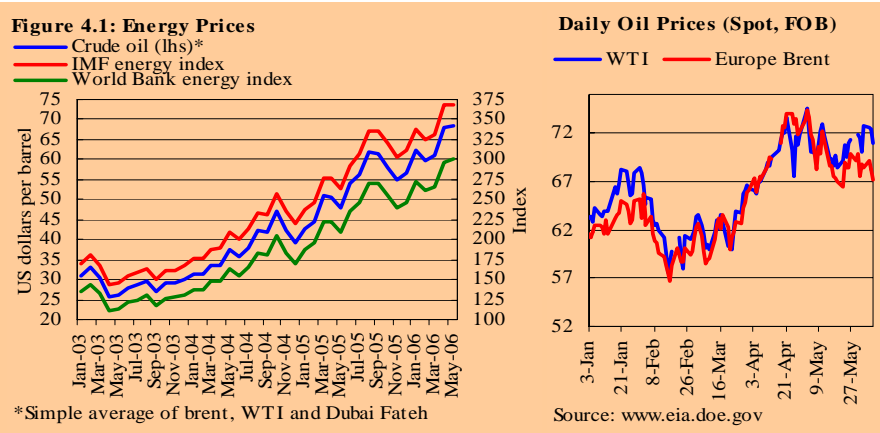
The building material sub-index rose by 2.9 percent in May primarily due to higher cement and cables & wire prices. Rising trend in the prices of metals like copper and silver are the major factors behind an increase in cable & wire prices. The prices of iron bars, on the other hand, continued their declining trend and price of bricks increased though with a decreasing rate.

**Figure 3.5** shows the weighted contribution by different WPI groups to overall YoY wholesale price inflation. The contribution of fuel, lighting and lubricants declined while that of food, raw material and manufactures groups increased. The food group contributed 27 percent of wholesale prices in May 2006, which is higher than its contribution of 23.5 percent during the previous month, but considerably less than 68 percent during May 2005.



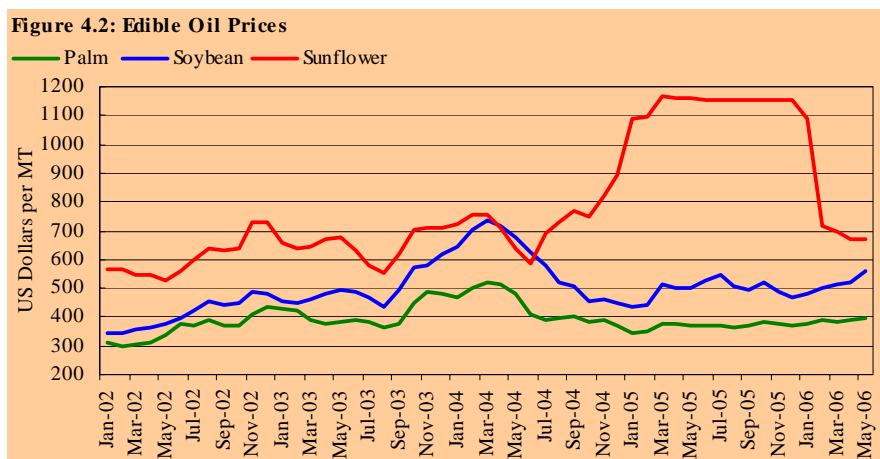
#### 4. Global Commodity Prices

Crude oil prices rose to an all time high at US \$74.5 per barrel (Europe Brent) on 2 May 2006, primarily due to supply side concerns. Worsening geopolitical climate, especially due to speculations regarding sanctions against Iran and problems in Nigeria fueled concerns about future supplies. Later on, however, oil prices eased with the downward revision in global demand for oil by the



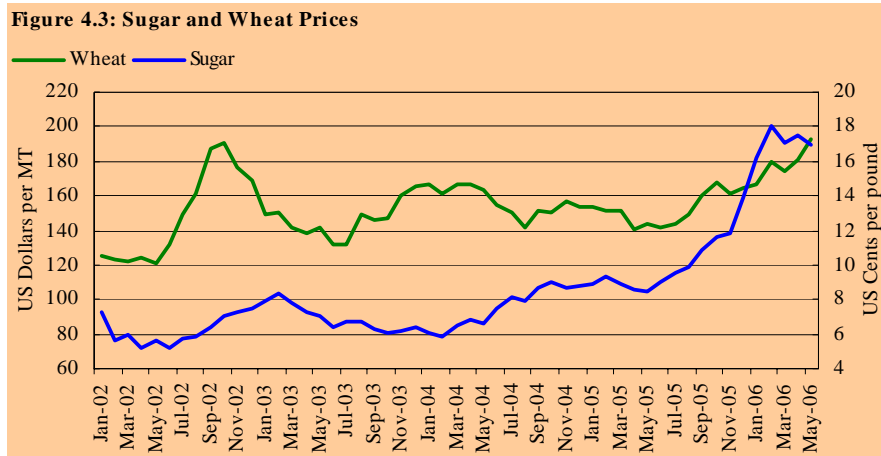
International Energy Agency and improved data on oil inventories in USA. Price of the Brent crude oil fell to US \$67.6 per barrel on 31 May 2006, still US \$18.3 per barrel higher than a year earlier. These developments have resulted in a moderate increase in the average crude oil price in May 2006 to US \$68.6 per barrel<sup>5</sup> from the previous level of US \$68.0 per barrel in April 2006 (see **Figure 4.1**).

Most of the non-fuel commodities, except steel products, continued to show rising trend during May 2006. As regards to the food items, palm and soybean oil prices maintained the rising trend on the back of increased demand for palm oil for non-food uses, i.e. fuel (as discussed in the previous issue of Inflation Monitor). However, production of both palm and soybean oil seeds is expected to increase, which may depress prices in the coming months. On the other hand, sunflower prices maintained the falling trend in May 2006 on the back of expected increase in World production by approximately 12 percent (see **Figure 4.2**).

