

Inflation Monitor

March 2011



State Bank of Pakistan

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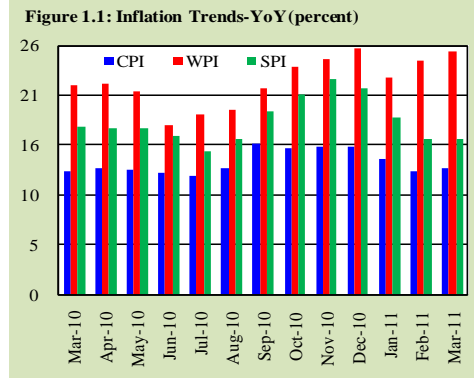
1. Overview

Inflationary pressures strengthened during March 2011, as reflected by all price indices (see **Figure 1.1**).

Consumer price index (CPI) inflation rose to 13.2 percent on YoY basis in the month under review after easing a little during the last three months (December-February FY11).

Wholesale price index (WPI) inflation also jumped to 25.4 percent (YoY) in March 2011 from 24.4 percent in the preceding month. Similarly, SPI

inflation (YoY) also increased slightly from 16.2 percent in the previous month to 16.3 percent. Several factors contributed to the resurgence in inflation during March 2011, such as passing on the impact of rising international oil prices to the domestic consumers, and upward adjustment in electricity tariffs.



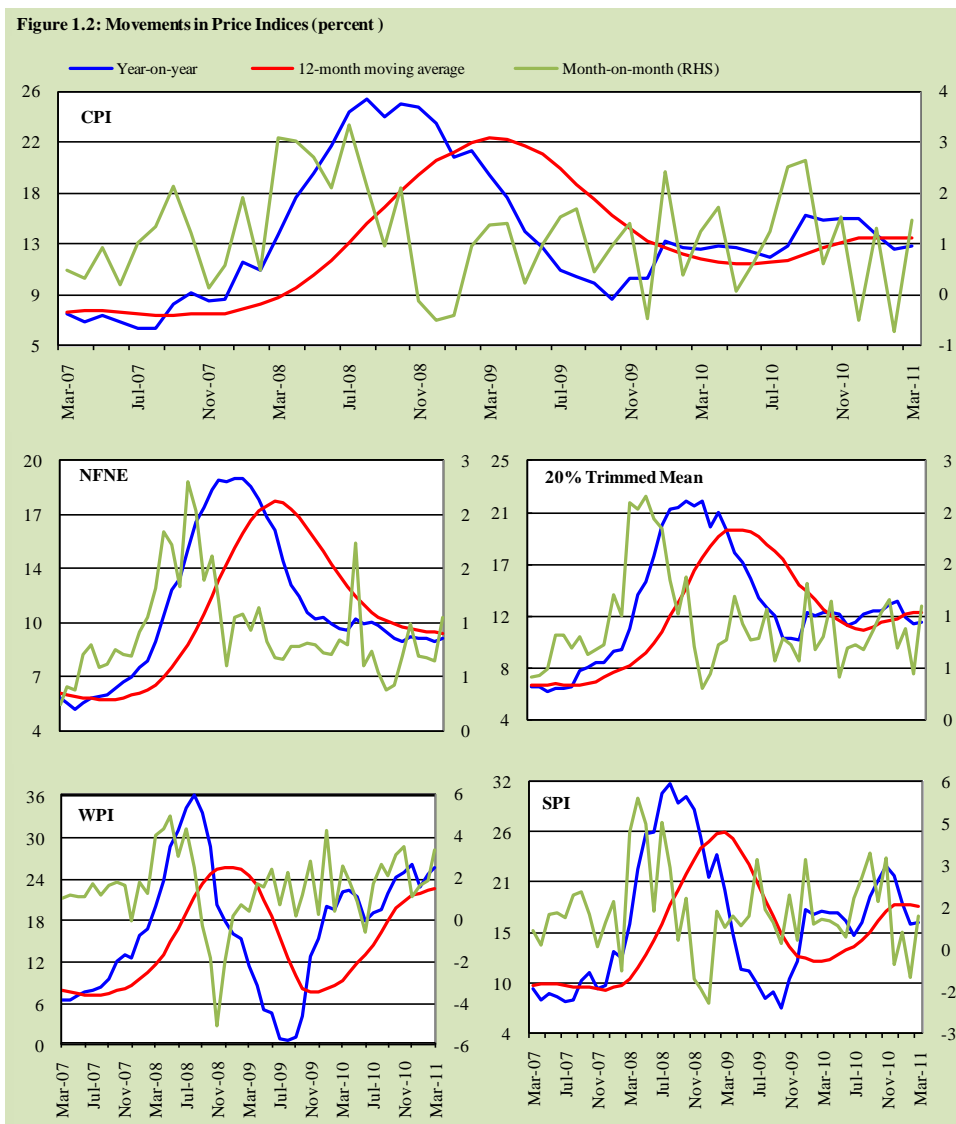
Like headline inflation, core inflation also trended upward during the month.

Core inflation (YoY) measured by 20% trimmed mean increased by 0.2 percentage points during March 2011 as against 0.5 percent decrease in the previous month. Similarly, NFNE (another core inflation measure) soared by 0.3 percentage points during the month as against a decline of 0.2 percentage points in the preceding month (see **Table 1.1** and **Figure 1.2**).

Table 1.1: Inflation Trends (percent)

	CPI						Core Inflation				WPI		SPI**	
	General		Food		Non-food		NFNE*		Trimmed		YoY	MoM	YoY	MoM
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM				
Mar-10	12.9	1.3	14.5	1.8	11.6	0.8	9.9	0.8	12.7	0.8	21.8	2.5	17.6	1.1
Apr-10	13.3	1.7	14.5	2.0	12.2	1.5	10.6	1.7	12.7	1.1	22.0	1.8	17.4	1.0
May-10	13.1	0.1	14.8	0.0	11.7	0.1	10.3	0.6	12.5	0.4	21.2	0.9	17.4	0.8
Jun-10	12.7	0.6	14.5	0.7	11.2	0.6	10.4	0.7	11.7	0.7	17.6	-0.6	16.5	0.4
Jul-10	12.3	1.2	12.8	1.5	12.0	1.0	10.3	0.5	12.0	0.7	18.7	1.7	14.9	1.8
Aug-10	13.2	2.5	15.6	5.1	11.2	0.3	9.8	0.4	12.5	0.7	19.2	2.6	16.2	2.6
Sep-10	15.7	2.7	21.2	5.3	11.0	0.3	9.4	0.4	12.8	0.9	21.5	2.1	19.1	3.5
Oct-10	15.3	0.6	20.1	0.1	11.3	1.1	9.3	0.7	12.8	1.0	23.8	3.1	20.9	1.7
Nov-10	15.5	1.5	20.5	2.2	11.1	0.9	9.5	1.0	13.4	1.2	24.7	3.5	22.5	3.3
Dec-10	15.5	-0.5	20.4	-1.9	11.4	0.8	9.5	0.7	13.6	0.7	25.7	1.1	21.5	-0.5
Jan-11	14.2	1.3	20.4	2.1	9.0	0.6	9.4	0.7	12.2	0.9	22.6	1.6	18.4	0.6
Feb-11	12.9	-0.7	17.7	-2.1	8.9	0.5	9.2	0.6	11.7	0.4	24.4	1.9	16.2	-1.0
Mar-11	13.2	1.5	18.0	2.0	9.1	1.0	9.5	1.0	11.9	1.1	25.4	3.3	16.3	1.2

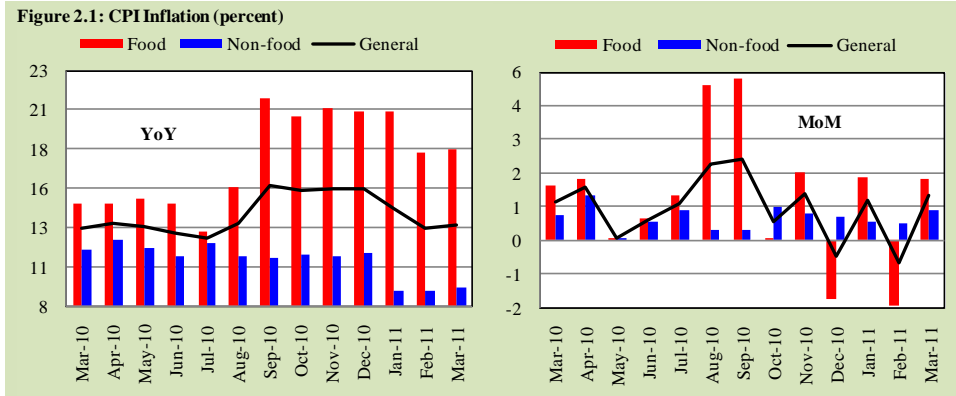
* NFNE is Non-food non-energy inflation; ** SPI for all income groups combined.



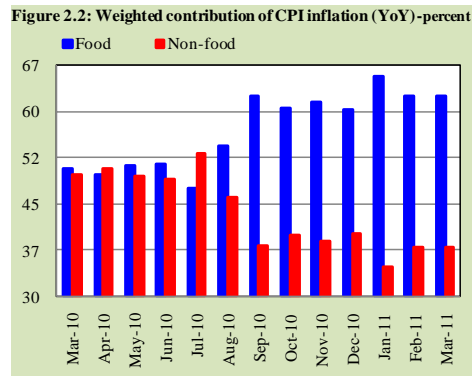
With the reverse in headline inflation in March 2011, after easing for three straight months, inflation diffusion (for overall CPI basket) also reversed from its declining trend commenced in November 2010. Similar reversal was also seen in inflation diffusion for food, beverages & tobacco; fuel & lighting; household furniture & Equipment; and cleaning, laundry & personal appearance groups during the month.

2. Consumer Price Index

CPI inflation on YoY basis was 13.2 percent during March 2011; 0.3 percentage points higher than in the last month. On MoM basis, CPI witnessed an inflation of 1.5 percent in March 2011 as against 0.7 percent deflation in February 2011. A



moderate increase in both food and non-food inflation (YoY) caused the uptick in headline inflation during the month (see **Figure 2.1**). On MoM basis, food prices increased during the month by 2.0 percent compared to a decline of 2.1 percent last month whereas non-food prices increased by 1.0 percent in March 2011, compared to 0.5 percent in February 2011.



With a slight but almost equal increase in CPI food and non-food inflation, the weighted contribution to overall CPI inflation (YoY) remained unchanged from the previous month at 62.1 percent and 37.9 percent respectively (see **Figure 2.2**). However, the share of food inflation in overall CPI inflation during the month was much higher when looked against the corresponding month last year. Resultantly, the (weighted) contribution of non-food inflation during March 2011 to overall inflation was (11.6 percentage points) less than what was experienced in March 2010.

2.1 Food Inflation

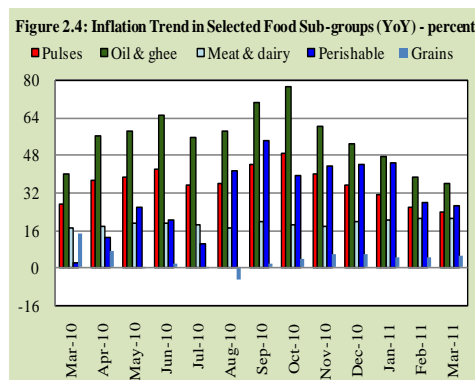
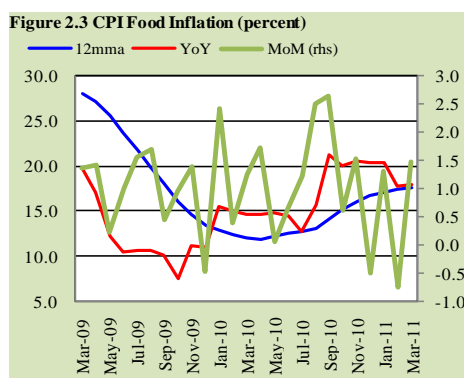
CPI food inflation on YoY basis increased slightly from 17.7 percent in February 2011 to 18.0 percent during March 2011. On MoM basis, food prices increased during the month by 2.0 percent compared to a decline of 2.1 percent last month (see **Figure 2.3**). Out of the top ten commodities contributing to overall CPI

inflation (YoY), eight¹ were from the food group, having a weighted contribution of 45.2 percent in overall inflation. Of these eight items, three² alone contributed 46.7 percent to CPI food (YoY) inflation (see **Table A3** in **Annexure A**).

Detailed item-wise analysis of (YoY) price changes show that in food group prices of 4.7 percent items declined or remained unchanged in March 2011

(compared to 18.7 percent in March 2010), 12.1 percent items registered subdued inflation upto 5 percent (14.0 percent in the same month of last year), moderate inflation- from 5 to 10 percent - observed in 11.2 percent commodities (14.0 percent in corresponding month of preceding year), and double digit inflation (over 10 percent) witnessed in 72.0 percent goods in March 2011 (compared to 53.3 percent in the same period of previous year).

