

Inflation Monitor

August 2013



State Bank of Pakistan

Statistics & DWH Department

ISSN 1992-8327 (print)

ISSN 1992-8335 (online)

The analysis in this document is based on data

- Provided by Pakistan Bureau of Statistics (PBS), for domestic inflation analysis
- Retrieved from IMF & World Bank websites for global inflation analysis

http://www.sbp.org.pk/publications/inflation_Monitor

Contents		Page
1.	Inflation in Brief	1
2.	City- wise Inflation	6
3.	Income Group- wise Inflation	7
4.	Weighted Contribution	9
5.	Inflation Diffusion Index	10
6.	Domestic Commodity Prices	11
7.	Global Commodity Prices	11
8.	Seasonal Adjustment in CPI	12
Annexure A		
Table A1	CPI Inflation by Groups	16
Table A2	Distribution of Price Changes (YoY) of CPI Basket	16
Table A3	Top and Bottom 15 Contributors to CPI Inflation (YoY)	17
Table A3.1	Top and Bottom 15 Contributors to CPI Inflation (MoM)	18
Table A3.2	Top Fifteen Contributors to CPI Inflation (YoY)	19
Table A3.3	Top Ten Contributors to CPI Food Inflation (YoY)	20
Table A3.4	Top Ten Contributors to CPI Non-Food Inflation (YoY)	21
Table A4	Distribution of Price Changes (YoY) - Selected CPI Items	22
Table A5	City-wise CPI Inflation by Income Groups	23
Table A6	City- wise CPI Inflation (YoY)	24
Table A7	Income Group-wise Inflation	25
Table A8	SPI Item-wise Price Movements	26
Table A9	Distribution of Price Changes (YoY)-WPI Items	27
Table A10	Consumer Price Index Numbers by Major Groups and Selected Commodities	28-29
Table A11	Wholesale Price Index Numbers by Major Groups and Selected Commodities	30-31
Table A12	Price Indices	32
Table A13	International Commodity Prices/ Indices	33
Table A14	CPI Data Series- Original and Seasonally Adjusted	34
Table A15	CPI Food Data Series- Original and Seasonally Adjusted	35
Table A16	CPI Monthly & Average Seasonal Factors	36
Table A17	CPI Food Monthly & Average Seasonal Factors	36
Table A18	CPI Month-on-Month % Change- Original & Seasonally Adjusted	37
Table A19	CPI Food Month-on-Month % Change- Original & Seasonally Adjusted	38
Figure A1	CPI Non-food Inflation	39
Figure A2	Frequency Distribution of Price Changes of CPI Items	40
Figure A3	Frequency Distribution of Price Changes of WPI Commodities	41
Figure A4	Group- wise/ overall Inflation Diffusion Index and Respective/ Overall YoY Inflation	42
Annexure B	Technical Notes	43-46

Team Leader

- Behzad Ali Ahmad Sr. Joint Director
behzad.ali@sbp.org.pk

Team Members

- Muhammad Ashfaq Assistant Director
muhammad.ashfaqch@sbp.org.pk
- Syed Salman Bukhari Assistant Director
salman.bukhari@sbp.org.pk

Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at 8.5 percent on year-on-year basis in August 2013 as compared to 8.3 percent in the previous month and 9.1 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at 1.2 percent in August 2013 as compared to 2.0 percent in the previous and 0.9 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation recorded at 0.8 percent in August 2013 compared to 1.2 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis increased to 7.9 percent in August 2013 compared to 7.8 percent in the previous month and 10.6 percent in the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) decreased to 0.6 percent in August 2013 compared to 1.2 percent in the previous month and 0.4 percent in the corresponding month of last year.
5. Non-food, non-energy inflation measured by CPI Core (NFNE) on year-on-year basis increased to 8.5 percent in August 2013 compared to 8.2 percent in the previous month. It was 10.8 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis decreased to 0.6 percent in August 2013 as compared to 1.5 percent in the previous month. A 0.3 percent rate of change in Core NFNE was observed in August 2012.
7. WPI inflation on year-on-year basis increased to 8.3 percent in August 2013 when compared to 6.5 percent a month earlier. During August 2012, WPI inflation was recorded at 7.7%.

8. WPI inflation on month-on-month basis recorded at 2.6 percent in August 2013 as compared to 1.6 percent in the previous month and was 1.0 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis decreased to 9.0 percent in August 2013 as compared to 9.1 percent in the previous month. It was 7.3 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at 1.2 percent in August 2013 as compared to 2.1 percent in previous month and was 1.4 percent in August 2012.

Table 1.1 Inflation Trends (percent) (Base 2007- 08 = 100)

Period	CPI Inflation						Core Inflation				WPI Inflation		SPI** Inflation	
	General		Food		Non-food		NFNE*		Trimmed					
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
Aug-12	9.1	0.9	8.5	0.9	9.4	0.9	10.8	0.3	10.6	0.4	7.7	1.0	7.3	1.4
Sep-12	8.8	0.8	7.6	0.7	9.7	0.9	10.5	0.4	10.4	0.5	7.8	0.3	7.5	0.9
Oct-12	7.7	0.4	5.8	-0.1	9.0	0.7	10.2	1.2	9.7	0.7	7.5	0.1	6.2	-0.5
Nov-12	6.9	-0.4	5.3	-0.3	8.1	-0.4	9.8	0.2	8.8	0.2	7.7	-0.4	5.5	0.0
Dec-12	7.9	0.2	7.7	0.0	8.1	0.4	9.8	0.5	9.2	0.3	9.6	0.4	7.4	0.3
Jan-13	8.1	1.7	8.1	1.9	8.1	1.5	10.0	1.2	9.9	1.0	8.6	1.2	7.1	1.6
Feb-13	7.4	-0.3	7.4	-1.3	7.4	0.4	9.6	0.4	9.2	0.2	8.3	0.3	6.8	-0.1
Mar-13	6.6	0.4	6.3	0.5	6.7	0.3	9.0	0.4	8.4	0.2	7.9	0.3	6.2	0.6
Apr-13	5.8	1.1	5.5	1.4	6.0	0.9	8.7	1.1	7.6	0.7	6.8	0.8	4.3	0.0
May-13	5.1	0.5	6.5	1.1	4.1	0.1	8.1	0.3	6.7	0.3	4.1	-0.4	3.8	0.0
Jun-13	5.9	0.7	7.9	1.1	4.4	0.5	7.8	0.4	6.8	0.6	5.2	1.0	4.6	2.5
Jul-13	8.3	2.0	9.2	3.0	7.6	1.3	8.2	1.5	7.8	1.2	6.5	1.6	9.1	2.1
Aug-13	8.5	1.2	10.3	2.0	7.3	0.6	8.5	0.6	7.9	0.6	8.3	2.6	9.0	1.2