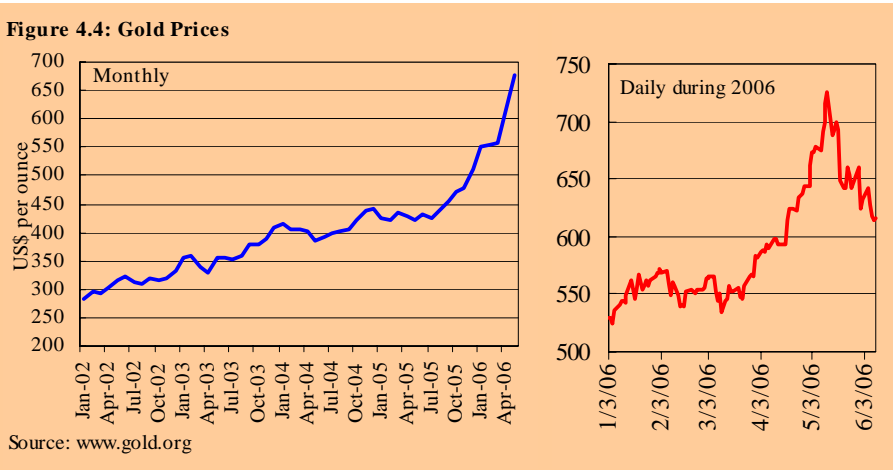


Wheat prices rose further by 7.1 percent (month-on-month basis) in May 2006 and are expected to maintain the rising trend during the rest of 2006 due to expected lower production caused by poor weather conditions in major producing countries combined with rising fertilizer and energy cost. Sugar price fell slightly by 0.6 percent in May 2006 from that in the last month mainly due to release of stocks by hedge funds (see **Figure 4.3**).

<sup>5</sup> Simple average price of UK Brent, WTI and UAE Fateh.

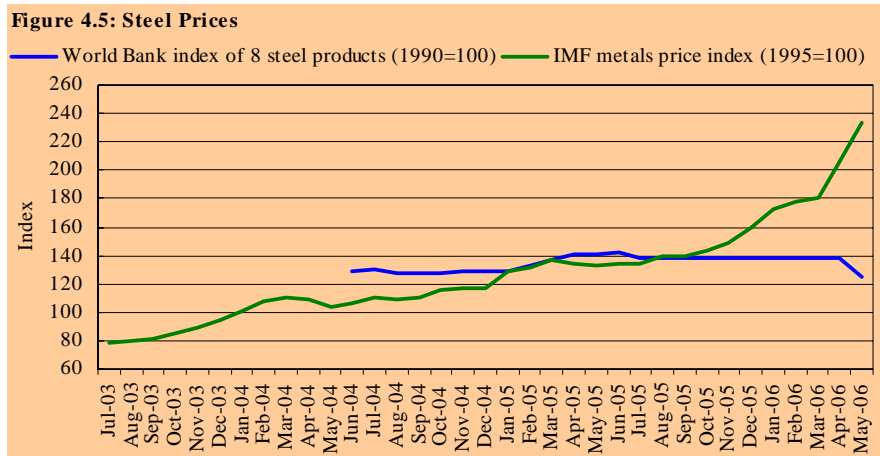


Gold prices kept on rising in May by even higher rates compared to the previous month; it touched the all time high of US \$725 per ounce on 12 May 2006 before falling below US \$600 per ounce by the mid of June 2006. On average, the gold price rose to US \$675.4 per ounce in May 2006 showing a 10.6 percent increase over the previous month and 60.1 percent over May 2005. Rising demand for investment and hedging against high oil prices and weakening dollar continued to drive gold prices up (see **Figure 4.4**).

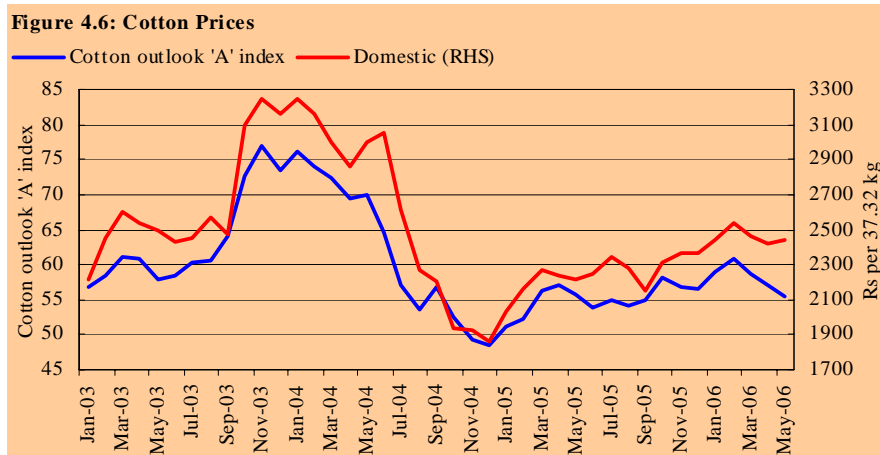


Other metal prices including copper, zinc, aluminum, etc. also firmed up further in May 2006 on the back of a strong demand from China and USA construction and manufacturing industries. The IMF metal price index rose by 76.7 percent YoY in

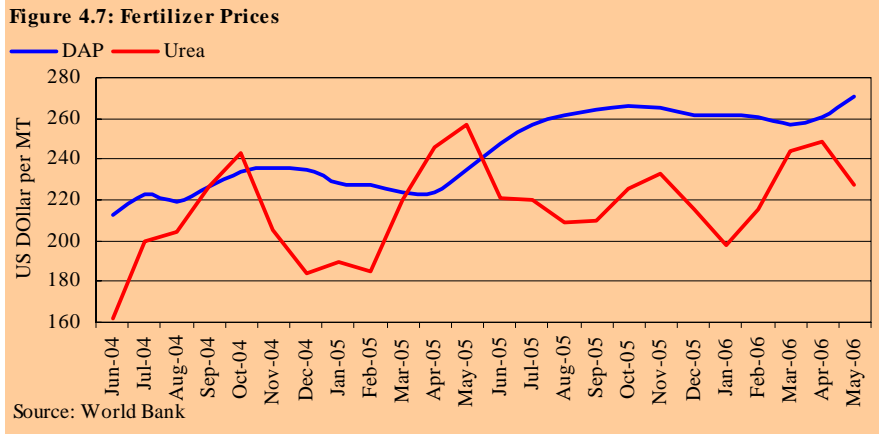
May compared to 52.5 percent increase in the previous month. Steel prices – as measured by World Bank index of 8 steel products – after remaining stable since July 2005, witnessed a sharp decline of 11.5 percent in May 2006 on the back of a strong increase in production especially in China. Moreover, higher inventories in US and relatively slow demand in Japan also eased demand pressures (see **Figure 4.5**).