Both perishable³ and non-perishable categories witnessed inflation during March 2011 over the last month. On MoM basis perishable sub-group recorded 5.5 percent inflation in the month under review as against 16.3 percent deflation in the previous month. Recent inflation in this sub-group was attributed to hike in prices of all items except onions. Onion prices were on slide on the back of the improved domestic supply as government banned its export to Afghanistan. As far the inflation of non-perishable group is concerned, it increased further both on YoY and MoM basis in March 2011. Non-perishable food items witnessed 16.8 percent inflation (YoY) during the month, slightly higher than last month inflation. Similarly, non-perishable commodities of food group registered 1.5 percent inflation (MoM) in the month under review compared to 0.2 percent inflation in the previous month (see **Figure 2.4**).



¹ These commodities were fresh milk, vegetable ghee, meat, fresh fruits, vegetables, readymade

² Fresh milk, meat, and vegetable ghee.

³ Perishable items are onions, tomatoes, potatoes, all vegetables and all fruits in CPI food basket having weight of 5.14 percent in overall CPI basket and 13.74 percent in CPI food basket.

Prices of pulses sub-group decelerated to 23.9 percent on YoY basis in March 2011; lowest since March 2010. The decline mainly came from improved supply on account of 90.0 percent rise in pulses import during the first nine month of current fiscal year compared to 8.0 percent import growth in the same period last year.

2.2 Non-food Inflation

CPI non-food inflation (YoY) was 9.1 percent in March 2011; lower than 8.9 percent observed in February 2011 but higher than 11.6 percent witnessed in the corresponding month of the last year (see **Figure 2.5**).

After decelerating in the preceding two months, YoY non-food inflation reversed during March 2011 on account of significant jump (3.2 percentage points) in inflation in the prices of laundry & personal appearance related items compared to the previous month inflation (see **Figure 2.6**).

Figure 2.5: CPI Non-food Inflation (percent)

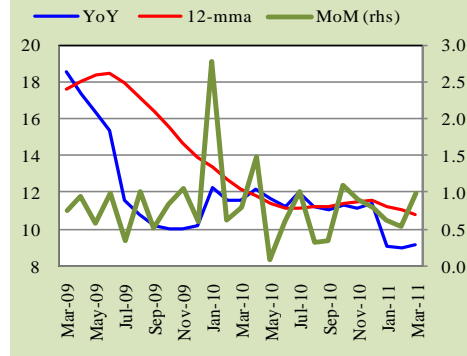
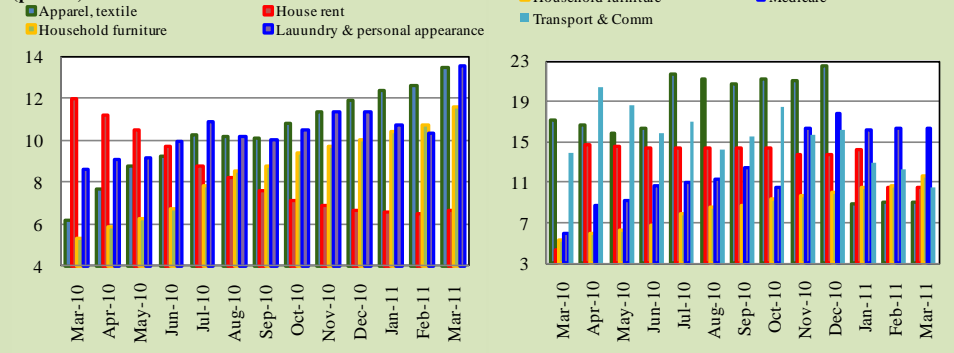


Figure 2.6: Inflation in Selected CPI Non-food Sub-groups (percent)



House rent inflation marginally increased from 6.5 percent in February 2011 to 6.6 percent during March 2011. However, it is likely that increasing trend in HRI will continue in months ahead due to rising building material prices in the international as well as domestic market.

2.3 Inflation Diffusion

With inflation in the prices of some commodities reached beyond the levels observed during price hike of 2008, it is important to look at how widespread inflation is in different commodities in the CPI basket. For this purpose we can

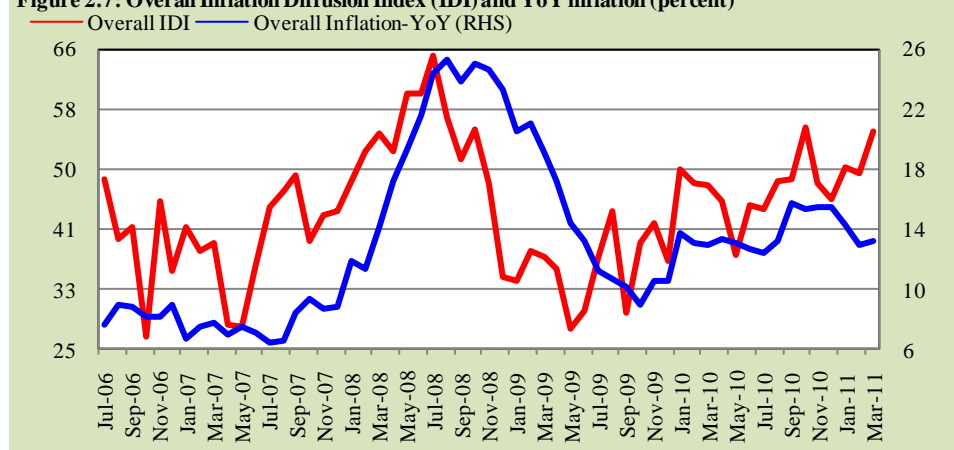
use inflation diffusion index (IDI), which is based on MoM change in the prices of commodities⁴.

Table 2.1: Inflation Diffusion Index - based on MoM change (percent)

	General	Food Beverages & Tobacco	Apparel, Textile & Footwear	Fuel & Lighting	Household Furniture & Equipment	Transport & Communi- cation	Recreation & Entertainment	Education	Cleaning, Laundry & Personal Appearance	Medicare	NFNE*
Feb-10	47.77	53.70	64.29	13.33	79.55	37.21	18.75	29.17	52.78	10.34	48.71
Mar-10	47.34	45.79	73.81	13.33	86.36	44.19	31.25	29.17	38.89	10.34	50.00
Apr-10	45.35	40.00	52.38	6.67	90.91	41.86	31.25	33.33	61.11	6.90	50.00
May-10	37.96	23.30	64.29	-6.67	84.09	13.95	43.75	33.33	61.11	10.34	48.28
Jun-10	44.57	43.12	69.05	26.67	75.00	37.21	-18.75	20.83	58.33	24.14	48.28
Jul-10	44.17	45.45	59.52	40.00	88.64	30.23	-6.25	12.50	55.56	10.34	44.40
Aug-10	47.91	69.72	61.90	26.67	90.91	30.23	18.75	12.50	13.89	3.45	39.22
Sep-10	48.33	61.82	69.05	20.00	88.64	20.93	0.00	20.83	38.89	20.69	45.26
Oct-10	55.25	52.68	80.95	73.33	93.18	44.19	25.00	16.67	61.11	17.24	54.74
Nov-10	47.65	42.34	76.19	20.00	95.45	30.23	18.75	29.17	58.33	10.34	52.16
Dec-10	45.53	38.89	80.95	53.33	93.18	27.91	12.50	0.00	52.78	13.79	48.71
Jan-11	49.86	61.47	78.57	20.00	84.09	30.23	31.25	25.00	27.78	13.79	46.98
Feb-11	48.88	43.52	78.57	20.00	86.36	53.49	31.25	16.67	44.44	17.24	53.88
Mar-11	54.75	62.04	78.57	40.00	88.64	32.56	18.75	25.00	66.67	10.34	52.12

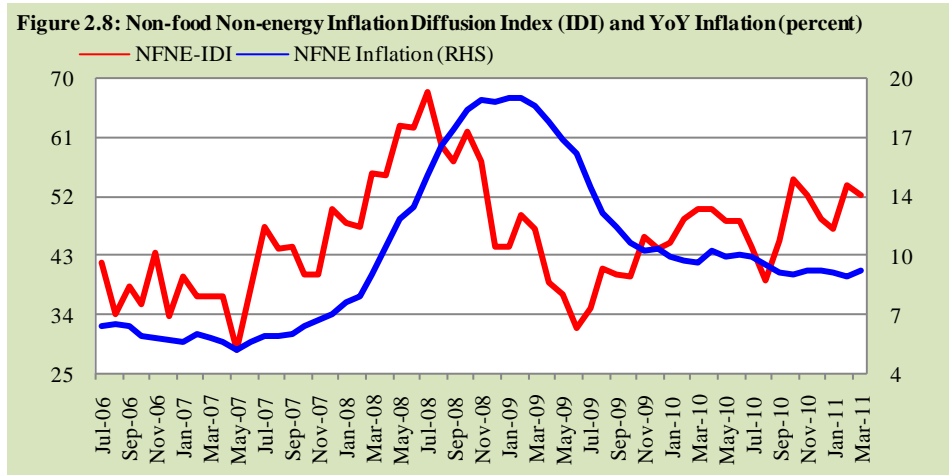
*: Non-food-non-energy

Figure 2.7: Overall Inflation Diffusion Index (IDI) and YoY inflation (percent)



The (upward) change in inflation diffusion index was much higher compared to the change in headline inflation during March 2011 (see **Table 2.1** and **Figure**

⁴ For details, see Appendix B



2.7). As reported in **Table 2.1**, the inflation diffusion index for non-food non-energy group declined (insignificantly) during March 2011 despite acceleration in core inflation (see **Figure 2.8**). The diffusion indices of inflation for food & beverages; apparel, textile & footwear; fuel & lighting; household furniture & equipment groups (accounting for 57.02% of the basket) climbed further in March 2011 that were already at diffusion levels experienced in 2008 (see **Figure A4 of Appendix A**).

2.4 Income Group-wise Inflation

During the month, the first three income groups faced higher inflation than average inflation whereas the highest income group observed lower than average CPI inflation (YoY) (see **Table 2.2**). But the same group was hit most by food inflation during the month. Out of the four, (first) two of the income groups were

Table 2.2: Income Group-wise Inflation (YoY)-percent

	Mar-10			Feb-11			Mar-11		
	General	Food	Non-food	General	Food	Non-food	General	Food	Non-food
Up to Rs. 3000	13.8	16.0	11.1	14.2	17.5	10.0	14.6	17.6	10.6
Rs. 3001-5000	13.6	15.6	11.3	13.9	17.4	9.6	14.2	17.6	10.1
Rs. 5000-12000	13.1	14.9	11.4	13.3	17.6	8.9	13.4	17.8	9.0
Above Rs. 12000	12.5	13.6	11.9	12.4	18.0	8.9	12.7	18.4	9.2
All income groups	12.9	14.5	11.6	12.9	17.7	8.9	13.2	18.0	9.1

most affected by non-food inflation whereas the third income group was least affected by non-food inflation during the month.

2.5 City-wise Inflation

Four of the five major cities of the country observed lower than overall CPI (YoY) inflation in March 2011. Peshawar experienced higher than overall CPI

inflation. On MoM basis, two major cities (Lahore and Peshawar) observed higher than overall (MoM) inflation (see **Table 2.3**).

Twenty three out of 35 cities recorded higher inflation than overall inflation (YoY), while the remaining 12 cities registered lower than average inflation during March 2011. The highest inflation (YoY) was recorded in Bahawalnagar at 18.2 percent, while Lahore registered the lowest inflation (YoY) at 9.0 percent. The highest food inflation (YoY) was 23.1 percent in

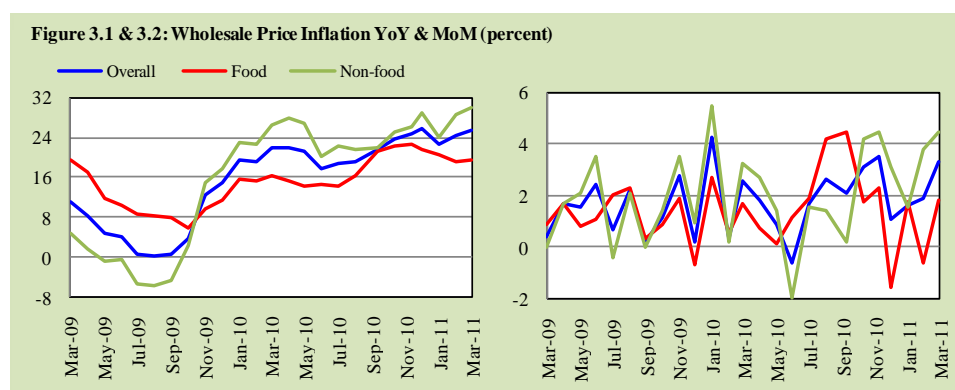
Kunri and lowest of 11.6 percent was in Lahore. Bahawalnagar registered the highest non-food inflation at 16.9 percent, while lowest non-food inflation of 4.6 percent was observed in Islamabad (see **Table A6 in Annexure A**).