* NFNE is Non-food non-energy

** SPI for all income groups combined

Fig 1.1: Summary of Price Inflation

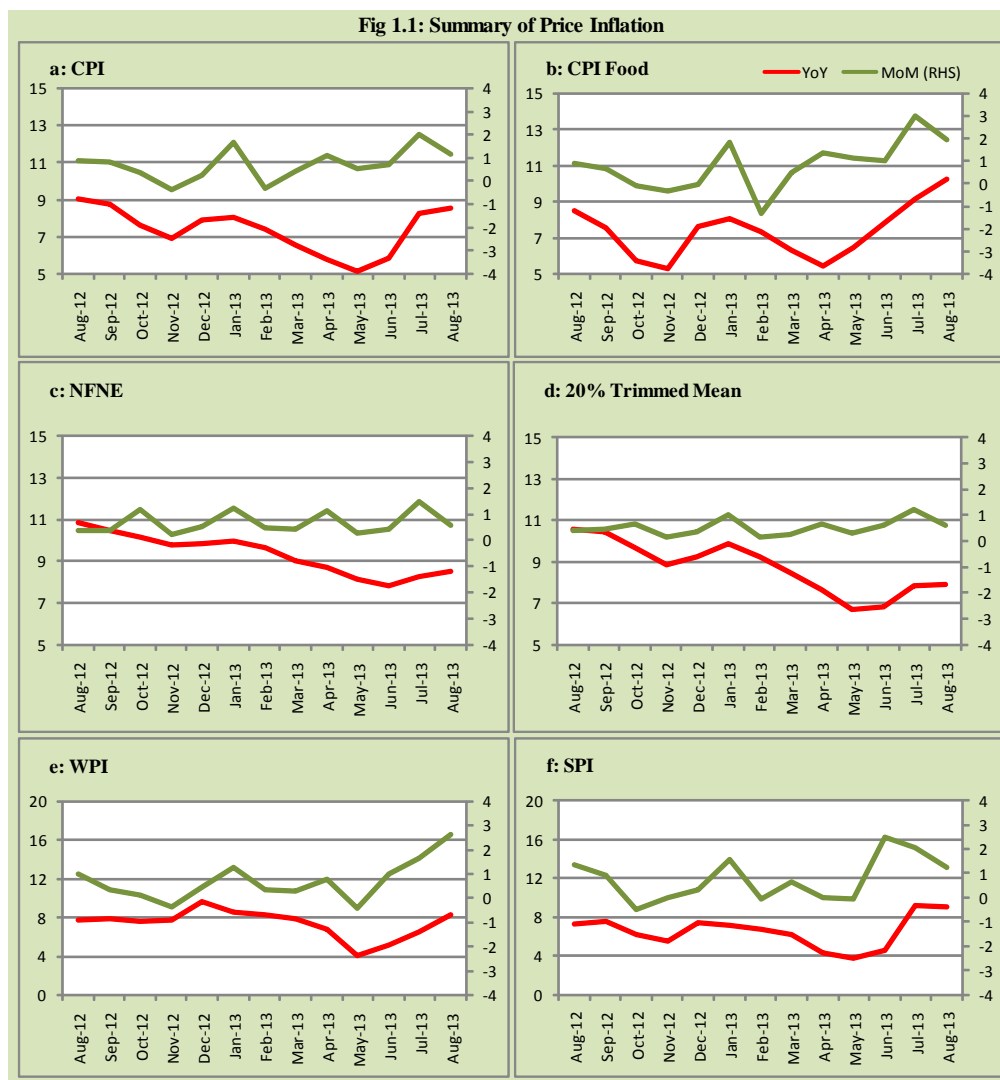


Fig 1.2: Movements in Price Indices (percent)