Cotton prices continued to ease in the international market for the third month in row with YoY growth in Cotton 'A' Index falling by 3.2 percent in May from the previous month. This represents 0.8 percent decline from May 2005, primarily due to forecast of slightly higher world output for 2005-06. In contrast, cotton prices in Pakistan edged up during the last couple of months on the early reports of water

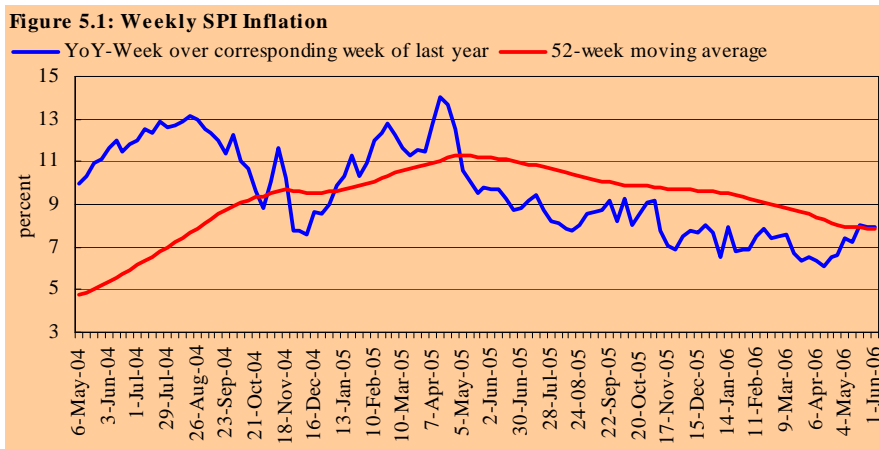


shortage problems being faced by farmers in the cotton growing areas (see **Figure 4.6**). In fertilizers, urea prices (per ton) witnessed a sharp decline of 11.5 percent YoY in May 2006 after showing slight easing in the previous month, while DAP prices firmed up further and rose by 15.1 percent YoY (see **Figure 4.7**).



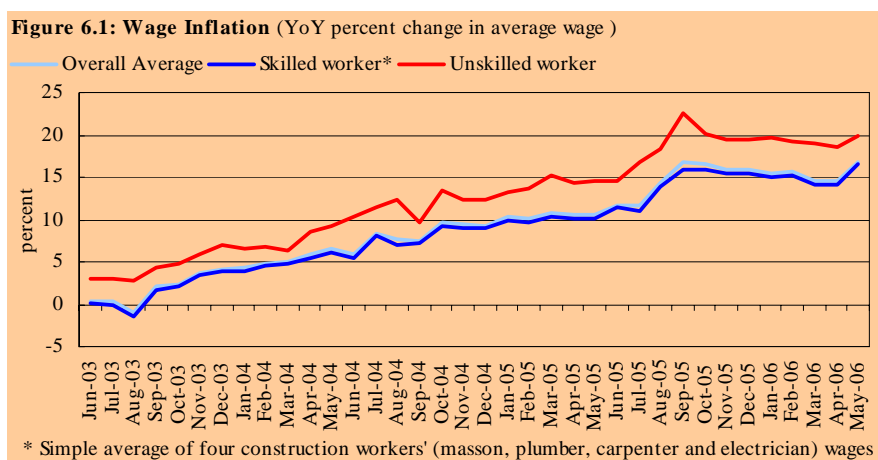
### 5. Sensitive Price Indicator

Like CPI, the impact of weak base of corresponding month last year was also reflected in inflation during May 2006. SPI inflation rose by 7.0 percent YoY during May 2006 as compared to relatively lower inflation of 6.4 percent in the previous month, reflecting the impact of increased prices of fuels and some of the food items, including sugar, milk, potatoes, and some pulses (see **Figure 5.1**).



## 6. Wage Inflation

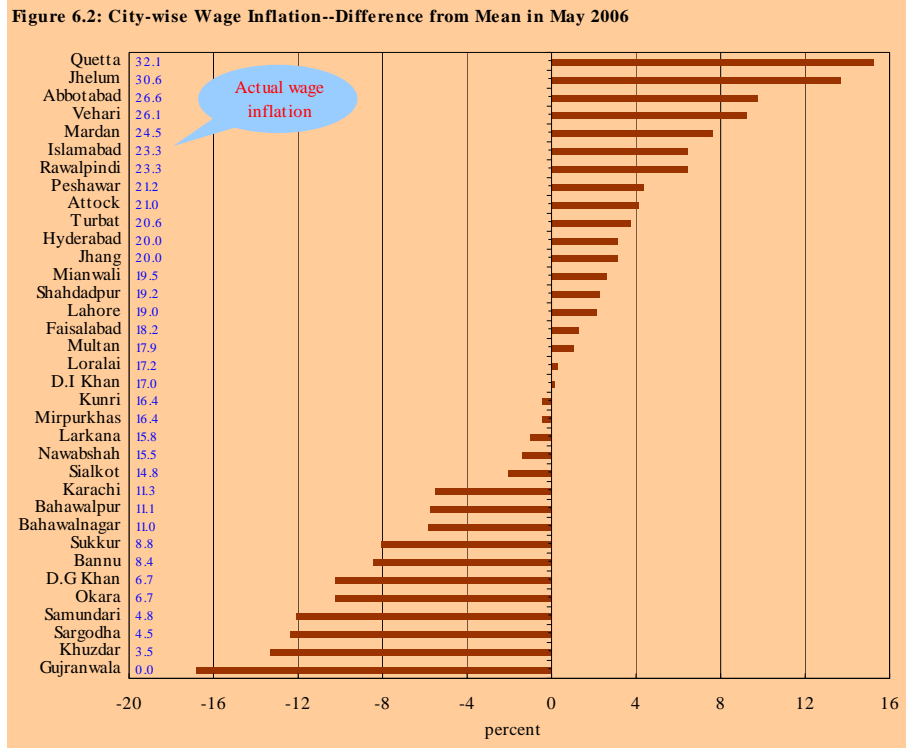
After slightly easing and remaining stable for the last two months, wage inflation witnessed an increase during May 2006. The average wage of the five construction workers rose by 16.9 percent during the month up from 14.2 percent in the previous month. It was also significantly higher compared to 10.6 percent increase recorded during the same month last year. This increase in overall wage inflation was contributed by higher wages of both the skilled and unskilled workers (see **Figure 6.1**). Within the skilled workers, all the four categories showed increase in wages during May 2006 (see **Table 6.1**)