Table 2.3: City-wise Inflation of Selected Cities (percent)

	Mar-10		Feb-11		Mar-11	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	1.3	12.9	-0.7	12.9	1.5	13.2
Islamabad	1.3	11.3	-0.7	10.5	1.5	11.3
Lahore	1.2	13.6	0.1	9.7	1.9	9.0
Karachi	1.7	12.6	-0.8	10.6	1.1	10.4
Quetta	1.4	11.4	-1.1	12.8	1.2	12.9
Peshawar	1.6	12.0	-1.9	13.7	1.7	13.7

3. Wholesale Price Index

WPI inflation (YoY) surged during March 2011, reaching 25.4 percent as against 24.4 percent in the previous month and 21.8 percent during the corresponding month last year. Both food and non-food components contributed to this increase; however, the contribution from non-food group was more pronounced. On month-on-month (MoM) basis WPI inflation was 3.3 percent during March 2011 compared to 1.9 percent in the previous month. As against YoY inflation, increase in WPI MoM inflation came from food group during March 2011 (see **Figure 3.1 & 3.2**).

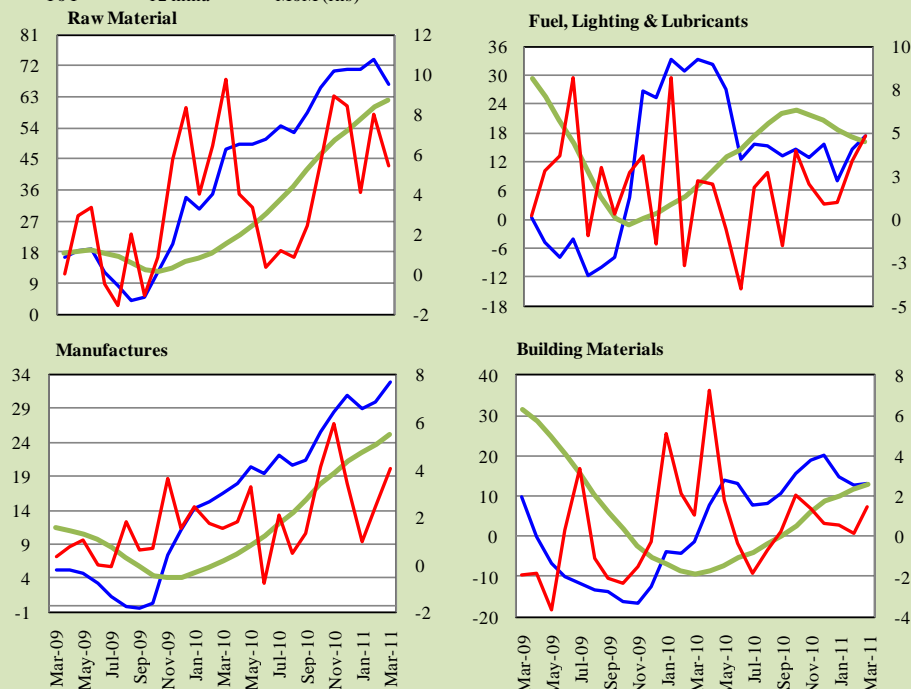


An item-wise analysis of WPI basket of 106 composite items shows that, prices (YoY) of 7 items either declined or remained unchanged, 12 items showed price change between 0 to 5 percent, 16 items recorded price change between 5 to 10 percent and remaining 71 items showed price change of more than 10 percent during March 2011. Major items recording significant price change (YoY) during March 2011 included tomatoes (197.1 percent), cotton (116.8 percent), cotton yarn (74.4 percent), pulse moong (63.0 percent) and maize (53.3 percent) (see **Table A9 in Annexure A**).

Out of all sub-groups of WPI non-food, *raw material* sub-group showed increase in inflation, both on YoY as well as MoM basis, during March 2011 compared to February 2011. Manufacturing sub-group showed higher change both on YoY and MoM basis during March 2011 compared to other sub-groups of WPI non-food group (see **Figure 3.3**).

Figure 3.3: WPI Non-food Inflation (percent)

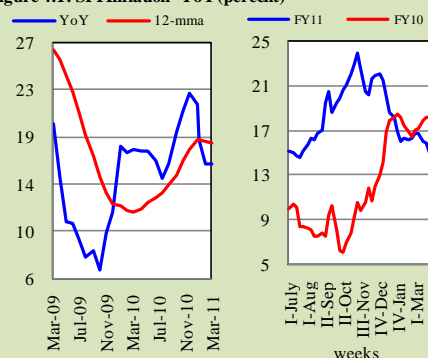
— YoY — 12 mma — MoM (rhs)



4. Sensitive Price Indicator

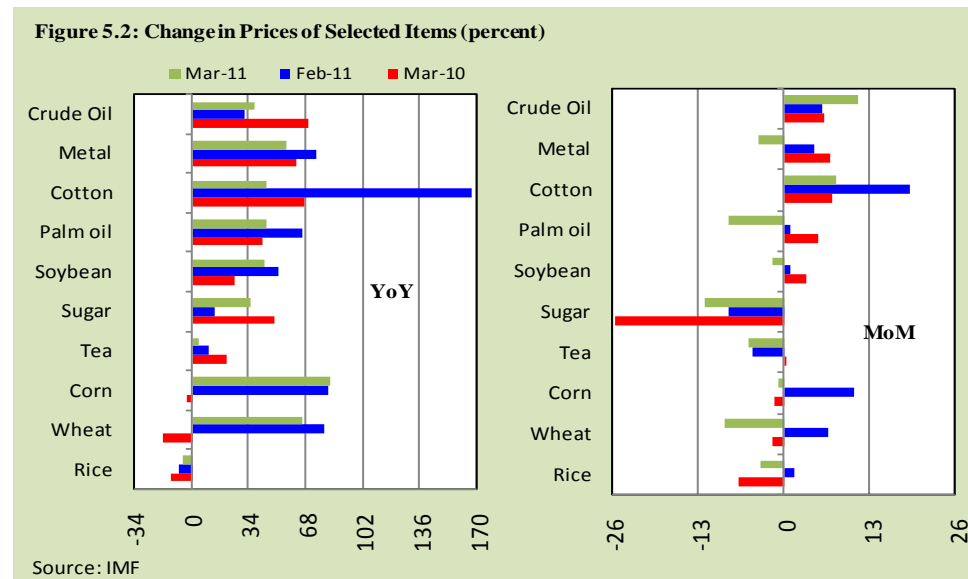
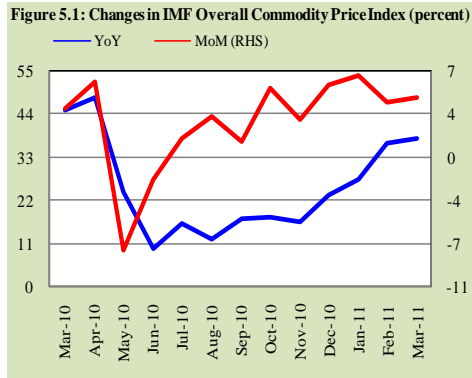
Inflation measured by Sensitive Price Indicator (SPI) marginally increased during March 2011 after a decline during December 2010 to February 2011. It registered 16.3 percent increase (YoY) during March 2011 compared to 16.2 percent rise in the previous month. Out of 53 items in SPI basket, prices of 5 items (compared to 10 items during March 2010) either declined or remained unchanged, while 37 items (compared to 28 items in March 2010) showed more than 10 percent change (see **Figures 4.1**).

Figure 4.1: SPI Inflation -YoY (percent)



5. Global Commodity Prices

Inflationary pressures gained further strength in global commodity markets as evident from the IMF (overall) commodity index which is on rising trend since November 2011. IMF commodity prices index surged by 38.0 percent on YoY basis in March 2011 compared to 36.8 percent rise in February 2011 (see **Figure 5.1**). The recent gains in world commodity prices were contributed by petroleum items, grains, and meat products.



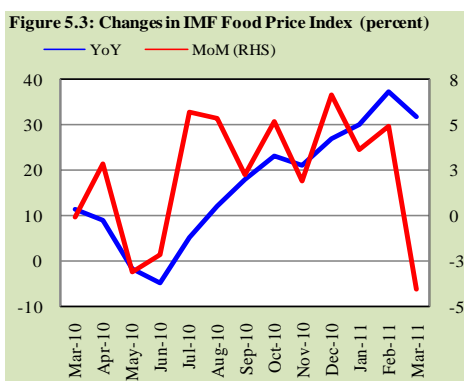
Earthquake and tsunami in Japan, political unrest in Libya and some other oil producing countries, and strong global demand on the back of economic recovery in US, European Union, Emerging Economies, and Russia were the main apparent factors responsible for upward movement in the global commodity prices.

Food commodity prices remained strong despite some ease observed in the prices of wheat, palm oil, and soybean oil (see **Figure 5.2**). In non-food group, a continuous rising trend was seen in fuel and agricultural raw material inputs sub-groups in recent months. Inflation (YoY) in these sub-groups reached the highest points after April 2010.

Food Group

Despite some ease, food inflation measured by IMF commodity food prices index⁵ remained strong in the month under review and reached 31.8 percent on YoY basis compared with 11.2 percent inflation in the corresponding month of preceding year. The ease came from a decline in food price index on MoM basis by 4.1 percent in March 2011 as against 4.9 percent increase in the previous

month. The MoM decline in food price index came after an increase for eight consecutive months (see **Figure 5.3**). The March 2011 fall was mainly driven by supply disruptions to major importers caused by political unrest in North Africa, Middle East, and natural dual disasters in Japan.



In international commodity market, sugar prices US cents per pound dropped to 25.9 in March 2011 compared with 29.4 in the previous month. This fall in sugar prices was attributed to better prospects of sugar production in India⁶, Switzerland, Thailand, Mexico, and Tanzania. Despite MoM easing in inflationary pressures, global wheat prices were still 65.8 percent higher on YoY basis in the reviewed month as against a deflation of 17.3 in the corresponding month last year. This was due to strong global demand and supply concerns. Global demand mainly came from China (the world biggest consumer), Egypt, and Saudi Arabia, which pushed the wheat prices up. Moreover, dry weather in Texas, Oklahoma, Kansas and Colorado, wet weather in the northern areas of US (hurt spring wheat acreage), too much moisture dampening fields in Canada, downward estimation in the European Union and Russian wheat crops, and in the diminishing global wheat inventories were contributing factors to rising wheat prices in March 2011.

Within the food groups, inflationary pressure further eased in vegetable oil in March 2011 over the last month. Palm oil prices per metric tons dipped by US\$ 106.3 to US\$ 1142.2 in the month under review. The decline in palm oil prices was due to ample stocks of cooking oil in India, prospects of bumper crop in South America and Malaysia, and increase in the existing stock of palm oil in Malaysia. Similarly, prices of soybean oil declined in March 2011; first dip

⁵ Food group composes of cereal, vegetable oils, meat, seafood, sugar, bananas, and oranges price indices.

⁶ The government of India has allowed 0.5 million tons sugar export.

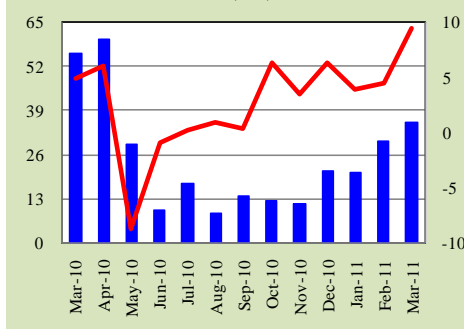
recorded since the start of current fiscal year. Soybean oil prices fell by 1.8 percent in the month under review as against 0.9 percent growth in the previous month. Better prospects of Brazil's 2011 soybean harvest at around 71.5 million tons from 68.6 million tons of soybeans harvested in 2010, upward revision in Argentina's 2011 soybean crop by 2.5 million tons from its previous estimates of 46.0 million tons after parched crops received rain, and upward revision in US soybean stocks were the probable factors for decline in the soybean prices in the month under review.

Non-food group

In case of non-food, continuous rising trends were seen in prices of energy and agricultural raw material sub-groups indices during the last eleven months. Energy prices index, which comprises of petroleum, gas and coal prices indices, soared both on YoY and MoM basis during March 2011. Due to significant MoM fuel inflation from 4.5 percent to 9.5 percent, YoY fuel commodity index climbed to 35.6

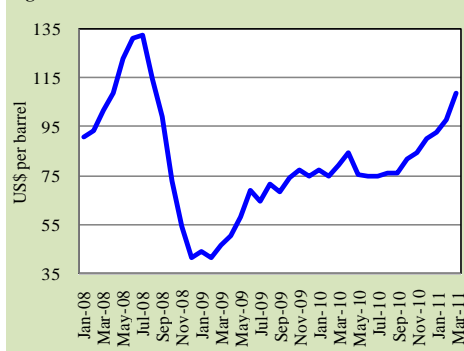
percent in the reviewed month compared to 29.9 percent rise in the preceding month (see **Figure 5.4**). This swell was mainly due to strong crude oil prices during the month under review.