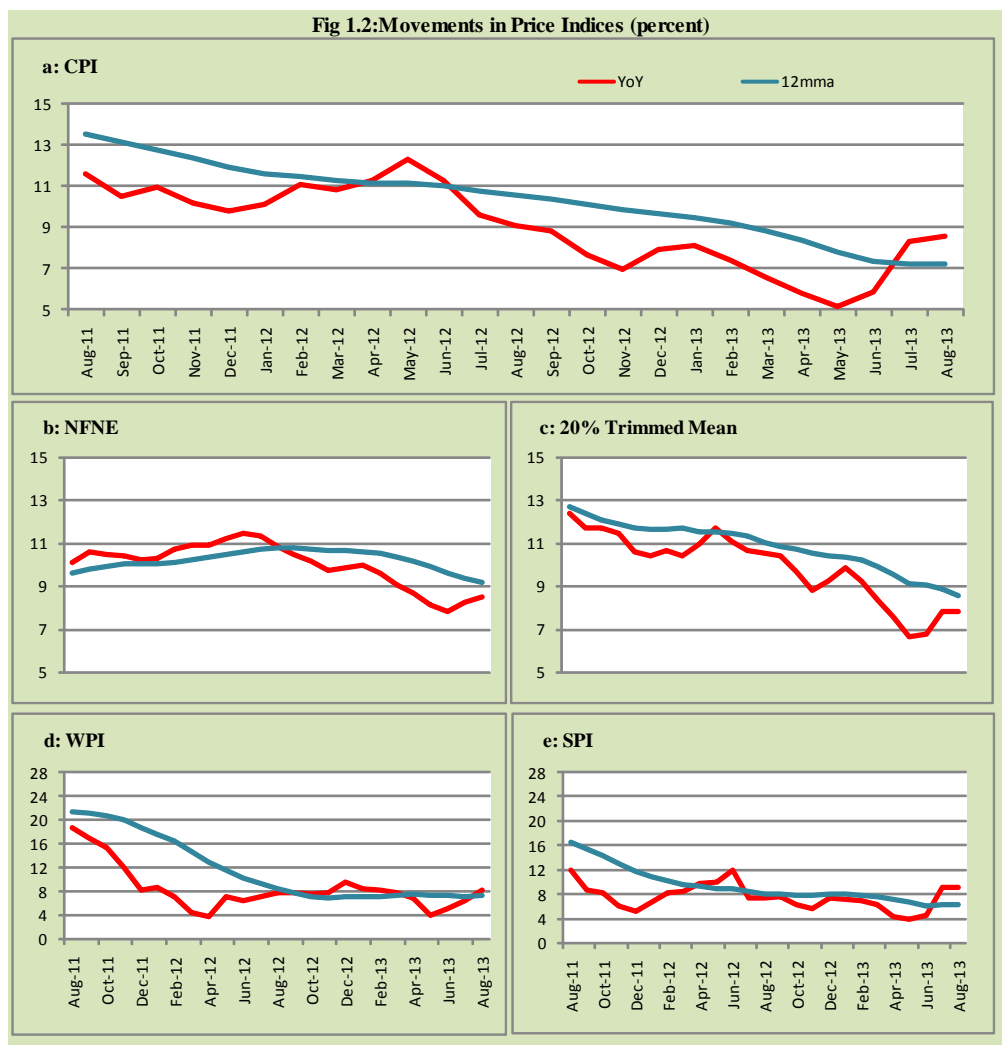
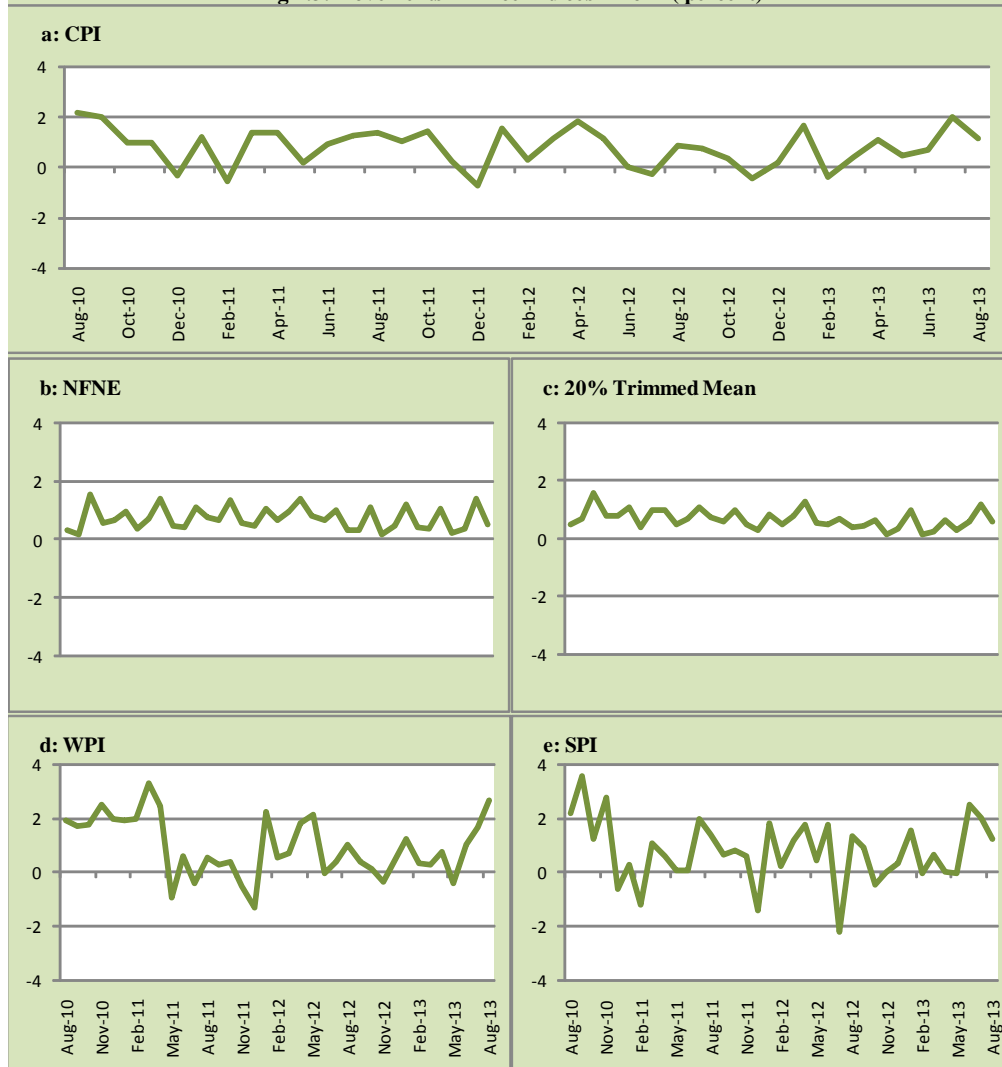
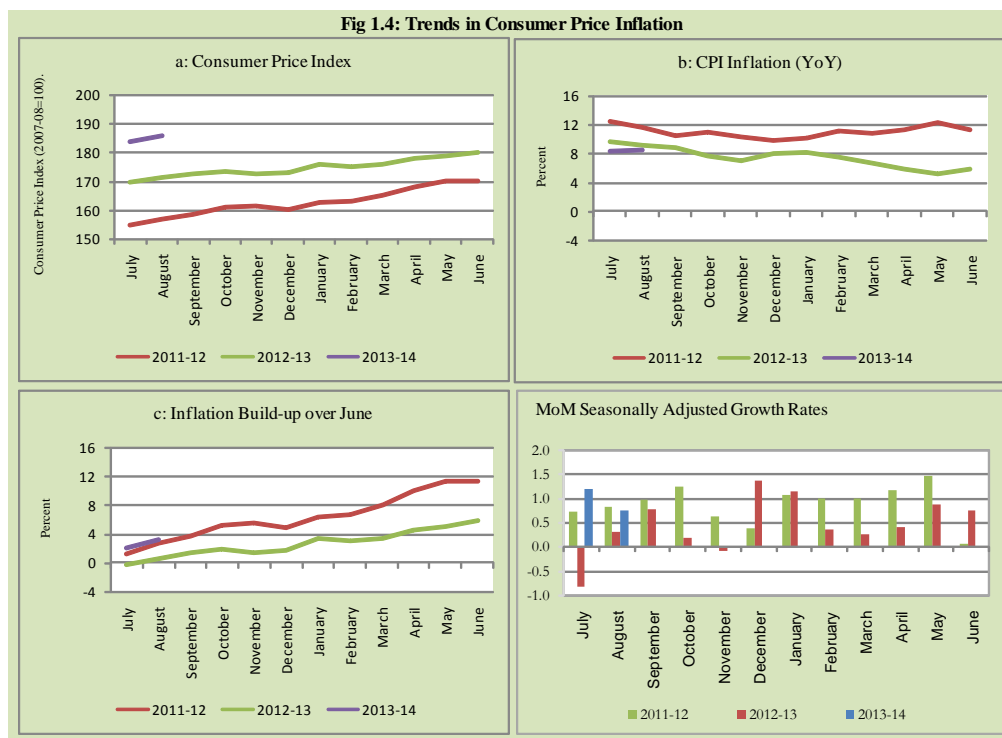


Fig 1.3: Movements in Price Indices -MoM (percent)





2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed a mixed trend during August 2013. Among these five cities, the lowest inflation was observed in Lahore at 6.6 percent while the highest inflation was observed in Peshawar at 11.2 percent (Table A6 of annexure-A).