	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06
<b>Overall</b>	<b>11.6</b>	<b>14.4</b>	<b>16.7</b>	<b>16.5</b>	<b>15.9</b>	<b>16.0</b>	<b>15.5</b>	<b>15.6</b>	<b>14.6</b>	<b>14.6</b>	<b>16.9</b>
Carpenter	12.3	14.1	16.1	16.9	16.3	16.9	14.7	15.8	14.4	14.9	14.6
Mason	11.3	15.8	19.7	17.6	17.2	18.0	18.2	17.2	16.0	16.4	17.2
Laborer	16.7	18.3	22.6	20.1	19.5	19.5	19.6	19.3	19.0	18.6	19.9
Plumber	12.6	14.6	16.9	17.2	15.8	16.0	16.4	17.0	15.1	13.9	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

City-wise variations in average daily wages from country average are shown in **Figure 6.2**. Average daily wages by type of construction workers are given in **Table 6.2**.





<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 (Jul-May)	281.8	303.8	153.7	281.9	267.2	257.7
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

**ANNEXURES**



## Annexure A

	Weights	May-02	May-03	May-04	May-05	May-06
<b>I. Food Group</b>	<b>40.3</b>	<b>3.4</b>	<b>2.6</b>	<b>10.0</b>	<b>12.5</b>	<b>5.6</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>4.3</b>	<b>2.6</b>	<b>5.1</b>	<b>8.0</b>	<b>8.2</b>
Apparel, Text.	6.1	3.4	4.3	0.7	5.3	3.5
House Rent	23.4	2.2	0.9	7.6	12.0	8.3
Fuel & Lighting	7.3	7.3	5.7	1.7	4.6	12.3
H/h Furn. & Equip.	3.3	3.6	3.2	5.0	5.5	5.6
Transport & Com.	7.3	4.9	1.0	8.1	11.1	13.0
Recreation, Enter.	0.8	5.5	0.5	-1.1	-0.1	-0.2
Education	3.5	5.3	5.1	2.7	4.0	7.2
Cleaning & Laundry	5.9	3.2	4.9	4.6	2.6	4.9
Medicines	2.1	4.7	0.4	1.7	0.8	3.9
<b>Headline</b>	<b>100</b>	<b>3.9</b>	<b>2.6</b>	<b>7.0</b>	<b>9.8</b>	<b>7.1</b>

Groups	Weights	% 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>40.3</b>	<b>5.6</b>	<b>110</b>	<b>29</b>	<b>28</b>	<b>22</b>	<b>31</b>
<b>II. Non-Food Group</b>	<b>59.7</b>	<b>8.2</b>	<b>250</b>	<b>80</b>	<b>87</b>	<b>49</b>	<b>34</b>
Apparel, Text.	6.1	3.5	42	7	23	10	2
House Rent	23.4	8.3	1	0	0	1	0
Fuel & Lighting	7.3	12.3	15	7	1	1	6
H/h Furn. & Equip.	3.3	5.6	44	2	27	15	0
Transport & Com.	7.3	13.0	43	13	5	8	17
Recreation, Enter.	0.8	-0.2	16	12	2	2	0
Education	3.5	7.2	24	5	9	5	5
Cleaning & Laundry	5.9	4.9	36	13	15	4	4
Medicines	2.1	3.9	29	21	5	3	0
<b>Overall</b>	<b>100</b>	<b>7.1</b>	<b>360</b>	<b>109</b>	<b>115</b>	<b>71</b>	<b>65</b>

Note: Prices of 14 seasonal items were not reported during May 2006.