Figure 5.4: Monthly Changes in Energy Prices Index (percent)



Within the energy sub-group, (average⁷) crude oil prices jumped up by US\$ 10.9 to US\$ 109.0 per barrel in March 2011; similar to the level observed in March 2008 (see **Figure 5.5**). This distend was due to strong demand and supply concerns regarding crude oil. There are bright future prospects of economic recovery in US on account of strengthening of US labor market for sixth successive monthly rise in payroll numbers (in March 2011). Higher job creation in US is expected to provide further impetus to US consumer spending, thus supporting the recovery.

Figure 5.5: Crude Oil Prices



⁷ Simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai Fateh, US\$ per barrel

Economic recovery in European Union, emerging economies, and Russia were apparent factors responsible for upward movement in the crude oil prices. International crude oil demand was further boosted by earthquake & tsunami in Japan as Japan shifted her electricity generation from atomic resources⁸ to fuel due to release of radiation from atomic reactors, acceleration in Brazil's industrial production, and shutdown of nuclear plants in Germany. As far as the supply side factors were concerned, conflict in Libya followed by Allied air strikes on Qaddafi's forces, as pro-Qaddafi forces retook control of the oil port of Ras Lanuf, political unrest in some of oil producing countries, and suspension of election in Nigeria were the main causes behind supply fears.

Agricultural raw material sub-group (comprising timber, cotton, wool, rubber, and hides) price index also accelerated during March 2011. In fact, it is on rising trend since July 2010. Agricultural raw material group recorded 45.4 percent inflation on YoY basis during March 2011, which was not only 6.4 percentage points higher than the inflation of last month but also 1.6 percentage points higher than March 2010 level. This is second highest ever YoY inflation in agricultural raw material sub-group since October 1987⁹. Recent YoY inflation in this sub-group is significantly higher than that observed in 2008 (see **Figure 5.6**). We fear this may lead to higher inflation in manufacturing sector in coming period. On MoM basis, this sub-group witnessed 6.9 percent inflation in reviewed month. This monthly inflation was contributed by all components of the sub-group except rubber, prices of which eased during the month.

Within the agricultural raw material group, global cotton prices reached another peak of US\$ 2.3 per pound in the month under review, which was 167.7 percent higher than the prices of March 2010 (See **Figure 5.7**). Cotton prices remained strong in March 2011 due to depletion in global inventories,

Figure 5.6: Changes in Agricultural Raw Material Index (percent)

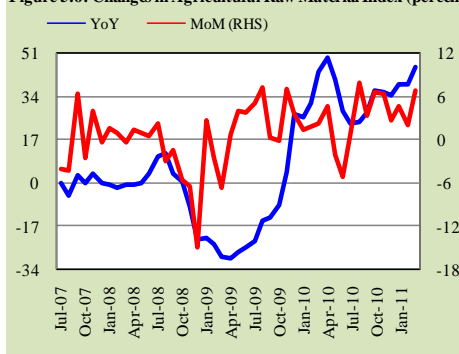
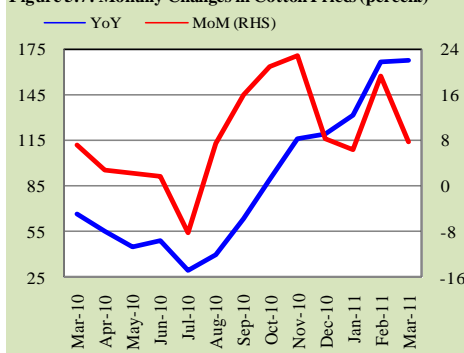


Figure 5.7: Monthly Changes in Cotton Prices (percent)



⁸ About twenty percent share in total electricity production of Japan.

⁹ The highest was observed in April 2010 at 49.3 percent.

soaring demand, and lower cotton production. World stock dropped to 42.33 million bales in the month under review, which was 0.5 million bales less than the stock of last month. The strong demand was evident from the 3.0 percent rise on YoY basis in the world consumption mainly from China. As far as the cotton production is concerned, Indian and China cotton production fell in the month under review.

Contrary to fuel and agricultural raw material sub-groups, metals sub-group prices eased in March 2011 following the four months gains. Inflation in metals group declined by 18.1 percentage points on YoY basis in reviewed month compared to a gain of 16.7 percent in the previous month. In metal group a deflation of 4.0 percent (MoM) was recorded in the month under review as against 4.4 percent inflation in the preceding month (see

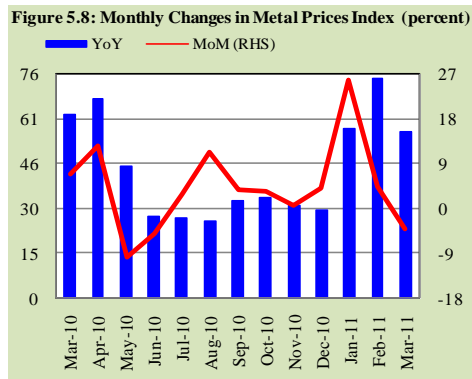


Figure 5.8). The deflation in March 2011 came after inflation in the eight months due to tightening of monetary policy in China, higher POL prices, and various macroeconomic concerns. The largest MoM decline was seen in iron ore, down 9.5 percent in March 2011 compared to 4.2 percent rise in the last month due to weak Chinese demand on account of the reluctance of Chinese steelmakers to rebuild inventory, and expected higher scrap supplies from Japan after the damages done by earthquake and tsunami in Japan. Per metric ton copper prices fell by US\$ 377.6 to US\$ 9503.4 in the month under review on the back of unrest in the Middle East, escalation in inflation concerns due to rising oil prices, and deceleration in manufacturing growth of China.

As far the precious metals prices, silver and gold prices continued to climb in March 2011. The prices of gold and silver soared by 3.7 percent and 16.5 percent in the month under study respectively compared to 1.2 percent and 8.1 percent growth in the corresponding month. The surge in precious metals' prices was due to weak US dollar, strong (investment) demand, high demand of jewellery from India and China, mounting European debt concerns, high oil prices, and inflation concerns.

Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weights	MoM change			YoY change		
		Mar-10	Feb-11	Mar-11	Mar-10	Feb-11	Mar-11
I. Food Group	40.3	1.8	-2.1	2.0	14.5	17.7	18.0
II. Non-Food Group	59.7	0.8	0.5	1.0	11.6	8.9	9.1
Apparel, textile, etc.	6.1	0.8	0.9	1.6	6.1	12.6	13.5
House rent	23.4	0.6	0.7	0.7	12.0	6.5	6.6
Fuel & lighting	7.3	-0.1	0.2	0.0	17.1	9.1	9.1
Household furniture & equipment	3.3	0.4	0.9	1.2	5.3	10.7	11.6
Transport & communication	7.3	3.4	0.5	1.7	14.0	12.3	10.5
Recreation & entertainment	0.8	0.1	0.1	0.1	4.3	10.5	10.5
Education	3.5	0.2	0.1	0.1	12.5	5.2	5.1
Cleaning, laundry, etc.	5.9	0.3	0.2	3.1	8.6	10.4	13.5
Medicare	2.1	0.2	0.5	0.2	6.0	16.3	16.3
Headline	100.0	1.3	-0.7	1.5	12.9	12.9	13.2

Table A2: Distribution of Price Changes of CPI Basket (YoY)											
Groups	% Change	Total Number of Items		No. of Items in each Inflation Range							
				Decrease or no change (0% or less)		Subdued increase (> 0% but < 5%)		Moderate increase (> 5% but < 10%)		Double digit increase (over 10%)	
		Mar-10	Mar-11	Mar-10	Mar-11	Mar-10	Mar-11	Mar-10	Mar-11	Mar-10	Mar-11
I. Food Group	18.0	107	107	20	5	15	13	15	12	57	77
II. Non-Food Group	9.1	250	250	57	49	62	38	62	54	69	109
Apparel, textile, etc.	13.5	42	42	6	5	8	1	21	10	7	26
House rent	6.6	1	1						1	1	
Fuel & lighting	9.1	15	15	1	2	0		0		14	9
Household furniture & equipt	11.6	44	44	1	1	20	2	18	16	5	25
Transport & communication	10.5	43	43	21	8	3	6	8	9	11	20
Recreation & entertainment	10.5	16	16	3	7	9	6	0	1	4	2
Education	5.1	24	24	2	8	6	9	4	6	12	1
Cleaning, laundry, etc.	13.5	36	36	8	5	9	4	10	10	9	17
Medicines	16.3	29	29	15	13	7	7	1		6	9
Overall	13.2	357	357	77	54	77	51	77	66	126	186
Note: Prices of 17 seasonal items were not reported during the month.											

Table A3: Top Ten Contributors to YoY CPI Inflation in March 2011

Table No. Top Ten Contributors to PPI Contribution in March 2011					
Items / Contributors		Weights	YoY change		Weighted Contribution
			Mar-10	Mar-11	
A. Ranked by Weighted Contribution					
1	Milk Fresh	6.66	15.33	20.91	11.88
2	House Rent Index	23.43	12.73	6.63	11.29
3	Vegetable Ghee	2.67	13.24	40.53	9.13
4	Meat	2.70	22.62	26.47	7.98
5	Fresh Fruits	1.62	5.72	32.00	4.21
6	Vegetables	1.76	33.73	26.71	4.07
7	Electricity	4.37	19.05	12.25	3.51
8	Readymade Food	1.68	13.59	19.48	2.88
9	Spices	0.60	11.39	54.96	2.68
10	Tomatoes	0.51	-40.86	136.39	2.37
Total		46.00			60.00
B. Ranked by Percentage Change					
1	Tomatoes	0.51	-40.86	136.39	2.37
2	Pulse Moong	0.22	86.05	61.11	1.38
3	Spices	0.60	11.39	54.96	2.68
4	Vegetable Ghee	2.67	13.24	40.53	9.13
5	Communication	1.93	2.12	37.17	2.31
6	Cooking Oil	0.69	0.64	35.98	1.89
7	Fresh Fruits	1.62	5.72	32.00	4.21
8	Jewellery	0.39	28.98	29.63	1.70
9	Besan	0.13	1.52	29.53	0.27
10	Honey	0.04	13.22	29.13	0.08
Total		8.79			26.03
C. Ranked by Weights					
1	House Rent Index	23.43	12.73	6.63	11.29
2	Milk Fresh	6.66	15.33	20.91	11.88
3	Wheat Flour	5.11	18.61	2.55	1.39
4	Electricity	4.37	19.05	12.25	3.51
5	Bakery & Confectionary	2.98	4.55	6.38	0.99
6	Meat	2.70	22.62	26.47	7.98
7	Vegetable Ghee	2.67	13.24	40.53	9.13
8	Tution Fees	2.36	8.78	6.66	0.98
9	Transport Fare/Charges	2.12	12.56	5.86	1.22
10	Natural Gas	2.05	16.91	2.29	0.54
Total		54.45			48.92

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in CPI, which is 13.2 percent in March 2011.