Table 2.1 City-wise Inflation of Selected Cities (percent)

	Aug-12		Jul-13		Aug-13	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	0.9	9.1	2.0	8.3	1.2	8.5
Islamabad	1.1	8.6	1.7	7.6	1.2	7.7
Karachi	1.6	7.9	1.7	8.2	1.2	7.8
Lahore	0.8	8.7	1.4	5.8	1.5	6.6
Peshawar	1.1	6.9	2.5	11.0	1.3	11.2
Quetta	1.0	8.8	2.7	9.2	0.4	8.7

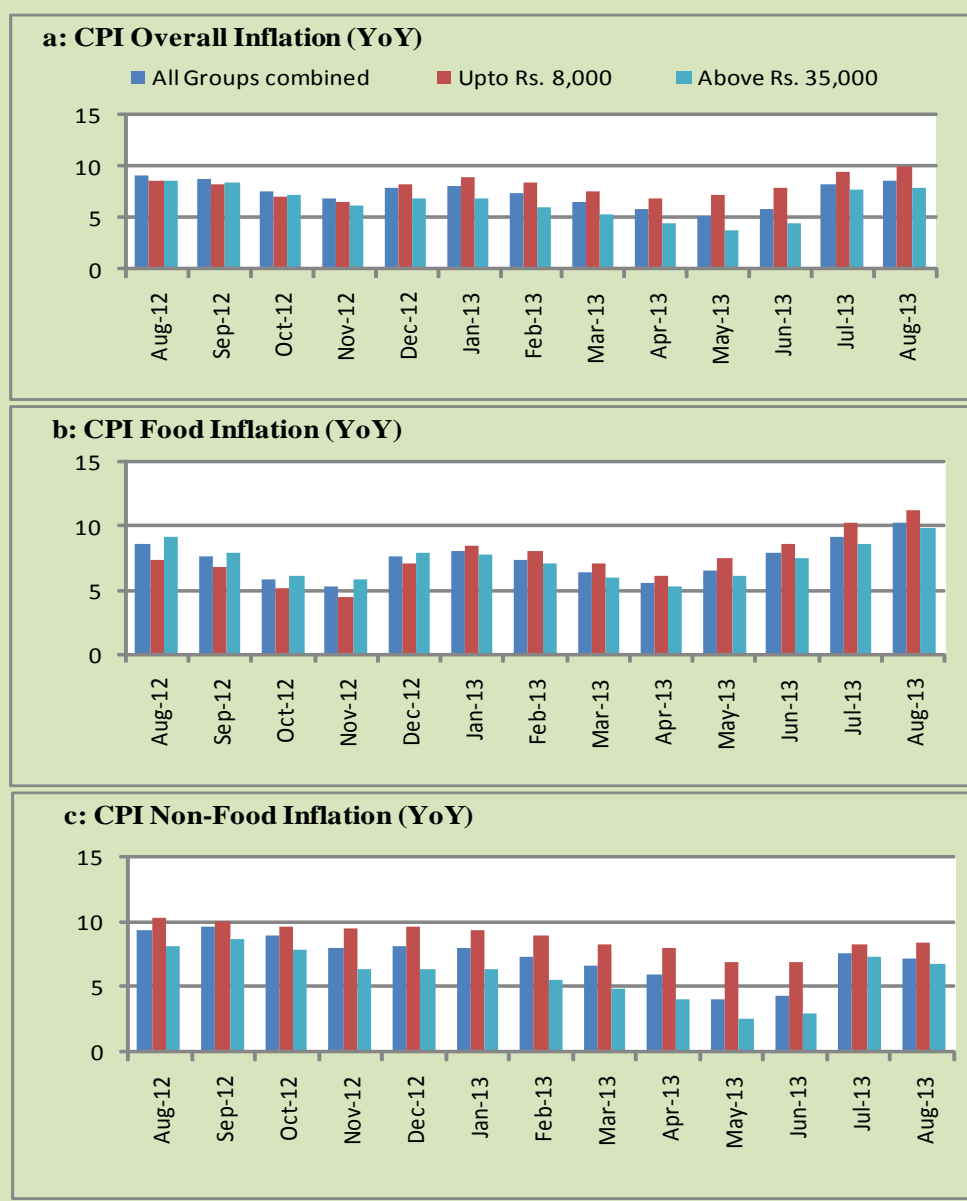
3. Income Group wise Inflation

Income group- wise data showed that income group above Rs. 35,000 witnessed lower inflation than the overall inflation in CPI basket during August 2013 for general, food and non-food groups and also lowest among the groups. The lowest income group (Up to Rs. 8, 000) has the highest inflation among the groups during the month of August 2013 (Table A7 of annexure-A).

Table 3.1 Income Group- wise Inflation (YoY)

Income Groups	General			Food			Non-food		
	Aug-12	Jul-13	Aug-13	Aug-12	Jul-13	Aug-13	Aug-12	Jul-13	Aug-13
All Groups Combined	9.1	8.3	8.5	8.5	9.2	10.3	9.4	7.6	7.3
Up to Rs. 8,000	8.6	9.4	10.0	7.4	10.2	11.2	10.3	8.4	8.4
Rs. 8,001- 12,000	9.8	8.9	9.4	7.8	9.7	10.7	12.2	8.0	8.0
Rs. 12,001- 18,000	9.7	8.6	9.1	8.2	9.5	10.5	11.4	7.8	7.7
Rs. 18,001- 35,000	8.3	8.5	8.9	8.6	9.2	10.3	8.1	7.8	7.6
Above Rs. 35,000	8.5	7.8	7.9	9.1	8.7	9.9	8.2	7.4	6.9

Fig 3.1: Income Group- wise Inflation



4. Weighted Contribution

The weighted contribution of food group in the overall inflation increased to 50.74 percent during August 2013 from 46.72 percent in July 2013. It was 39.99 percent in August 2012.