Table A3: Distribution of Price Changes - Selected CPI Items, May 2006				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
<b>Food Group</b>	Onion, Muskmelon (Kharbooza) Kinnu Eggs farm Chicken farm broiler (live)	Cardamom large loose av. qty Bread tandoori st. size Curry powd. national 200 gm, Pickles Ahmed/Mitchelles Bread plain medium size	Cooked beef (av. hotel) Tinda Dates av. qty. Curd Milk powder Loose/packed	Pulse gram Gur av. qty Gram whole yellow av. qty Pulse moong (washed), Pulse mash (washed)
<b>Apparel &amp; Textile</b>	Boot polish Cherry/kiwi 50ml Gents shoes paul Bata Gents Sandal Bata	Tailoring coat-pant suit Tailoring awami-suit (male) Tropical suiting law. pur	Tailoring suit female Tailoring shirt Second-hand coat for men	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 Match box small Elect. charges up to 50 units	Tube light Philips 40 watts	Gas chrg up to 3.3719 mmbtu	Kerosene oil Firewood whole Gas cylinder stand. size
<b>H/hold Furniture</b>	Refg. Dawlence 10 cft. Sewing machine(Singer)	D-freezer waves 8 cft. Almirah (steel) 6'x3' 20 gua, Presure cooker 4 ltr.	Household servant Female P/T Mattress single (4"thick); Sofa set wooden with foam seat	
<b>Transport &amp; Comm.</b>	Internet charges Motorcycle Honda cd-70., Car Suzuki 800 Cc (W/O. A/C), Motorcycle Yamaha 100cc.	Train fare A/C slp. 1-100km., Car service charges, Bus fare outside city , Bicycle with tyres & tubes	A/C bus fare outside City; Suzuki fare min. with in city; Full tonga charges; Tyre motor cycle without tub	Train fare eco. 1-100 km.; High speed diesel; Train fare eco. > 500 km. Train fare eco. 101-500 km.
<b>Recreation</b>	Video game sega 16 byte; V.C.P.; Panasonic/LG/Nat Vid. cassette blk. Tdk/Sony	Tape recorder cassette blan; Dry cell 1.5 volt(local)	Cinema non-A/C high class; Cinema A/C. highest class	
<b>Education</b>	Comp. with printer & speaker; Pen Ink dollor 57 ml bottle; Govt. college fee Ist. year	Maths book class IX or X; Exercise. book lined 80/100 P; Paper foolscap (27"X17")	Urdu book; Ist.year/inter English book class VI School fee secondary eng. med.	English book class IX or X; Govt. university fee misc. Maths book Ist. year (T.B.B)
<b>Cleaning &amp; Laundry</b>	Toilet soap lux 95 grams; Toilet paper roll (R. petal) Robin blue (35 grams) Shaving cream touch-me/adm.	Shampoo Plain Medora 200 Ml.; Blade Treet Ordinary 10's Washing Soap Nyl(135-160gms) Artificial Jewellery Set	Beauty Porl Hair Styl Charge; Washing Powder 1000 Grm Haircut Charges For Men; Dry Cleaning Suit Coat Pant	Washing ch. (Kamiz-shalwar) Washing ch. shirt Gold tezabi 24 Ct Silver tezabi 24 Ct
<b>Medicare</b>	Panadol tab. extra/plain Daonil tab; Entox tab.	Ventolin tab;Flagyl tab; Thermometer China	Galxos-D; Jouhar Joshanda; Doctor (Mbbs) clinic fee	

Table A4: Top Ten CPI Items (Ranked by Inflation Contribution)								
Items	Unit	Weights	Price May-06	Year-on-year change			Weighted Contribution	
				May-04	May-05	May-06		
<b>A. Ranked by Weighted Contribution</b>								
1	House rent index	Month	23.43	135.9	7.6	12.0	8.3	27.4
2	Sugar refined	Kg	1.95	36.6	-3.7	36.8	40.5	11.1
3	Milk fresh (unboiled)	Ltr	6.53	24.1	7.2	15.1	10.2	9.3
4	Gas cylinder stand. Size	Each	0.68	588.1	4.5	-5.3	69.6	6.7
5	Petrol super	Ltr	1.73	57.9	22.5	23.3	26.7	6.5
6	Beef with bone avg.qlty.	Kg	1.61	108.4	26.1	17.7	15.2	3.4
7	Gas chrg 10.1157 - 13.4876mmbtu	Mmbtu	0.93	352.8	2.0	15.5	22.2	2.9
8	Pulse gram	Kg	0.43	40.2	-5.0	11.9	43.8	2.6
9	Pulse mash (washed)	Kg	0.20	72.8	0.0	16.7	83.3	2.4
10	Train fare eco. > 500 km.	P/km	0.48	0.5	10.0	15.2	34.2	2.3
<b>Total</b>			<b>38.0</b>					<b>74.5</b>
<b>B. Ranked by Percentage Change</b>								
1	Pulse mash (washed)	Kg	0.20	72.8	0.0	16.7	83.3	2.4
2	Silver tezabi 24 ct	10 gm	0.03	258.2	28.8	11.9	75.6	0.3
3	Pulse moong (washed)	Kg	0.22	62.4	-4.6	34.7	71.0	2.2
4	Gas cylinder stand. Size	Each	0.68	588.1	4.5	-5.3	69.6	6.7
5	Gold tezabi 24 ct	10 gm	0.20	13646.4	12.0	15.0	63.4	1.8
6	Gram whole yellow avg.qlty	Kg	0.15	63.8	6.0	28.5	45.1	0.9
7	Gur avg.qlty	Kg	0.07	38.7	-3.9	46.8	44.6	0.5
8	Pulse gram	Kg	0.43	40.2	-5.0	11.9	43.8	2.6
9	Sugar refined	Kg	1.95	36.6	-3.7	36.8	40.5	11.1
10	Chilies green	Kg	0.14	33.4	12.8	-0.1	37.2	0.8
<b>Total</b>			<b>4.1</b>					<b>29.2</b>