Table A4: Distribution of Price Changes (YoY)- Selected CPI Items, March 2011				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	Increase of over 10%
Food Group	Onion Pulse Masoor Ice Cream Walls Toffee (Hilal) Chowklate Candy	Carrot, Cigarettes Gold Leaf, Wheat Flour Bag Coffee-Nescafe 75gm, Chicken, Cuminseed White National, Sugar Refined, Ginger, Corriander Seed Powd.National Curry Powd. National 200 gm, Wheat Flour, Wheat	Turnip, Biscuits-packed, Fruit Juice Tetra Pack, Vinegar Synthetic (Sirka) Tea Lipton Yellow Label 200gm, Potatoes, Cigarettes K-2, Cigarettes Capstan, Bread Plain, Peas, Cigarettes Morven Gold, Vermicelli	Cardamom Large Loose av.qlty, Tomatoes, Chillies Powd.National 200gm, Chillies Green, Pulse Moong, Cucumber (Kheera), Kinnu Vegetable Ghee (Loose), Garlic Cooking Oil Vegetable Ghee Tin Malta/Mosambi
Apparel & Textile	Gents Shoes Paul Bata, Gents Sandal Bata, Child Shoe Power Lite Bata	Pullover Gents Oxford/Bon.	Shirt Boy 24"/26" length, School Uni. kameez,shal.Girl Full Pant Boy 24"/26" lgth.	Dopatta Georgette av.qlty., Lawn av.qlty. Voil av.qlty.
House Rent Index			House Rent Index	
Fuel & Lighting	Gas Chrg 3.3719 - 6.7438 mmbtu Match box small Gas Chrg10.1157 - 13.4876mmbtu		Tube Light Philips 40 watts	Firewood Whole Bulb Philips 100-watts Gas Cylinder stand. Size, Elect. Charges 101 - 300 unit
Household Furniture & Equipment	Washing Machine Singer	Carpet plain av. qlty Wall Clock quartz av.qlty	Hand Stitching needle S. Steel Plate, Dining Table 6 chairs av.qlt	Towel av. quality Marriage Hall with furniture, Pressure Cooker 4 ltr.
Transport & Communication	Minibus Fare Max.with in city, Minibus Fare Min.with in city, Car Tax For 800cc To 1300cc, Platform ticket	Petrol Super Internet Charges CNG Filling Charges Suzuki Fare min.with in city	Car Service Charges Tyre Motor Cycle, Car Suzuki 800 cc (w/o. A/C), Motorcycle Yamaha 100cc.	Telephone charges local call, Tel charges outside city, Tyre Car with tube general, Tyre Cycle specify brand name
Recreation & Entertainment	Video Game Sega 16 byte, daily "Dawn" Daily "Jang"	V.C.P. Panasonic/LG/Nat T.V. 20" Colored With R/Cont, Radio With C.Player National	Cinema Non-A/C High Class	Cinema A/C. Highest Class, Tv.Licence Fee domestic
Education	English Book Class VI Maths Book Class IX or X, Urdu Book Class IX/X(T.B.B)	Eng. Book Ist.Yr Complete Se, Pen Ink Dollor 57 Ml Bottle Govt. Engg. Coll. Fee 1 Year	Paper Fullscape Exercise. Book Lined 80/100 p, Govt. Med. College Fee MBBS	Pencil goldfish/Deer
Cleaning & Laundry	Surf (Medium) 160 gm Washing Powder 1000 gm, Robin Blue (35 grams), Toothpaste Macklines 70 gm	Brylcreem 210 ml. Perfume med.size Medora/Broa, Shampoo Plain Medora 200 ml. Facecream Ponds	Finis 500 ml Tissue Paper Perfumed 100 pcs, Wrist Watch Gents Citizen, Hair- Colour Begin (6gm)	Silver Tezabi 24 ct Gold Tezabi 24 ct Washing Soap Nyl(135-160gms) Washing ch. shirt
Medicare	Betnovate-N Ointment 5 gms, Sancos Syrup (50 ml.), Calpol Syrup 60 ml.	Lederplex Syrup O.R.S. (Nimcol) Daonil Tab. 5 mg.		Dettol (Medium) Thermometer China Doctor (MBBS) Clinic Fee

Table A5: City-wise Inflation by Income Groups, March 2011

		Upto Rs:3000						Rs 3001-5000					
		General		Food		Non-Food		General		Food		Non-Food	
		MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1	Lahore	1.0	10.3	0.7	12.5	1.4	7.2	1.0	10.0	0.7	12.0	1.4	7.3
2	Faisalabad	1.0	11.6	0.4	14.6	1.9	7.1	1.1	12.2	0.2	14.7	2.4	8.9
3	Rawalpindi	2.1	13.2	3.0	19.9	0.7	4.3	2.2	12.2	3.3	17.5	0.8	5.6
4	Multan	1.6	16.2	1.4	19.2	1.9	12.4	1.8	15.4	1.7	18.6	1.9	11.4
5	Gujranwala	1.6	11.8	1.9	15.4	1.2	6.8	1.6	11.1	2.0	14.7	1.1	6.8
6	Islamabad	1.5	12.7	2.4	22.0	0.3	1.4	1.6	13.1	2.3	20.9	0.6	3.7
7	Sargodha	2.2	14.8	2.1	17.6	2.4	11.2	2.0	14.6	2.0	16.7	2.1	12.0
8	Sialkot	0.6	10.5	0.3	12.1	1.0	8.4	0.5	10.5	0.1	12.6	1.0	7.8
9	Bahawalpur	1.2	16.0	1.2	17.8	1.2	13.5	1.3	16.0	1.4	18.2	1.1	13.1
10	Karachi	1.0	12.3	1.2	16.1	0.7	7.2	1.1	11.5	1.4	14.9	0.7	7.4
11	Hyderabad	1.8	14.7	2.2	17.5	1.2	11.1	1.8	15.2	2.4	18.5	1.1	11.1
12	Sukkur	2.7	17.8	4.1	25.2	0.8	8.4	1.9	15.8	2.5	21.0	1.2	9.8
13	Larkana	1.1	16.0	0.9	21.3	1.4	9.1	1.1	16.1	0.9	20.7	1.4	10.3
14	Peshawar	1.3	15.0	1.8	17.8	0.7	11.5	0.9	14.9	0.9	17.6	0.9	11.8
15	Bannu	0.6	14.8	1.5	17.1	-0.5	11.9	0.3	15.0	1.1	17.5	-0.7	12.1
16	Quetta	0.7	14.4	1.1	19.3	0.0	7.5	1.1	13.3	1.4	18.3	0.6	6.8
17	Khuzdar	-0.4	15.4	-1.3	17.9	0.8	12.3	-0.3	15.1	-1.1	17.7	0.8	12.0
		Rs 5001-12000						above Rs 12000					
		General		Food		Non-Food		General		Food		Non-Food	
		MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1	Lahore	0.9	9.1	0.9	11.6	1.0	6.4	1.2	8.7	1.4	11.6	-6.1	-0.7
2	Faisalabad	1.0	11.6	0.6	15.3	1.4	7.6	1.3	10.9	1.5	16.1	-6.6	-0.7
3	Rawalpindi	2.0	11.8	3.3	17.2	0.7	6.4	2.3	12.4	3.7	17.8	-4.2	3.1
4	Multan	1.6	14.1	1.9	18.3	1.3	9.6	1.7	13.2	2.6	18.9	-6.1	2.0
5	Gujranwala	1.4	10.8	1.9	15.1	0.8	6.5	1.3	10.5	2.1	15.4	-5.4	0.8
6	Islamabad	1.6	11.5	2.4	19.6	0.6	3.5	2.0	11.2	3.3	19.9	-5.0	-0.2
7	Sargodha	1.9	14.7	2.3	16.7	1.4	12.7	1.9	14.9	2.3	17.4	-4.8	6.1
8	Sialkot	0.4	9.9	0.2	12.0	0.7	7.6	0.7	9.9	0.5	11.6	-5.7	1.7
9	Bahawalpur	1.5	15.5	2.0	19.6	0.9	11.0	1.9	15.4	3.1	21.5	-7.9	1.4
10	Karachi	1.1	10.9	1.6	14.6	0.6	7.2	1.3	9.7	2.1	15.4	-4.9	0.4
11	Hyderabad	1.7	14.7	2.3	18.0	1.0	11.3	2.0	15.0	3.1	18.6	-4.0	6.8
12	Sukkur	1.8	15.3	2.5	20.7	1.0	10.2	1.7	15.1	2.4	20.1	-2.3	8.3
13	Larkana	1.1	15.6	1.2	21.1	1.0	10.0	1.5	16.2	2.0	22.1	-5.1	5.6
14	Peshawar	0.7	14.0	0.9	18.1	0.5	10.0	1.2	13.1	1.6	18.3	-4.8	3.8
15	Bannu	0.1	15.2	1.4	18.2	-1.2	12.2	1.1	15.5	3.2	19.5	-4.8	8.0
16	Quetta	1.4	12.6	2.2	18.2	0.6	6.7	2.0	13.1	3.1	18.9	-5.2	2.4
17	Khuzdar	-0.2	12.5	-1.1	15.3	0.7	9.7	-0.2	10.3	-1.3	13.5	-4.5	2.9

Table A6: City-wise Inflation in CPI (YoY) March 2011							
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Bahawalnagar	18.2	19.9	16.9	Quetta	12.9	18.5	8.1
Kunri	18.1	23.1	13.9	Loralai&Cantt	12.8	15.4	10.8
Mirpur Khas	16.9	22.7	12.3	Jehlum	12.6	17.3	8.7
Mianwali	16.4	19.4	13.9	Rawalpindi	12.1	17.5	7.7
Jhang	16.3	18.5	14.5	Okara	12.0	13.6	10.6
D.G. Khan	16.0	21.3	11.8	Attock	11.6	16.6	7.6
Larkana	15.8	21.2	11.3	Islamabad	11.3	19.8	4.6
Bahawalpur	15.6	19.6	12.1	Faisalabad	11.3	15.6	7.5
Sukkur	15.4	20.7	11.3	Gujranwala	10.8	15.1	7.3
Bannu	15.2	18.3	12.8	Karachi	10.4	15.0	6.7
D.I.Khan	15.0	20.2	10.9	Sialkot	9.9	11.8	8.2
Khuzdar	15.0	18.7	12.1	Lahore	9.0	11.6	6.7
Shahdadpur	14.8	18.3	12.0				
Hyderabad	14.8	18.2	12.0				
Sargodha	14.8	16.9	13.0				
Abbotabad	14.6	20.7	9.6				
Mardan	14.4	17.4	12.1				
Vehari	14.2	17.0	11.9				
Nawabshah	14.2	16.6	12.3				
Turbat	14.2	17.9	11.3				
Multan	14.0	18.6	10.2				
Samundari	13.9	15.5	12.5				
Peshawar	13.7	18.1	10.1				

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

Table A7 : Income Group-wise Inflation (percent)							
	MoM				YoY		
	Mar-10	Feb-11	Mar-11		Mar-10	Feb-11	Mar-11
<u>Up to Rs. 3000</u>							
General	1.1	-1.2	1.4		13.8	14.2	14.6
Food	1.5	-2.4	1.5		16.0	17.5	17.6
Non-food	0.7	0.7	1.2		11.1	10.0	10.6
<u>Rs. 3001-5000</u>							
General	1.2	-1.1	1.4		13.6	13.9	14.2
Food	1.5	-2.5	1.6		15.6	17.4	17.6
Non-food	0.7	0.6	1.2		11.3	9.6	10.1
<u>Rs. 5000-12000</u>							
General	1.2	-0.9	1.4		13.1	13.3	13.4
Food	1.7	-2.2	1.8		14.9	17.6	17.8
Non-food	0.8	0.6	0.9		11.4	8.9	9.0
<u>Above Rs. 12000</u>							
General	1.3	-0.5	1.6		12.5	12.4	12.7
Food	2.1	-1.9	2.4		13.6	18.0	18.4
Non-food	0.8	0.5	1.1		11.9	8.9	9.2
<u>All income groups</u>							
General	1.3	-0.7	1.5		12.9	12.9	13.2
Food	1.8	-2.1	2.0		14.5	17.7	18.0
Non-food	0.8	0.5	1.0		11.6	8.9	9.1

Table A8: SPI Item-wise Price Movements

S.No	Items	Unit	Prices	Percentage change	
			Mar-11	YoY	Monthly
1	Wheat	Kg.	27.3	1.6	0.7
2	Wheat flour average qlt.	Kg.	31.0	3.1	0.3
3	Rice basmti.broken	Kg.	53.4	21.7	1.5
4	Rice irri-6	Kg.	41.1	18.5	2.2
5	Masur pulse washed	Kg.	119.3	-2.9	0.1
6	Moong pulse washed	Kg.	141.1	60.1	0.7
7	Mash pulse washed	Kg.	159.2	17.9	0.1
8	Gram pulse washed	Kg.	72.4	28.6	-1.2
9	Beef	Kg.	222.8	23.6	1.9
10	Mutton	Kg.	431.1	29.9	2.5
11	Egg hen (farm)	Doz.	76.6	26.5	14.6
12	Bread plain	Each	28.2	3.2	0.2
13	Sugar	Kg.	66.2	2.0	-0.4
14	Gur	Kg.	81.1	12.1	-2.2
15	Milk fresh	Ltr	51.2	20.1	1.6
16	Milk powdered nido	400g	200.0	11.1	0.0
17	Curd	Kg.	59.4	17.7	2.0
18	Veg.ghee tin	2.5kg	479.7	35.9	0.5
19	Veg.ghee loose	Kg.	166.7	43.9	0.5
20	Mustard oil	Kg.	168.5	24.0	0.2
21	Cooking oil	2.5ltr	479.7	35.9	0.5
22	Potatoes	Kg.	19.0	5.5	5.6
23	Onions	Kg.	21.9	-14.2	-20.9
24	Tomatoes	Kg.	34.5	80.8	-15.4
25	Bananas	Doz.	52.5	27.5	8.8
26	Salt powdered	Kg.	7.5	12.1	0.3
27	Red chillies(powder)	Kg.	264.1	59.4	-0.1
28	Garlic	Kg.	199.9	33.7	-0.3
29	Tea packet	250g	151.3	16.2	6.0
30	Tea (prepared)	Cup	13.4	25.5	0.1
31	Cooked beef plate	Each	54.7	20.0	2.7
32	Cooked dal plate	Each	35.4	22.7	2.5
33	Cigarettes k-2	10's	13.7	6.0	0.0
34	Coarse latha	Mtr.	60.1	23.3	6.9
35	Lawn (avg.+s.qlty)	Mtr.	109.7	13.4	3.8
36	Voil printed	Mtr.	56.7	15.6	3.7
37	Shirting	Mtr.	90.1	9.5	2.6
38	Sandel gents Bata	Pair	499.0	0.0	0.0
39	Sandel ladies Bata	Pair	399.0	5.3	0.0
40	Chappal spng. Bata	Pair	139.0	7.8	0.0
41	Kerosene	Litr	86.9	18.7	4.5
42	Firewood	40kg	380.5	23.7	2.4
43	Elec. Bulb 60-wats	Each	24.1	20.7	0.6
44	Match box	Each	1.0	0.0	0.0
45	Washing soap	Cake	16.3	24.3	2.7
46	Bath soap lifebuoy	Cake	26.7	21.3	3.7
47	Chicken (farm)	Kg.	142.6	0.9	5.2
48	Gas chrg. All clb. Comb	mmbtu	337.2	0.0	0.0
49	L.P.G.(cylinder 11kg.)	Each	1186.4	21.2	-5.3
50	Elec.chrg.all slabs comb	per unit	9.1	12.2	0.2
51	Petrol	Ltr	78.1	9.5	5.9
52	Diesel	Ltr	83.7	18.4	5.9
53	Telephone local	Call	3.6	48.3	0.0
Maximum				80.8	14.6
Median				18.5	0.5
Minimum				-14.2	-20.9