The weighted contribution of non-food group showed decrease to touch 49.26 percent in August 2013 from 53.28 percent in July 2013.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)

Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
Aug-12	39.99	12.01	12.97	12.64	3.85	18.55
Sep-12	36.69	11.86	13.06	16.16	3.86	18.38
Oct-12	32.26	13.20	14.34	15.11	4.52	20.57
Nov-12	32.78	14.79	15.75	10.05	4.90	21.74
Dec-12	40.58	14.29	13.76	8.43	4.39	18.56
Jan-13	41.94	13.53	11.88	10.07	4.20	18.38
Feb-13	41.59	15.24	12.70	8.00	3.93	18.53
Mar-13	40.11	14.02	14.27	7.14	4.58	19.89
Apr-13	39.66	15.99	16.52	1.30	4.17	22.36
May-13	52.66	17.82	4.28	-0.34	4.91	20.67
Jun-13	55.58	17.03	3.84	3.09	4.46	15.99
Jul-13	46.72	13.37	20.20	5.27	3.25	11.19
Aug-13	50.74	13.02	19.40	1.98	3.35	11.51

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change													
	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13
General	41.4	48.6	54.7	39.6	49.6	51.4	37.9	39.1	40.9	44.5	48.4	58.0	53.5
Food & Non-Alcoholic Beverages	47.8	44.2	38.3	19.1	33.0	49.6	15.2	22.5	23.9	34.6	50.4	53.5	39.8
Alcoholic Beverages & Tobacco	83.3	83.3	33.3	83.3	83.3	33.3	0.0	0.0	0.0	33.3	100.0	100.0	16.7
Clothing & Footwear	76.3	64.4	84.7	79.7	89.8	72.9	84.7	59.3	67.8	67.8	55.9	76.3	76.3
Housing, Water, Elect, Gas & other Fuels	30.6	38.9	50.0	22.2	38.9	66.7	22.2	33.3	58.3	16.7	50.0	66.7	41.7
Furnishing & Household Equip. Maintenance etc	20.3	81.2	79.7	69.6	76.8	63.8	53.6	68.1	69.6	78.3	76.8	78.3	85.5
Health	23.1	41.0	23.1	33.3	23.1	30.8	17.9	15.4	23.1	20.5	10.3	17.9	28.2
Transport	41.9	37.2	48.8	11.6	37.2	44.2	46.5	27.9	14.0	27.9	32.6	53.5	39.5
Communication	8.3	16.7	50.0	33.3	50.0	66.7	16.7	8.3	16.7	33.3	16.7	58.3	33.3
Recreation & Culture	23.1	10.3	35.9	17.9	20.5	28.2	25.6	25.6	35.9	30.8	28.2	33.3	41.0
Education	43.8	31.3	43.8	12.5	25.0	6.3	25.0	75.0	25.0	43.8	43.8	50.0	68.8
Restaurant & Hotels	33.3	83.3	100.0	66.7	100.0	83.3	100.0	66.7	50.0	83.3	66.7	100.0	100.0
Miscellaneous	60.0	54.3	80.0	65.7	65.7	51.4	51.4	57.1	54.3	60.0	57.1	60.0	65.7
NFNE	38.8	49.1	62.1	46.4	55.3	52.7	45.9	45.6	49.1	49.4	47.9	58.6	58.6

See annexure B (Technical Notes) for the definition of Inflation Diffusion Index.

6. Domestic Commodity Prices

Table 6.1 Inflation in Domestic CPI Food Commodities

Sr. No	Item	Unit	Aug-12		Jul-13		Aug-13	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	7.42	1.37	22.47	3.49	26.78	4.94
2	Wheat Flour Bag	10 Kg	6.88	1.19	22.27	1.90	27.16	5.23
3	Rice Basmati Sup. Qlty.	Kg	18.54	1.00	18.48	1.13	18.57	1.08
4	Pulse Masoor (Washed)	Kg	-8.05	-0.33	9.82	2.46	9.92	-0.23
5	Pulse Moong (Washed)	Kg	-14.67	-0.98	2.71	5.84	3.43	-0.29
6	Pulse Mash (Washed)	Kg	-11.32	-0.49	-3.88	-0.43	-3.39	0.02
7	Pulse Gram	Kg	46.13	-1.14	-25.56	-5.27	-28.25	-4.71
8	Vegetable Ghee (Loose)	Kg	3.11	-0.66	-5.69	-0.08	-5.26	-0.21
9	Sugar Refined	Kg	-26.70	-0.96	-0.63	0.73	-0.07	-0.40
10	Milk Fresh (Unboiled)	Ltr	12.85	1.21	7.74	0.46	7.84	1.30
11	Tea- Tapal Danedar	200 Gm	-1.96	0.00	36.24	2.63	36.24	0.00
12	Beef With Bone Av. Qlty.	Kg	10.99	0.29	4.21	0.81	3.91	0.00
13	Mutton Av. Qlty.	Kg	12.18	0.35	6.13	0.73	6.83	1.02
14	Chicken Farm Broiler (Live)	Kg	-4.66	-11.68	-0.76	-3.71	26.02	12.15
15	Eggs Farm	Doz	5.09	6.23	8.35	8.95	8.34	6.23
16	Potatoes	Kg	-3.82	6.44	11.46	24.87	12.43	7.36
17	Onion	Kg	46.28	28.03	61.82	4.09	70.08	34.57
18	Tomatoes	Kg	78.64	111.67	247.07	79.83	45.05	-11.54
19	Ginger	Kg	-25.59	0.08	36.17	6.59	40.93	3.58
20	Garlic	Kg	-28.11	5.54	21.58	-2.77	17.49	2.00

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Aug-12		Jul-13		Aug-13	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-2.5	4.2	3.2	2.6	0.1	1.1
Food	2.4	0.7	-0.8	-0.9	-6.5	-5.2
Metals	-25.9	-5.8	-5.7	1.8	4.9	4.8
Energy	2.7	7.5	6.2	4.1	1.1	2.3
Agricultural Raw Material	-13.5	-1.0	4.2	-2.5	4.0	-1.2
Cotton	-26.0	0.5	10.3	-0.5	9.9	0.1

Source: IMF

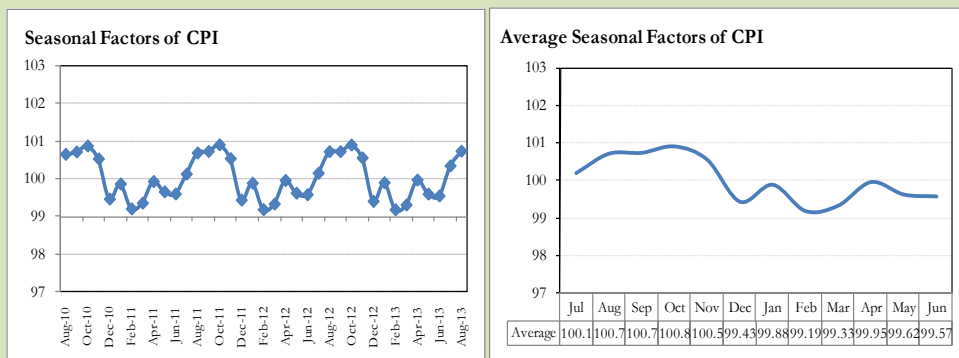
8. Seasonal Adjustment in CPI

Seasonal adjustment is the process of estimating and removing the seasonal effects from a time series after decomposing it into seasonal, trend, cycle and irregular components. The purpose is to identify the different components of the time series and thus provide a better understanding of its underlying behavior. Seasonally adjusted changes are usually preferred for analyzing general price trends in the economy because they eliminate the effect of changes that normally occur at the same time and in about the same magnitude every year. Various statistical methods can be used to decompose a time series into its constituent components. The State Bank of Pakistan uses X-12- ARIMA Seasonal Adjustment Method for this purpose.