Income		Upto Rs:3000			3001-5000			5001-12000			above 12000			combined		
#	Cities	General	Food	Non-Food	General	Food	Non-Food	General	Food	Non-Food	General	Food	Non-Food	General	Food	Non-Food
1	Lahore	8.6	7.4	9.5	8.1	6.0	9.6	7.8	5.2	9.7	8.1	4.4	10.9	8.0	4.9	10.2
2	Faisalabad	5.9	5.7	6.0	6.4	6.5	6.3	6.4	6.3	6.5	6.7	4.8	8.1	6.6	5.6	7.2
3	Rawalpindi	9.6	10.4	9.0	8.9	8.5	9.2	9.3	8.7	9.7	10.6	8.7	11.9	9.9	8.7	10.8
4	Multan	9.6	9.2	9.9	8.7	8.3	9.1	8.3	7.4	8.9	8.5	6.8	9.7	8.4	7.4	9.2
5	Gujranwala	7.7	9.0	6.8	7.0	7.3	6.8	7.2	7.8	6.9	7.4	8.1	7.0	7.3	7.8	6.9
6	Islamabad	9.4	8.2	10.2	9.4	8.1	10.2	9.3	8.0	10.2	10.8	8.0	12.7	10.6	8.0	12.4
7	Sargodha	9.3	9.2	9.3	8.6	8.9	8.4	7.8	7.8	7.9	6.9	5.5	7.9	7.7	7.4	7.9
8	Sialkot	6.2	4.3	7.6	6.8	5.5	7.8	6.1	3.7	7.9	6.2	2.3	9.1	6.2	3.1	8.5
9	Bahawalpur	7.1	5.2	8.4	7.4	5.3	8.9	7.3	5.3	8.8	7.0	3.7	9.5	7.2	4.9	8.9
10	Karachi	5.5	5.4	5.6	5.3	4.4	6.0	5.3	3.8	6.4	7.1	3.3	9.8	6.2	3.7	8.0
11	Hyderabad	5.5	5.1	5.7	5.1	4.5	5.6	4.9	4.1	5.6	5.4	3.4	6.7	5.1	4.0	5.9
12	Sukkur	5.7	5.6	5.9	5.5	4.7	6.0	5.6	5.0	6.0	5.4	3.7	6.5	5.5	4.7	6.1
13	Larkana	4.5	3.2	5.4	4.2	3.3	4.8	4.0	2.8	4.9	3.5	1.6	4.9	3.9	2.6	4.9
14	Peshawar	6.6	6.7	6.6	7.1	7.2	7.1	6.9	6.2	7.4	6.9	4.0	9.0	6.9	5.4	8.0
15	Bannu	10.3	11.0	9.8	9.6	9.5	9.7	9.0	8.3	9.6	8.0	6.0	9.5	9.0	8.1	9.5
16	Quetta	6.6	6.0	6.9	6.4	6.0	6.7	6.4	5.3	7.2	7.1	4.5	8.9	6.7	5.0	7.9
17	Khuzdar	8.0	9.7	6.8	7.5	8.5	6.8	6.6	7.7	5.9	7.5	7.7	7.4	7.1	8.1	6.3
<b>Average</b>		<b>7.4</b>	<b>7.1</b>	<b>7.6</b>	<b>7.2</b>	<b>6.6</b>	<b>7.6</b>	<b>7.0</b>	<b>6.1</b>	<b>7.6</b>	<b>7.2</b>	<b>5.1</b>	<b>8.8</b>	<b>7.2</b>	<b>5.8</b>	<b>8.1</b>
<b>Minimum</b>		<b>4.5</b>	<b>3.2</b>	<b>5.4</b>	<b>4.2</b>	<b>3.3</b>	<b>4.8</b>	<b>4.0</b>	<b>2.8</b>	<b>4.9</b>	<b>3.5</b>	<b>1.6</b>	<b>4.9</b>	<b>3.9</b>	<b>2.6</b>	<b>4.9</b>
<b>Median</b>		<b>7.1</b>	<b>6.7</b>	<b>6.9</b>	<b>7.1</b>	<b>6.5</b>	<b>7.1</b>	<b>6.9</b>	<b>6.2</b>	<b>7.4</b>	<b>7.1</b>	<b>4.5</b>	<b>9.0</b>	<b>7.1</b>	<b>5.4</b>	<b>8.0</b>
<b>Maximum</b>		<b>10.3</b>	<b>11.0</b>	<b>10.2</b>	<b>9.6</b>	<b>9.5</b>	<b>10.2</b>	<b>9.3</b>	<b>8.7</b>	<b>10.2</b>	<b>10.8</b>	<b>8.7</b>	<b>12.7</b>	<b>10.6</b>	<b>8.7</b>	<b>12.4</b>



<b>Table A6 : Income Group-wise Inflation (YoY)</b>											
	<b>Jul-05</b>	<b>Aug-05</b>	<b>Sep-05</b>	<b>Oct-05</b>	<b>Nov-05</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><i>Up to Rs. 3000</i></b>											
General	8.7	8.2	7.9	7.4	7.0	8.4	8.4	8.2	6.9	6.0	7.5
Food	9.5	8.4	7.8	6.3	5.6	8.5	8.5	8.2	6.2	4.5	7.2
Non-food	8.1	8.0	8.0	8.2	8.0	8.3	8.4	8.1	7.4	7.1	7.7
<b><i>Rs. 3001-5000</i></b>											
General	8.6	8.0	7.8	7.2	6.8	8.2	8.5	8.0	6.7	5.8	7.1
Food	9.3	8.0	7.4	5.9	5.2	8.2	8.3	7.8	5.7	4.0	6.5
Non-food	8.1	8.0	8.0	8.2	7.9	8.2	8.6	8.1	7.4	7.1	7.6
<b><i>Rs. 5000-12000</i></b>											
General	8.7	8.0	7.9	7.6	7.2	8.2	8.5	7.9	6.7	5.8	6.9
Food	9.5	7.8	7.5	6.2	5.6	8.1	8.2	7.6	5.5	3.8	5.9
Non-food	8.2	8.1	8.3	8.6	8.3	8.2	8.8	8.1	7.6	7.3	7.6
<b><i>Above Rs. 12000</i></b>											
General	9.3	8.8	9.3	9.2	8.9	8.9	9.0	8.2	7.1	6.5	7.3
Food	10.2	7.8	7.6	6.9	6.5	8.1	8.1	7.2	5.1	3.2	4.8
Non-food	8.7	9.6	10.4	10.8	10.6	9.5	9.6	8.8	8.5	9.0	9.2
<b><i>All income groups</i></b>											
General	9.0	8.4	8.5	8.3	7.9	8.5	8.8	8.0	6.9	6.2	7.1
Food	9.7	7.8	7.5	6.4	5.8	8.1	8.2	7.5	5.4	3.6	5.6
Non-food	8.5	8.8	9.3	9.6	9.4	8.8	9.2	8.4	8.0	8.0	8.2