Table A9: Distribution of Price Change (YoY) - WPI Items: March 2011				
Groups	Decrease or no change	Subdued increase (upto 5%)	Moderate increase (5 to 10%)	More than 10% increase
Food	Maida Sugar Confectionary	Sugar Confectionary Wheat Onions Wheat Flour Fish Chicken Sugar Refined	Condiments Gur Powdered Milk	Potatoes, Gram Whole Beverages, Beans, Tea Salt, Vegetables Prepared / Preserved Mineral Water, Fresh Milk, Vegetables, Milk Food, Rice, Oil Cakes, Mash, Fruit, Prepared /Preserved, Eggs, Meat Cooking Oil, Dry Fruits Fresh Fruits, Cotton Seed Oil, Besan, Mustard & Rapeseed Oil, Gram Split, Bajra Vegetable Ghee, Jowar Spices, Maize, Moong Tomatoes
Raw material	Pig Iron		Wool	Skins, Tobacco, Hides Sugar Cane, Mustard /Rapeseeds, Cotton Seeds, Cotton
Fuel & lighting	Diesel Oil	Motor Sprit		Electricity Ind. Supply Tariff-B, Diesel Oil Coal, Mobil Oil Kerosene Oil, Elec. Agriculture Tariff-D Coke, Fire Wood Furnace Oil
Manufacture	Woolen Textiles Matches	Foot Wear Audio-Visual Instruments	Woolen Textiles Matches Ready Made Garments Utensils Paper Dying Materials Glass Products Other Electrical Goods	Tyres, Machinery Mattresses, Drugs & Medicines, Tubes Pesticides & Insecticides, Silk & Rayon Textiles, Plastic Products, Hosiery, Soaps, Cotton, Textiles, Jute Manufactures, Chemicals, Transports, Fertilizers, Cigarettes, Blended Yarn, Cosmetics, Nylon Yarn, Cotton Yarn
Building material	Tiles	Sanitary Wares Cement Blocks	Pipe Fittings Glass Sheets Wires And Cables	Timber Iron Bars & Sheets Bricks

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities				
Item and Specification	Weights	Index		
		Mar-10	Feb-11	Mar-11
General	100.00	219.65	244.93	248.55
Food & Beverages.	40.34	247.55	286.26	292.03
1 Wheat	0.48	316.44	316.65	318.36
2 Wheat Flour	5.11	307.61	314.13	315.46
3 Maida	0.11	284.42	284.70	285.36
4 Besan	0.13	202.42	261.97	262.20
5 Rice	1.34	278.24	321.24	324.80
6 Pulse Masoor	0.22	342.19	331.89	327.01
7 Pulse Moong	0.22	293.68	468.57	473.14
8 Pulse Mash	0.20	296.68	360.09	354.93
9 Pulse Gram	0.43	194.92	252.46	249.02
10 Gram Whole	0.15	215.63	237.76	244.20
11 Mustard Oil	0.05	251.54	300.22	303.51
12 Cooking Oil	0.69	221.73	301.50	301.50
13 Vegetable Ghee	2.67	244.09	341.27	343.03
14 Sugar	1.95	237.42	242.87	242.07
15 Gur	0.07	280.27	326.94	317.82
16 Tea	1.26	205.56	223.31	230.13
17 Milk Fresh	6.66	246.42	289.84	297.95
18 Milk Powder	0.11	211.95	238.91	241.27
19 Milk Products	0.56	228.91	263.60	270.22
20 Honey	0.04	212.85	268.72	274.86
21 Cereals	0.09	254.44	274.72	278.47
22 Jam, Tomato, Pickles & Vinegar	0.25	184.51	215.90	220.79
23 Beverages	0.73	177.63	208.26	213.45
24 Condiments	0.34	247.61	257.87	260.61
25 Spices	0.60	234.17	354.11	362.88
26 Dry Fruit	0.28	342.50	397.07	401.23
27 Bakery & Confectionary	2.98	150.43	159.76	160.02
28 Cigarettes	0.95	226.38	239.91	239.93
29 Betel Leaves & Nuts	0.19	185.20	220.31	221.02
30 Rrdymade Food	1.68	253.48	298.35	302.86
31 Sweetmeat & Nimco	0.38	260.82	317.32	319.55
32 Fish	0.27	214.58	257.68	252.94
33 Meat	2.70	323.01	400.64	408.52
34 Chicken Farm	0.92	269.84	257.03	277.00
35 Eggs	0.41	228.70	256.69	294.12
36 Potatoes	0.59	195.67	199.11	210.88
37 Onions	0.64	242.15	271.68	228.33
38 Tomatoes	0.50	98.88	233.04	233.74
39 Vegetables	1.80	249.76	303.17	316.46
40 Fresh Fruits	1.62	235.29	263.40	310.58
Apparel, Textile & Footwear.	6.10	163.88	183.07	185.96
41 Cotton Cloth	1.62	165.37	194.12	198.97
42 Silk, Linen, Woolen/Cloth	0.58	168.07	191.31	194.26
43 Tailoring Charges	0.86	179.56	205.29	208.30
44 Hosiery	0.15	179.06	203.21	208.64
45 Rrdymade Garments	1.20	150.57	166.89	170.06
46 Woolen Rrdymade Garments	0.15	200.40	220.34	224.38
47 Footwear	1.53	157.28	162.88	162.99
House Rent.	23.43	210.08	222.39	224.01
48 House Rent Index (Combined)	23.43	210.08	222.39	224.01

(continued)

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities				
Item and Specification	Weights	Index		
		Mar-10	Feb-11	Mar-11
Fuel And Lighting.	7.29	243.82	266.04	265.98
49 Kerosene	0.14	461.64	497.88	519.18
50 Firewood	0.48	342.24	399.73	413.52
51 Match Box	0.13	200.00	200.00	200.00
52 Bulb & Tube	0.13	131.43	150.95	151.72
53 Electricity	4.37	189.54	212.19	212.76
54 Natural Gas	2.05	332.21	345.93	339.82
H.Hold. Furniture & Equipment Etc.	3.29	171.82	189.50	191.75
55 Utensils	0.37	158.05	172.68	174.20
56 Plastic Products	0.11	209.48	237.91	240.09
57 Suitcase	0.05	166.17	187.66	188.94
58 House Hold Equipments	0.10	160.02	179.12	180.90
59 Furniture (Rrdy Made)	0.31	186.87	206.75	207.40
60 Furnishing	0.64	163.55	184.44	185.40
61 Elect. Iron Fans & Washing Machine	0.19	163.31	175.54	176.81
62 Sewing Machine, Clock And Needles	0.13	150.71	164.72	164.72
63 Refrigerator & Air conditioner	0.18	133.54	144.93	147.27
64 Marriage Hall	0.04	203.60	239.33	250.79
65 House Hold Servant	1.19	182.54	199.16	202.85
Transport & Communication.	7.32	212.24	230.63	234.57
66 Petrol	1.73	240.37	240.37	252.16
67 Diesel	0.21	467.05	498.07	522.56
68 CNG . Filling Charges	0.16	226.80	236.39	236.39
69 Service Charges	0.38	177.47	191.06	195.12
70 Vehicles	0.26	134.13	146.61	147.11
71 Tyre & Tube	0.28	167.08	199.36	202.76
72 Transport Fare/Charges	2.12	284.15	300.40	300.79
73 Train Fare	0.15	253.24	287.05	287.05
74 Air Fare	0.10	342.93	369.79	369.79
75 Communication	1.93	93.28	127.94	127.95
Recreation & Entertainment.	0.83	126.54	139.71	139.80
76 Recreation	0.34	142.98	142.98	142.98
77 Entertainment	0.49	115.04	137.43	137.57
Education.	3.45	186.28	195.73	195.83
78 Tuition Fees	2.36	180.31	192.31	192.31
79 Stationery	0.35	182.69	195.49	198.86
80 Text Books	0.69	216.25	215.90	214.66
81 Computer & Allied Products	0.05	85.71	86.67	86.67
Cleaning Laundry & Per. Appearance.	5.88	184.18	202.78	209.13
82 Washing Soap & Detergent	1.55	168.74	181.06	185.29
83 Toilet Soap	0.74	186.50	194.80	216.07
84 Tooth Paste	0.40	117.62	121.06	121.80
85 Shaving Articles	0.35	153.39	165.43	168.13
86 Cosmetics	1.43	168.16	177.42	179.78
87 Watches	0.06	139.31	152.72	152.72
88 Jewellery	0.39	421.54	527.41	546.44
89 Laundry Charges	0.22	193.38	223.56	227.10
90 Hair Cut & Beauty Parlour Charges	0.73	170.14	192.23	195.06
Medicare.	2.07	159.10	184.68	185.11
91 Drugs & Medicares	1.08	126.27	138.35	139.16
92 Doctor's Fee	1.00	194.49	234.63	234.63

Table A11: Wholesale Price Index Numbers by major Groups and Selected Commodities

Item and Specifications	Mar-10	Jan-11	Feb-11	Mar-11
General	237.51	282.96	288.24	297.86
Food	246.68	291.06	289.24	294.48
1 Wheat	319.74	315.15	317.02	321.74
2 Wheat flour	302.29	302.98	302.64	305.58
3 Maida	287.38	284.32	283.75	285.92
4 Besan	178.62	238.88	237.62	239.29
5 Rice	325.33	380.15	385.58	388.71
6 Maize	252.50	347.51	367.90	392.20
7 Jowar	258.70	357.42	374.71	386.24
8 Bajra	200.25	279.95	283.01	287.44
9 Beans	282.30	312.89	311.17	317.30
10 Gram whole	235.57	250.88	255.30	260.23
11 Gram split	170.78	234.71	234.71	233.79
12 Masoor	328.17	315.01	308.46	300.71
13 Mash	262.29	312.92	314.64	316.89
14 Moong	297.38	458.64	467.51	484.84
15 Potatoes	194.12	224.48	206.08	213.93
16 Onions	245.58	435.27	290.67	247.36
17 Tomatoes	89.40	531.23	271.23	265.61
18 Vegetables	253.21	317.10	297.61	299.41
19 Fresh fruits	176.86	201.93	203.39	227.19
20 Dry fruits	259.87	313.91	328.15	332.05
21 Fresh milk	211.26	244.25	245.41	248.98
22 Powdered milk	222.89	232.63	241.84	245.04
23 Milk food	171.71	188.09	196.81	203.69
24 Vegetable ghee	272.67	378.76	398.19	399.78
25 Mustard & rapeseed oil	280.01	351.56	367.42	376.85
26 Cotton seed oil	285.06	348.02	371.09	380.91
27 Cooking oil	224.44	266.91	277.21	286.52
28 Oil cakes	318.48	366.13	377.34	384.05
29 Gur	264.19	313.98	291.87	281.96
30 Sugar refined	237.71	273.10	242.50	247.50
31 Chicken	271.91	241.25	266.65	281.22
32 Eggs	241.19	359.72	269.14	303.21
33 Fish	146.82	164.25	150.37	149.72
34 Meat	304.27	372.60	377.52	384.94
35 Spices	247.58	332.14	343.65	370.47
36 Condiments	292.28	303.35	306.47	311.44
37 Salt	167.69	182.71	192.07	196.00
38 Tea	170.12	172.03	183.54	194.17
39 Beverages	143.10	154.59	158.02	160.16
40 Mineral water	127.38	140.19	146.43	149.72
41 Fruit prepared/preserved	187.12	227.04	227.04	233.20
42 Vegetables prepared/preserved	180.65	200.30	204.34	212.13
43 Sugar confectionary	100.46	100.57	100.57	100.59
Raw material	274.70	402.36	434.70	458.34
44 Cotton	241.21	422.26	487.18	522.87
45 Cotton seeds	272.54	356.41	355.91	358.16
46 Mustard/rapeseeds	294.13	376.57	378.46	369.01
47 Tobacco	228.26	255.01	262.07	262.58
48 Sugar cane	495.33	584.97	566.09	594.40
49 Wool	142.92	153.73	153.73	153.70
50 Hides	132.74	143.03	151.24	154.59
51 Skins	102.05	107.76	110.13	113.06
52 Pig iron	321.93	321.93	321.93	321.93