The changes in consumer prices are normally reported in terms of year-on-year and month-on-month basis. Seasonal adjustment is particularly useful for analyzing month-on-month changes. The monthly data series of Consumer Price Index (CPI) from July 2008 to August 2013 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

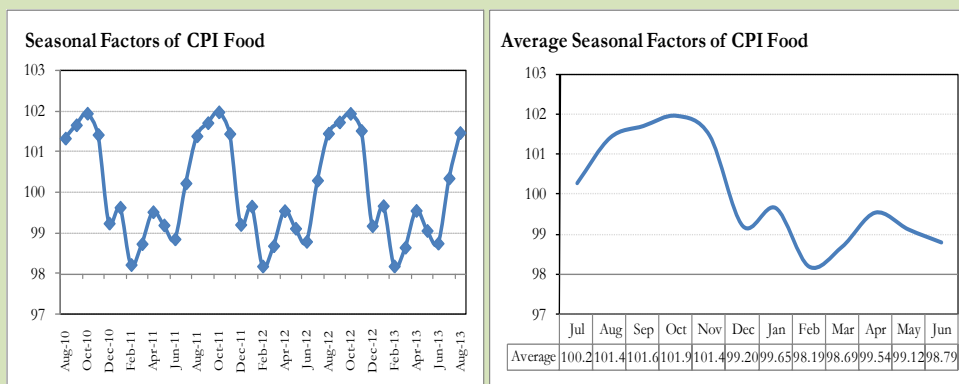
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November & April and downward seasonality in the remaining months of the year. Upward and downward seasonality is above and below the trend line respectively. It is important to note that seasonal factors are estimates based on present and past experience and that future data may not necessarily show the same pattern of seasonal factors.

Fig. 8.1 Seasonal Factors of CPI



Note: Data Available in Annex Table 16.

Fig. 8.2 Seasonal Factors of CPI Food



Note: Data Available in Annex Table 17.

Figures 8.3 & 8.4 show that seasonally adjusted series are relatively smoother than the original series due to the removal of the seasonal variations. The trend follows the long-term movement in original series, and is smoother than the original series because some irregular fluctuations have been removed.

Fig. 8.3 Seasonal Plots of CPI

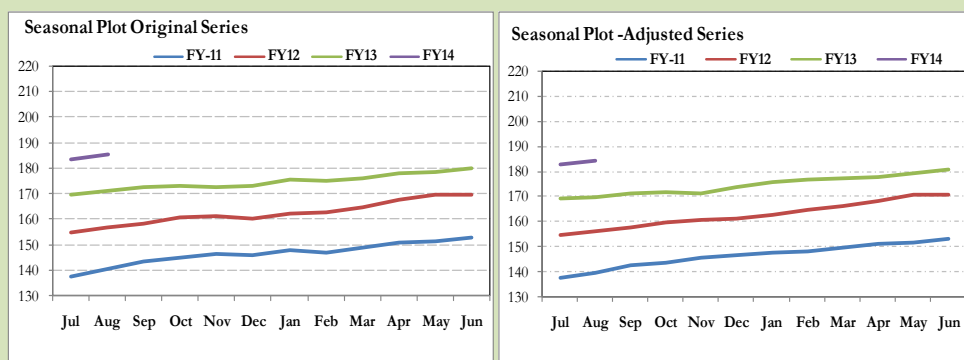
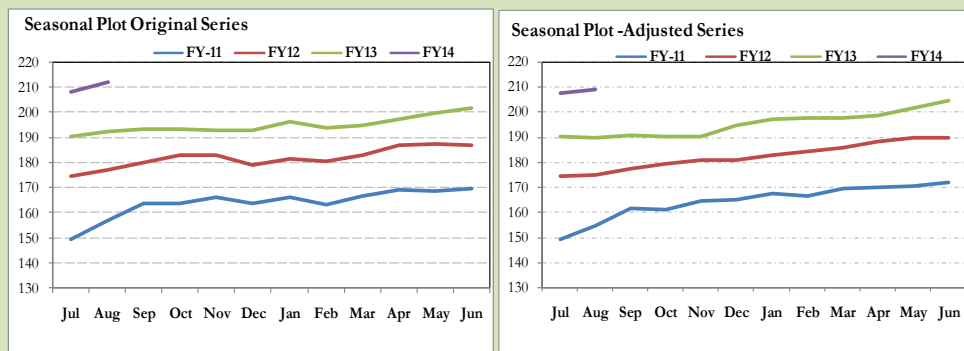


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for August 2013 stood at 184.36 against 185.71 in original series showing a decrease of 1.35 on account of adjustment of upward seasonality in August 2013.

Seasonally adjusted CPI food group for August 2013 stood at 209.21 against 212.27 in original series showing a decrease of 3.06 on account of adjustment of upward seasonality in August 2013.

Month-on-month change of seasonally adjusted CPI series stood at 0.77% reflecting decrease during August 2013 over July 2013 and an increase of 1.16% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at 0.84% reflecting decrease during August 2013 over July 2013 and an increase of 1.96% in original series.

It is important to note that inflation rates should be analyzed on the basis of seasonally adjusted rates. This is especially needed for inflation rates on month-on-month basis. The most recent annual rate of inflation is usually indicated by annualizing the seasonally adjusted month-on-month rate. Annualized rate of CPI inflation in August 2013 (corresponding to the seasonally adjusted month-on-month rate) is 9.62 percent.