<b>Table A7: Distribution of Wholesale Price Changes (YoY), May 2006</b>				
<b>Groups</b>	<b>Decrease or no change</b>	<b>Subdued increase (up to 5%)</b>	<b>Moderate increase (5 to 10%)</b>	<b>More than 10% increase</b>
<b>Food</b>	Eggs, Onions, Bajra Tomatoes, Chicken Fish, Maize, Fresh fruits Masoor, Jowar, Rice Cotton seed oil Cooking oil, Dry fruits Wheat flour Mustard & rapeseed oil Sugar confectionary Vegetable ghee	Spices Maida Condiments Wheat Vegetables Prepared/preserved Tea Milk food	Powdered milk Fruit Prepared/preserved Mineral water Vegetables Beverages Fresh milk, Salt	Oil cakes Meat, Beans Potatoes Gram whole Besan, Gur Sugar refined Gram split Moong, Mash
<b>Raw material</b>	Skins Hides	Cotton seeds Mustard/rapeseeds Pig iron	Cotton	Tobacco Wool Sugarcane
<b>Fuel &amp; lighting</b>	Coke, Mobil oil Electricity ind. supply tariff-B Elec. agriculture tariff-D	-	-	Coal, Fire wood Natural gas Kerosene oil Motor sprit Diesel oil Furnace oil
<b>Manufactures</b>	Nylon Yarn Blended Yarn Chemicals Other Electrical Goods Utensils Glass Products Soaps Chrome Leather Matches	Drugs & medicines Plastic products Silk & rayon Textiles, Foot wear Hosiery, Tyre Cotton textiles Woolen textiles Ready made garments Dying materials Machinery Mattresses, Tubes Transports Sole leather	Paper Pesticides & insecticides Audio-visual instruments Cotton yarn Jute manufactures Cosmetics Fertilizers Cigarettes	Wires & cables
<b>Building material</b>	Iron bars & sheets Paints & varnishes	Tiles Glass sheets Pipe fittings Bricks Timber Sanitary wares Cement blocks	-	Cement

	Items	Unit	Price as in May-2006	Percentage change in May-06 over		
				Jun-05	May-05	Apr-06
1	Wheat	Kg.	11.13	-1.6	0.3	-2.8
2	Wheat flour average quality	Kg.	12.92	-0.5	-0.2	-2.0
3	Rice basmati broken	Kg.	20.22	-1.5	-2.0	-0.2
4	Rice irri-6	Kg.	16.09	-0.2	0.2	-0.1
5	Masoor pulse washed	Kg.	45.58	-0.9	-0.8	2.4
6	Moong pulse washed	Kg.	62.77	61.6	69.4	4.4
7	Mash pulse washed	Kg.	73.5	77.9	79.9	7.5
8	Gram pulse washed	Kg.	40.4	45.4	43.9	14.8
9	Beef	Kg.	114.03	12.7	14.3	0.5
10	Mutton	Kg.	216.66	12.7	13.3	1.3
11	Egg hen (farm)	Doz.	21.95	-31.6	-32.2	-4.7
12	Bread plain m.s.	Each	14.47	4.7	4.7	0.3
13	Sugar	Kg.	36.32	37.3	38.9	-1.2
14	Gur	Kg.	39.74	30.4	42.5	7.3
15	Milk fresh	Litr	25.01	8.3	10.5	2.8
16	Milk powdered Nido	400g	111.01	4.9	7.2	0.3
17	Curd	Kg.	29.64	7.4	10.5	2.3
18	Vegetable ghee tin	2.5k	203.51	-0.3	0.0	0.0
19	Vegetable ghee loose	Kg.	59.26	0.8	0.7	0.3
20	Mustard oil	Kg.	67.12	2.3	2.2	0.3
21	Cooking oil	2.5l	204.36	-0.2	-0.3	0.0
22	Potatoes	Kg.	19.44	9.0	14.2	-0.6
23	Onions	Kg.	10.48	-10.7	-30.4	-15.1
24	Tomatoes	Kg.	13.13	-29.8	-10.4	-25.3
25	Bananas	Doz.	33.32	2.7	16.4	16.3
26	Salt powdered	Kg.	4.33	18.0	21.6	5.6
27	Red chillies (powder)	Kg.	68.95	-7.2	-7.1	1.4
28	Garlic	Kg.	63.03	17.9	21.3	2.3
29	Tea packet	250g	65.27	5.4	5.3	0.9
30	Tea (prepared)	Cup	6.06	11.6	13.1	0.7
31	Cooked beef plate	Each	27.4	8.9	9.6	2.7
32	Cooked dal plate	Each	16.71	11.2	12.0	2.5

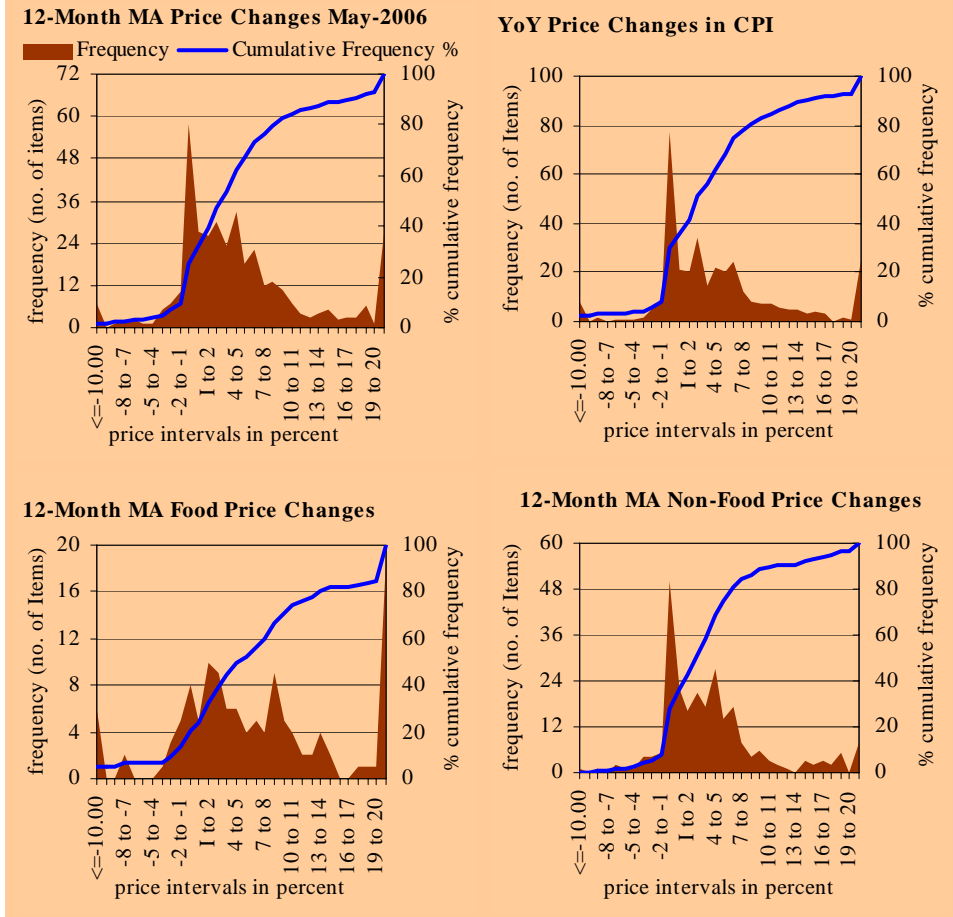
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*Inflation Monitor, May 2006*