(continued)

Table A11: Wholesale Price Index Numbers by major Groups and Selected Commodities

Item and Specifications	Mar-10	Jan-11	Feb-11	Mar-11
Fuel & light	312.23	338.54	349.84	366.57
53 Coal	141.00	160.00	160.00	160.00
54 Coke	555.18	693.98	693.98	693.98
55 Diesel oil	455.42	486.97	486.97	511.15
56 Motor sprit	238.25	237.66	237.66	249.46
57 Mobil oil	200.36	216.39	216.39	228.69
58 Furnace oil	374.20	420.08	469.12	511.39
59 Kerosine oil	439.93	481.70	481.70	505.51
60 Natural gas	256.00	256.00	256.00	256.00
61 Electricity ind. Supply tariff-b	201.01	220.68	220.68	222.49
62 Elec. Agriculture tariff-d	205.07	238.86	238.86	238.86
63 Fire wood	279.48	330.55	332.95	353.66
Manufacture	161.77	201.97	206.86	215.17
64 Sole leather	134.06	134.06	134.06	134.06
65 Chrome leather	212.23	212.23	212.23	212.23
66 Cotton yarn	155.72	244.54	255.82	271.58
67 Blended yarn	177.53	223.23	235.34	236.81
68 Nylon yarn	121.72	174.85	174.09	174.70
69 Cotton textiles	150.40	166.51	168.34	176.73
70 Hosiery	156.94	171.79	176.56	183.80
71 Silk & reyon textiles	149.62	159.41	163.50	172.28
72 Woolen textiles	141.56	146.88	147.42	148.80
73 Jute manufactures	132.09	146.42	148.17	162.85
74 Mattresses	141.72	156.11	157.11	160.17
75 Rrdy made garments	118.87	123.49	123.89	125.26
76 Utensils	148.79	153.01	156.01	159.13
77 Plastic products	141.08	153.20	156.45	164.24
78 Glass products	179.81	182.18	192.67	194.87
79 Chemicals	198.28	231.61	236.37	244.64
80 Dying materials	88.99	96.14	96.14	96.14
81 Soaps	183.88	199.15	199.26	216.05
82 Cosmetics	123.62	161.81	161.81	175.12
83 Drugs & medicines	116.73	123.48	127.60	132.18
84 Fertilizers	304.86	347.45	358.17	386.96
85 Pesticides & insecticised	149.39	160.57	162.74	171.34
86 Machinery	177.90	196.32	199.80	199.80
87 Transports	129.05	162.74	162.78	162.78
88 Tyres	208.57	228.02	229.57	229.61
89 Tubes	187.73	214.77	214.77	214.77
90 Audio-visual instruments	92.28	94.02	94.02	96.27
91 Other electrical goods	131.27	139.60	142.51	142.51
92 Cigarettes	197.49	262.35	262.35	262.35
93 Paper	105.98	107.79	114.45	114.45
94 Matches	124.26	130.85	130.85	130.85
95 Foot wear	192.15	199.97	199.97	199.97
Building material	202.43	225.32	225.57	228.81
96 Cement	124.02	134.47	135.31	135.55
97 Bricks	248.68	310.85	316.98	319.61
98 Cement blocks	170.83	170.83	172.23	172.23
99 Tiles	99.67	99.67	99.67	99.67
100 Iron bars & sheets	260.59	293.69	293.43	296.76
101 Pipe fittings	185.05	190.29	193.87	195.80
102 Timber	208.88	226.36	227.30	230.68
103 Glass sheets	177.94	188.34	188.34	188.29
104 Paints & varnishes	149.43	180.97	180.97	212.43
105 Sanitary wares	162.20	162.77	163.29	163.37
106 Wires and cables	270.43	286.09	286.09	287.17

Table A12: Price Indices - Base 2000-01=100

Period	CPI			WPI			SPI *
	Overall	Food	Non-food	Overall	Food	Non-food	
2004-05	121.98	125.69	119.47	124.14	125.03	123.50	126.52
2005-06	131.64	134.39	129.78	136.68	133.78	138.78	136.43
2006-07	141.87	148.21	137.59	146.18	145.67	146.53	149.29
2007-08	158.90	174.36	148.44	170.15	173.27	167.88	170.55
2008-09	191.90	215.69	175.82	201.10	213.54	192.04	209.29
2009-10	214.41	242.59	195.36	226.49	239.01	217.39	236.87
2009 Jan.	190.09	210.33	176.40	192.91	208.80	181.35	204.02
Feb.	191.90	211.58	178.59	194.19	210.31	182.46	206.78
Mar.	194.53	216.13	179.92	195.00	212.16	182.51	208.40
Apr.	197.28	220.46	181.61	198.28	215.69	185.61	210.85
May.	197.74	220.04	182.66	201.29	217.50	189.49	212.62
Jun.	199.69	222.23	184.45	206.13	219.81	196.17	215.09
Jul	202.77	228.93	185.08	207.57	224.31	195.39	222.00
Aug	206.21	234.69	186.95	212.16	229.52	199.53	225.18
Sep	207.14	235.59	187.90	212.53	230.34	199.57	227.34
Oct	209.11	238.12	189.49	215.01	232.35	202.39	227.73
Nov	212.02	242.40	191.48	220.98	236.69	209.55	232.14
Dec	210.99	238.16	192.62	221.43	235.06	211.51	232.81
2010 Jan.	216.09	242.91	197.95	230.80	241.37	223.11	240.25
Feb	216.93	243.17	199.19	231.64	242.67	223.61	242.37
Mar	219.65	247.55	200.78	237.51	246.68	230.84	244.98
Apr	223.44	252.53	203.77	241.88	248.53	237.04	247.50
May	223.58	252.62	203.94	243.98	248.81	240.47	249.51
Jun	225.03	254.42	205.15	242.44	251.73	235.68	250.61
Jul	227.79	258.19	207.23	246.48	256.40	239.26	255.13
Aug	233.50	271.35	207.91	252.93	267.12	242.60	261.70
Sep	239.69	285.63	208.62	258.22	279.03	243.08	270.74
Oct	241.17	285.89	210.93	266.19	283.96	253.26	275.31
Nov	244.84	292.20	212.81	275.46	290.52	264.50	284.33
Dec	243.60	286.64	214.50	278.38	286.07	272.78	282.83
2011 Jan	246.76	292.52	215.82	282.96	291.06	277.07	284.47
Feb	244.93	286.26	216.98	288.24	289.24	287.51	281.56
Mar	248.55	292.03	219.15	297.86	294.48	300.32	284.83

*: all groups combined

Table A13: International Commodity Prices/Indices			
	Jan-11	Feb-11	Mar-11
Energy			
Crude Oil (US\$ per barrel)*	92.7	97.7	108.7
IMF Energy Index (2005 =100)	173.0	180.7	198.0
WB Energy Index (1990=100) @	320.4	333.1	365.6
Food			
	0.0	0.0	0.0
Rice (\$/MT)	527.5	535.2	515.2
Wheat (\$/MT)	326.5	348.2	316.8
Sugar (US cent / pound)	32.1	29.4	25.9
Palm Oil (\$/MT)	1,238.6	1,248.6	1,142.2
Soybean Oil (\$/MT)	1,257.1	1,268.4	1,245.1
Non-Food Non-Energy			
Cotton Outlook 'A' Index #	178.9	213.2	229.7
IMF Metal Price Index (2005=100)	243.8	254.5	244.2
Copper (\$/MT)	9,533.2	9,880.9	9,503.4
Aluminum (\$/MT)	2,439.7	2,515.3	2,555.5
Iron Ore (\$ cents/dry MT)	179.6	187.2	169.4
Tin (\$/MT)	27,439.4	31,619.7	30,590.9
Nickel (\$/MT)	25,621.2	28,412.2	26,710.4
Zinc (\$/MT)	2,375.8	2,473.5	2,341.5
Lead (\$/MT)	2,584.0	2,595.6	2,624.0
Uranium (\$/pound)	63.9	65.0	63.5
DAP (\$/MT)	533.2	558.1	483.9
Urea (\$/MT)	367.5	375.0	380.0
\$/MT = US\$ per metric tonne.			
* Crude Oil (petroleum), simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai Fateh			
# Middling 1-3/32 inch staple, Liverpool Index "A", average of the cheapest Cts/lb five of fourteen styles, CIF Liverpool (Cotton Outlook, Liverpool). From January 1968 to May 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16. 2/			
DAP: Diammonium Phosphate			
@ World bank commodity index for low and middle income countries			
Source: IMF and World Bank.			