Fig. 8.5 Month-on-Month Percent Changes in CPI

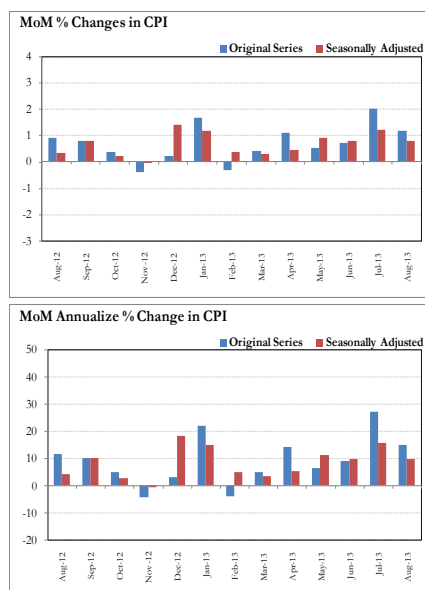
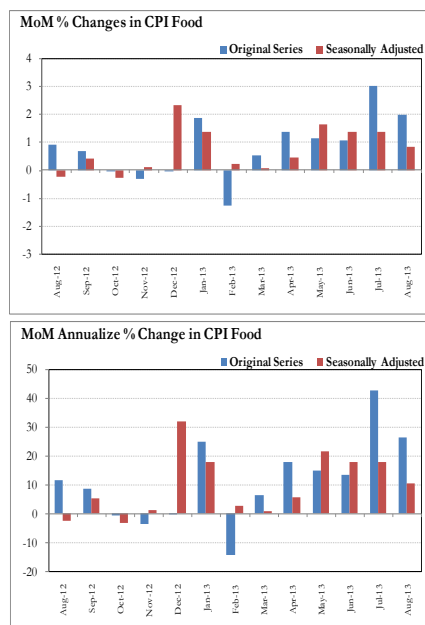


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weight	MoM change			YoY change		
		Aug-12	Jul-13	Aug-13	Aug-12	Jul-13	Aug-13
I. Food Group	37.5	0.9	3.0	2.0	8.5	9.2	10.3
Food & Non-Alcoholic Beverages	34.8	1.0	2.7	2.1	8.1	8.9	10.1
Alcoholic Beverages & Tobacco	1.4	0.3	11.7	0.0	18.1	14.8	14.5
Restaurant & Hotels	1.2	0.2	1.5	1.1	10.1	9.0	10.1
II. Non-Food Group	62.5	0.9	1.3	0.6	9.4	7.6	7.3
Clothing & Footwear	7.6	0.9	2.1	1.0	15.6	14.9	15.0
Housing, Water, Elect, Gas & other Fuels	29.4	0.0	1.9	0.0	4.4	6.5	6.5
Furnishing & Household Equip. Maintenance etc	4.2	0.0	0.8	0.9	17.4	7.6	8.6
Health	2.2	1.7	0.3	0.5	15.6	7.7	6.5
Transport	7.2	4.5	0.8	1.0	15.4	5.7	2.2
Communication	3.2	0.0	0.7	0.0	0.2	4.9	4.9
Recreation & Culture	2.0	0.3	0.4	1.6	18.8	8.4	9.7
Education	3.9	0.6	0.4	1.1	9.9	7.6	8.1
Miscellaneous	2.8	0.9	-0.7	1.6	11.7	5.4	6.0
Headline	100	0.9	2.0	1.2	9.1	8.3	8.5

Table A2: Distribution of Price changes (YoY) of CPI basket											
Groups	% changes	No. of items in each inflation range									
		Total number of items		Decrease or no change (0% or less)		Subdued increase (>0% but <5%)		Moderate increase (5% but less than 10%)		Double digit increase (10% or more)	
		Aug-12	Aug-13	Aug-12	Aug-13	Aug-12	Aug-13	Aug-12	Aug-13	Aug-12	Aug-13
I. Food Group	10.3	128	128	25	28	19	17	31	34	53	49
Food & Non-Alcoholic Beverages	10.1	116	116	25	28	19	17	26	29	46	42
Alcoholic Beverages & Tobacco	14.5	6	6	0	0	0	0	2	2	4	4
Restaurant & Hotels	10.1	6	6	0	0	0	0	3	3	3	3
II. Non-Food Group	7.3	348	348	39	53	42	64	54	121	213	110
Clothing & Footwear	15.0	59	59	2	3	3	3	5	14	49	39
Housing, Water, Elect, Gas & other Fuels	6.5	36	36	6	6	1	4	12	19	17	7
Furnishing & Household Equip. Maintenance etc	8.6	69	69	1	0	7	13	13	39	48	17
Health	6.5	39	39	12	17	5	6	4	7	18	9
Transport	2.2	43	43	2	12	4	11	4	17	33	3
Communication	4.9	12	12	5	2	3	3	1	3	3	4
Recreation & Culture	9.7	39	39	6	8	9	12	8	6	16	13
Education	8.1	16	16	4	1	4	5	0	6	8	4
Miscellaneous	6.0	35	35	1	4	6	7	7	10	21	14
Overall	8.5	476	476	64	81	61	81	85	155	266	159

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

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in August 2013

Top 15 Contributors		YoY Change			Weighted Contribution
Items/ Contributors		Weights	Aug-12	Aug-13	
Ranked by Weighted Contribution					
1	House Rent	21.81	6.52	8.19	16.74
2	Wheat Flour	4.16	5.89	27.07	12.97
3	Milk Fresh	6.68	12.95	7.68	7.48
4	Fresh Vegetable	1.68	-5.27	27.18	5.40
5	Onion	0.53	46.27	70.08	5.05
6	Chicken	1.36	-4.66	26.03	4.38
7	Education	3.94	9.91	8.09	3.35
8	Tea	0.84	1.27	25.02	2.90
9	Footwear	1.55	16.28	18.51	2.80
10	Cotton Cloth	1.73	8.68	14.94	2.76
11	Tomatoes	0.44	78.64	45.05	2.68
12	Cigarette	1.39	18.26	14.65	2.65
13	Rice	1.58	12.80	13.21	2.41
14	Tailoring	0.88	18.26	15.78	1.90
15	Meat	2.43	11.38	4.88	1.75
Total		51.02			75.24
Bottom 15 Contributors					
1	Spices	0.54	12.57	-18.99	-1.89
2	Fresh Fruits	1.86	18.31	-4.37	-1.33
3	Vegetable Ghee	2.07	5.09	-4.86	-1.13
4	Pulse Gram	0.24	46.13	-28.25	-1.09
5	Besan	0.15	43.65	-25.99	-0.63
6	Gram Whole	0.16	23.96	-21.24	-0.54
7	Cooking Oil	1.75	13.43	-2.42	-0.48
8	Pulse Mash (Washed)	0.21	-11.32	-3.39	-0.09
9	Mustard Oil	0.10	9.74	-1.52	-0.02
10	Sugar	1.04	-26.70	-0.07	-0.01
11	Electricity	4.40	16.24	0.00	0.00
12	Medical Equipment	0.01	13.54	7.24	0.01
13	Kerosene Oil	0.01	10.80	10.76	0.01
14	Motor Vehicle Tax	0.11	26.89	1.13	0.01
15	Blades	0.03	11.35	5.00	0.02
Total		12.69			-7.15