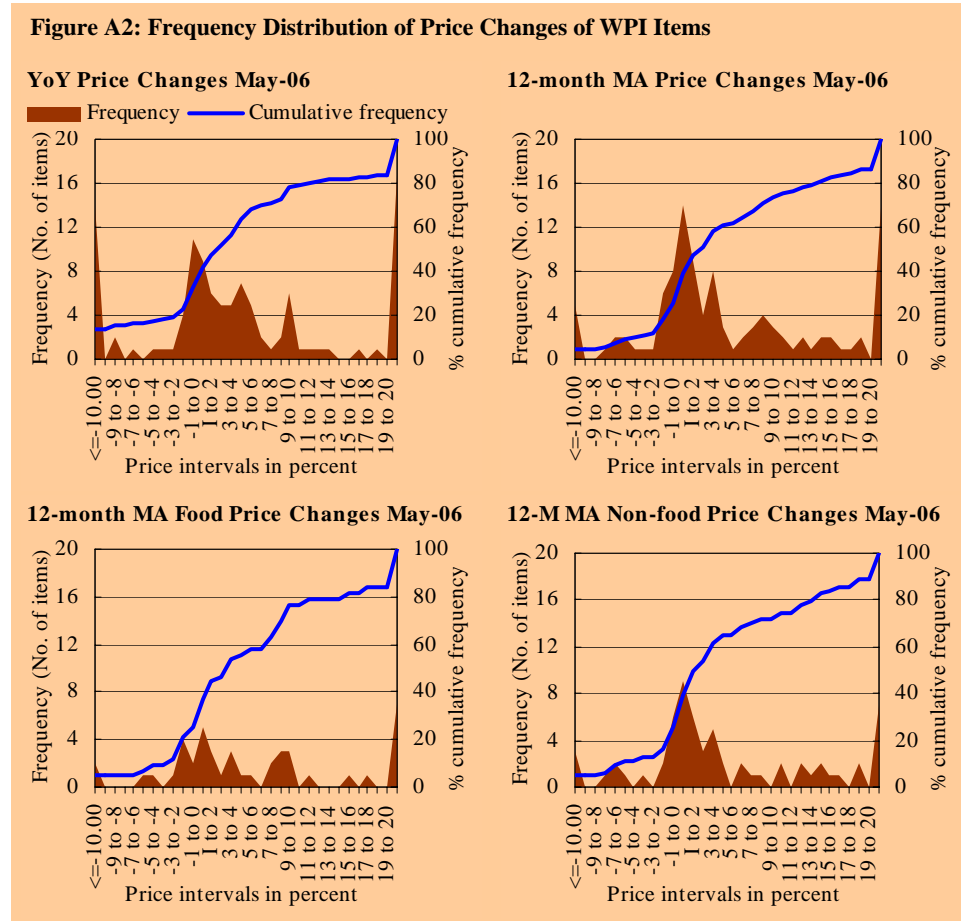
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	Items	Unit	Price as in May-2006	Percentage change in May-06 over		
				Jun-05	May-05	Apr-06
33	Cigarettes k-2	10's	7.1	-0.7	3.1	0.0
34	Coarse latha	Mtr.	34.8	4.4	5.2	0.8
35	Lawn (avg.+s.qlty)	Mtr.	80.1	5.4	6.5	2.5
36	Voil printed	Mtr.	37.8	2.6	2.7	2.5
37	Shirting	Mtr.	63.4	3.7	4.0	0.8
38	Sandal gents Bata	Pair	399.0	-4.8	-20.0	0.0
39	Sandal ladies Bata	Pair	299.0	3.5	20.1	0.0
40	Chappal spng. Bata	Pair	89.0	0.0	0.0	0.0
41	Kerosene	Litr	39.1	24.6	24.6	7.0
42	Firewood	40kg	181.6	24.7	25.4	1.1
43	Elec. Bulb 60-wats	Each	11.3	-2.3	-2.3	-0.1
44	Match box	Each	0.6	6.8	8.6	1.6
45	Washing soap	Cake	7.9	3.8	4.1	0.5
46	Bath soap lifebuoy	Cake	13.9	-0.1	-0.4	0.0
47	Chicken (farm)	Kg.	53.6	-26.1	-30.0	-3.9
48	Gas chrg. All clb. Comb	D.mmbt	93.1	9.5	9.5	0.0
49	L.p.g (cylinder 11kg.)	Each	548.0	61.2	60.9	27.4
50	Elec.chrg.all slabs com	Bd. Unit	2.4	0.0	0.0	0.0
51	Petrol	Litr	57.8	26.7	26.7	2.5
52	Diesel	Litr	38.9	33.1	33.1	4.2
53	Telephone local	Call	2.3	0.0	0.0	0.0
<b>Max:</b>				<b>77.9</b>	<b>79.9</b>	<b>27.4</b>
<b>Median</b>				<b>4.4</b>	<b>5.3</b>	<b>0.5</b>
<b>Min:</b>				<b>-31.6</b>	<b>-32.2</b>	<b>-25.3</b>

**Figure A1: Frequency Distribution of Price Changes of CPI Items**



**Figure A2: Frequency Distribution of Price Changes of WPI Items**



## 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. 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.