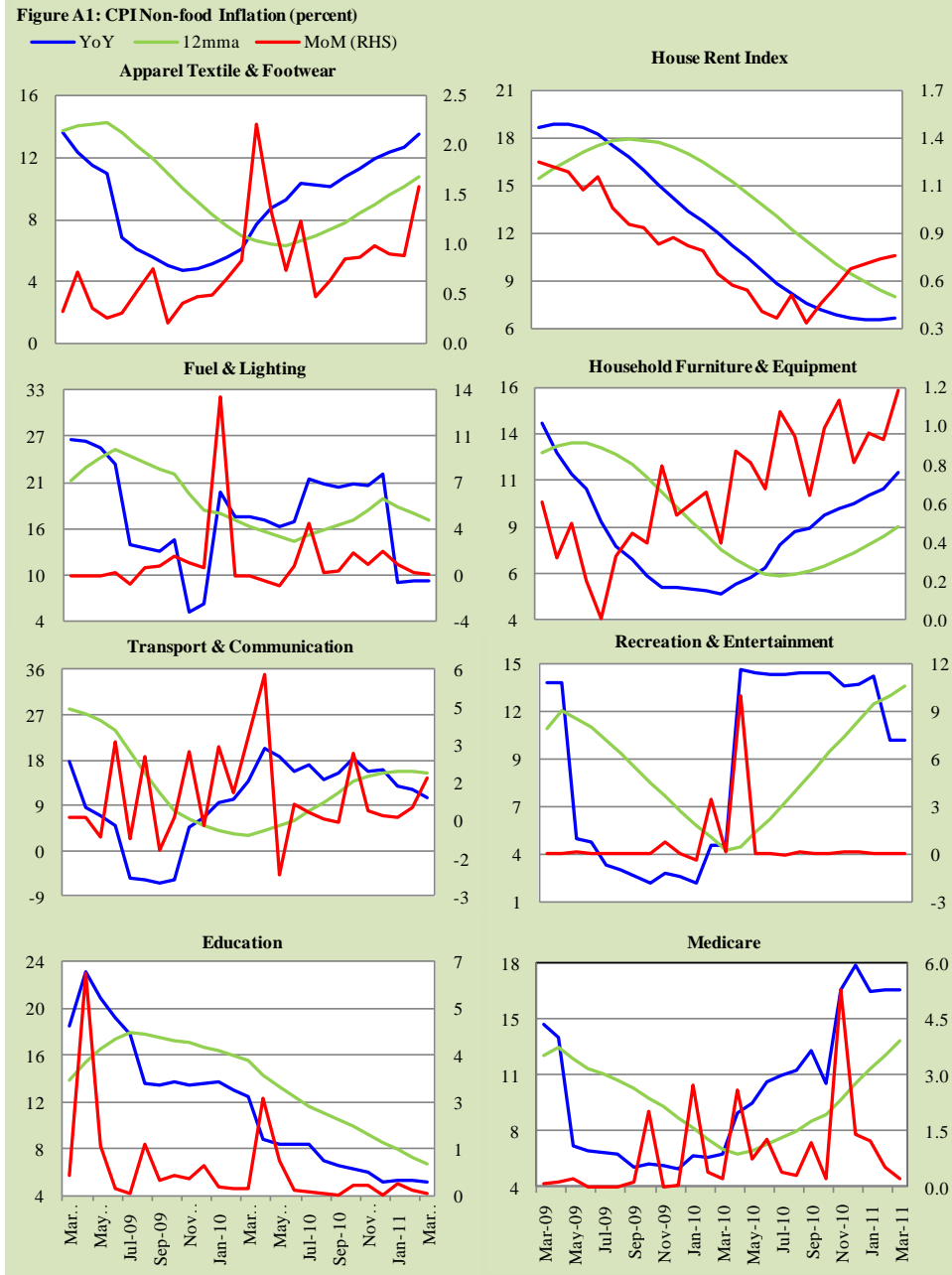


Figure A2: Frequency Distribution of Price Changes of CPI Items, March 2011

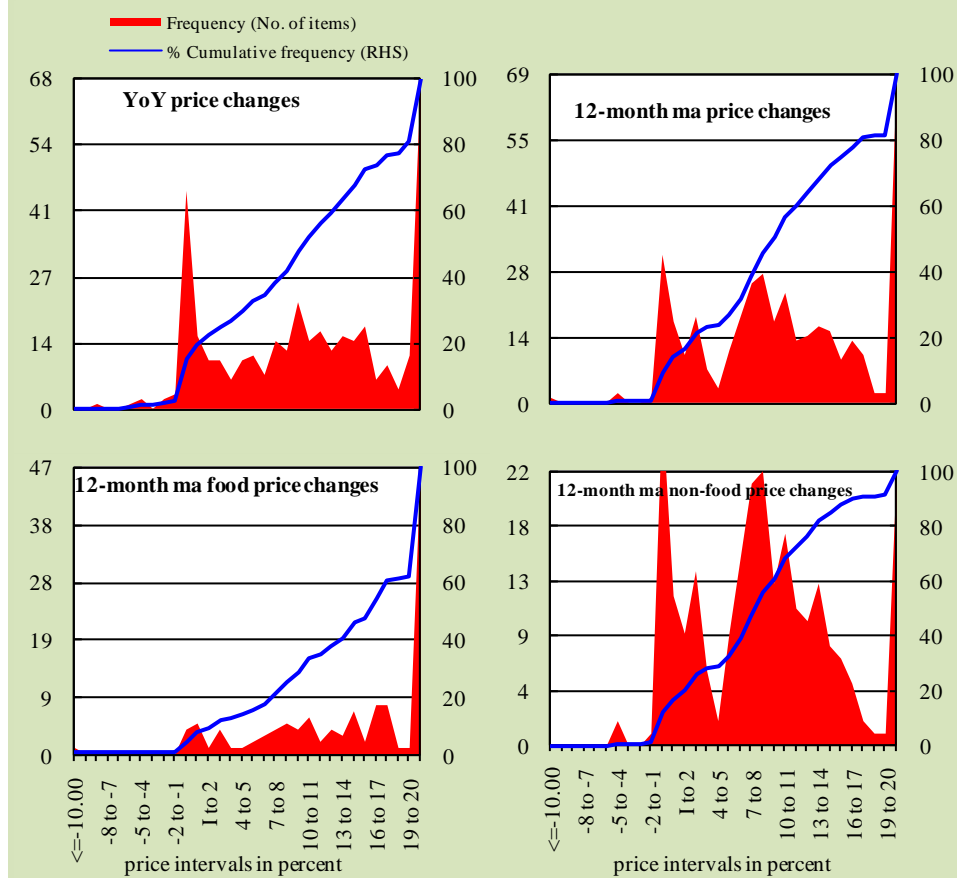
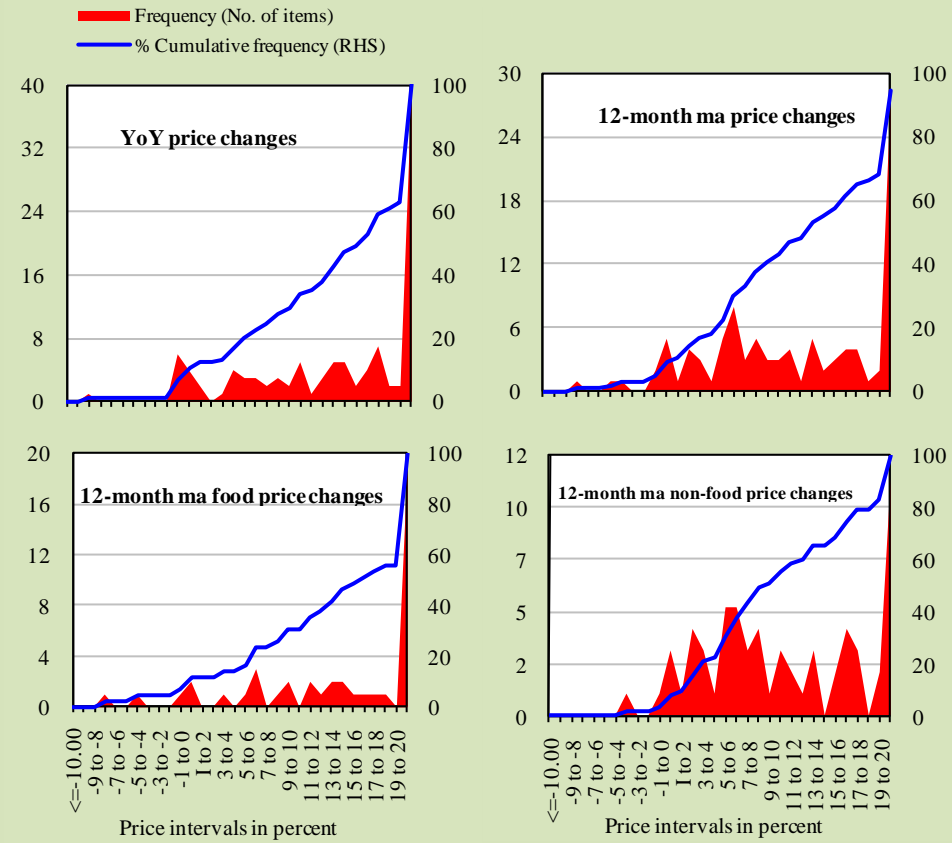
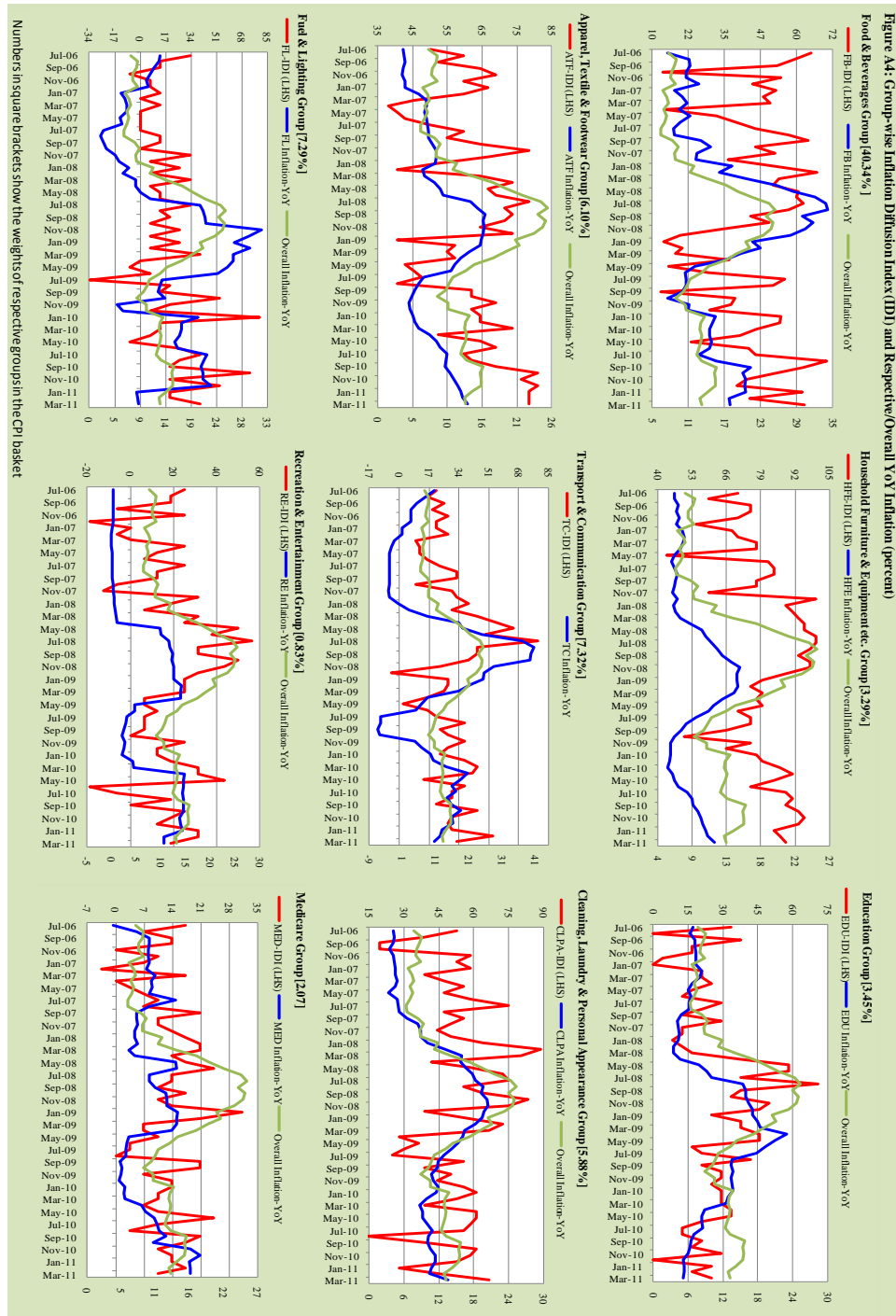


Figure A3: Frequency Distribution of Price Changes of WPI Items, March 2011





Annexure B

Technical Notes

1. All the three measures of inflation, viz. CPI, WPI and SPI are computed by the following Laspeyres Index formula:

$$I_t = \sum_j w_0^j \left(\frac{P_t^j}{P_0^j} \right)$$

Where I_t is price index, w_0^j is weight of commodity j in the overall basket, P_t^j is price of commodity j in period t and P_0^j is its price in the base year.

2. Base year for all the indices is the year 2000-01.
3. CPI basket contains 374 consumers' goods; WPI basket contains 425 commodities; SPI contains 53 commodities.
4. YoY inflation is the percent change of an index in a given month over the index in the same month of the last year. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

5. Period average inflation is the percent change of the average index during the period from July to the given month of a fiscal year over the average index during the corresponding period of the last year. It is computed as follows:

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

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

6. Monthly inflation is the percent change of an index in a given month over the index in the preceding month. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

7. 12-month moving average inflation (Long-run trend inflation) is the percent change of 12-month moving average of a price index; it is computed as follows:

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

8. Core Inflation is defined as the persistent component of measured inflation that excludes volatile and controlled prices. It reflects the normal supply and demand conditions in the economy. Core inflation is computed by the following two methods:

- a) Non-food, Non-energy inflation (NFNE inflation); it is computed by excluding food group and energy items (kerosene oil, petrol, diesel, CNG, electricity and natural gas) from the CPI basket.
- b) 20% trimmed-mean inflation; it is computed through the following steps:
 - i. All CPI items are arranged in ascending order according to YoY/12-month moving average/monthly/period average changes in their price indices in a given month.
 - ii. 20 percent of the items showing extreme changes are excluded with 10 percent of the items at the top of the list (corresponding to cumulative weight of 90% or more) and 10 percent of the items at the bottom of the list (corresponding to cumulative weight of 10 percent or less).
 - iii. The weighted mean of the changes in price indices of the rest of the items is core inflation.

9. Weighted contribution of different items (or sub-groups) to total inflation is worked out as below:

Let the overall index (I_t) is the weighted average of price indexes of individual items or sub-groups (I_{it}), i.e.

$$I_t = \sum_i w_i \cdot I_{it}$$

The weighted contribution of a single item (or a sub-group) to overall inflation is defined as below:

$$C_{it} = \alpha_{it-12} \cdot w_i \cdot \left(\frac{\pi_{it}}{\pi_t} \right)$$

Where C_{it} : Contribution of i^{th} item to the overall inflation

$$\alpha_{it-12} = \frac{I_{it-12}}{I_{t-12}} ; \text{ i.e. ratio of item's index to overall index in}$$

the reference month

w_i : Weights of i^{th} item

π_{it} : Inflation of i^{th} item

π_t : Overall inflation

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 374 commodities of the CPI basket. It is based on month-on-month (MoM) change in the prices of these commodities and can be obtained by estimating what is known as an ‘inflation diffusion index’ (IDI) as below:

$$\frac{\text{Number of Commodities with } \uparrow \text{ in MoM change} - \text{Number of Commodities with } \downarrow \text{ in MoM change}}{\text{Number of Commodities for which prices are reported}}$$

Thus, it is the difference between the share of items with increasing prices (i.e. depicting inflation) and the share of items with falling prices (i.e. depicting deflation) in CPI amongst the commodities for which prices have altered or remained constant¹⁰.

Based upon commodity level price data from July 2001 to February 2011 we computed inflation diffusion indices overall (general) CPI basket and for all groups in CPI basket (except House Rent Index being single item). A simple analysis¹¹ suggests that IDI is a leading indicator for Pakistan's YoY inflation.

¹⁰ We do not observe the prices of certain commodities (like the seasonal items) during certain periods of time. To calculate the inflation diffusion index we consider the commodities for which prices have been reported (irrespective of changed or not) during the month under review.

¹¹ Formal test shows one way ‘Granger’ causality from IDI to YoY inflation.