Table A3.1: Top and Bottom 15 Contributors to CPI Inflation (MoM) in August 2013					
Top 15 Contributors		MoM Change		Weighted Contribution	
Items/ Contributors	Weights	Jul-13	Aug-13		
Ranked by Weighted Contribution					
1	Onion	0.53	4.09	34.57	21.62
2	Wheat Flour	4.16	2.42	4.49	17.97
3	Chicken	1.36	-3.71	12.15	15.79
4	Milk Fresh	6.68	0.44	1.26	8.94
5	Fresh Vegetable	1.68	2.94	4.15	6.92
6	Motor Fuel	3.03	1.51	1.72	4.43
7	Potatoes	0.47	24.87	7.36	3.43
8	Education	3.94	0.43	1.08	3.30
9	Personal Equipments	0.84	-2.62	3.09	2.99
10	Egg	0.46	8.95	6.23	2.22
11	Ready Made Garment	0.97	1.63	2.30	1.95
12	Text Books	0.57	0.00	2.63	1.83
13	Tailoring	0.88	3.72	1.90	1.79
14	Bakery & Confectionary	1.16	0.28	1.66	1.65
15	Wheat	0.35	3.50	4.94	1.57
Total		27.09			96.40
Bottom 15 Contributors					
1	Tomatoes	0.44	79.83	-11.54	-7.71
2	Fresh Fruits	1.86	13.59	-2.47	-5.06
3	Cooking Oil	1.75	-0.57	-0.90	-1.19
4	Pulse Gram	0.24	-5.27	-4.71	-0.94
5	Gram Whole	0.16	-3.96	-3.41	-0.48
6	Besan	0.15	-9.27	-3.37	-0.43
7	Sugar	1.04	0.74	-0.40	-0.38
8	Spices	0.54	-1.15	-0.21	-0.11
9	Pulse Moong	0.23	5.84	-0.29	-0.08
10	Pulse Masoor	0.27	1.99	-0.29	-0.06
11	Mustard Oil	0.10	0.13	-0.57	-0.04
12	Woolen Readymade Garments	0.40	0.00	0.00	0.00
13	Electricity	4.40	0.00	0.00	0.00
14	Motor Vehicle Tax	0.11	0.00	0.00	0.00
15	News Papers	0.19	0.00	0.00	0.00
Total		11.90			-16.49

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in August 2013

Table 1: Top 15 Items/Contributors to Inflation (YoY) in August 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Aug-12	Aug-13	
A. Ranked by Percentage Change					
1	Onion	0.53	46.27	70.08	5.05
2	Tomatoes	0.44	78.64	45.05	2.68
3	Fresh Vegetable	1.68	-5.27	27.18	5.40
4	Wheat Flour	4.16	5.89	27.07	12.97
5	Wheat	0.35	7.41	26.78	1.03
6	Chicken	1.36	-4.66	26.03	4.38
7	Postal Services	0.07	5.10	25.98	0.20
8	Tea	0.84	1.27	25.02	2.90
9	Gur	0.02	-17.79	21.69	0.07
10	Wheat Product	0.10	3.85	19.37	0.21
11	Woolen Readymade Garments	0.40	16.34	19.21	0.84
12	Footwear	1.55	16.28	18.51	2.80
13	Text Books	0.57	40.47	15.84	1.42
14	Tailoring	0.88	18.26	15.78	1.90
15	Dopatta	0.44	18.98	15.13	0.82
Total		13.39			42.69
B. Ranked by Weights					
1	House Rent	21.81	6.52	8.19	16.74
2	Milk Fresh	6.68	12.95	7.68	7.48
3	Electricity	4.40	16.24	0.00	0.00
4	Wheat Flour	4.16	5.89	27.07	12.97
5	Education	3.94	9.91	8.09	3.35
6	Communication & Apparatus	3.15	0.04	4.32	1.14
7	Motor Fuel	3.03	16.21	0.89	0.34
8	Transport Services	2.70	14.85	1.71	0.63
9	Meat	2.43	11.38	4.88	1.75
10	Vegetable Ghee	2.07	5.09	-4.86	-1.13
11	Fresh Fruits	1.86	18.31	-4.37	-1.33
12	Cooking Oil	1.75	13.43	-2.42	-0.48
13	Cotton Cloth	1.73	8.68	14.94	2.76
14	Fresh Vegetable	1.68	-5.27	27.18	5.40
15	Rice	1.58	12.80	13.21	2.41
Total		63.00			52.04
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 8.5 percent in August, 2013.					

Table A3.3: Top Ten Contributors to CPI Food Inflation (YoY) in August 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Aug-12	Aug-13	
A. Ranked by Weighted Contribution					
1	Wheat Flour	4.16	5.89	27.07	12.97
2	Milk Fresh	6.68	12.95	7.68	7.48
3	Fresh Vegetable	1.68	-5.27	27.18	5.40
4	Onion	0.53	46.27	70.08	5.05
5	Chicken	1.36	-4.66	26.03	4.38
6	Tea	0.84	1.27	25.02	2.90
7	Tomatoes	0.44	78.64	45.05	2.68
8	Cigarette	1.39	18.26	14.65	2.65
9	Rice	1.58	12.80	13.21	2.41
10	Meat	2.43	11.38	4.88	1.75
Total		21.10			47.68
B. Ranked by Percentage Change					
1	Onion	0.53	46.27	70.08	5.05
2	Tomatoes	0.44	78.64	45.05	2.68
3	Fresh Vegetable	1.68	-5.27	27.18	5.40
4	Wheat Flour	4.16	5.89	27.07	12.97
5	Wheat	0.35	7.41	26.78	1.03
6	Chicken	1.36	-4.66	26.03	4.38
7	Tea	0.84	1.27	25.02	2.90
8	Gur	0.02	-17.79	21.69	0.07
9	Wheat Product	0.10	3.85	19.37	0.21
10	Cigarette	1.39	18.26	14.65	2.65
Total		10.87			37.35
C. Ranked by Weights					
1	Milk Fresh	6.68	12.95	7.68	7.48
2	Wheat Flour	4.16	5.89	27.07	12.97
3	Meat	2.43	11.38	4.88	1.75
4	Vegetable Ghee	2.07	5.09	-4.86	-1.13
5	Fresh Fruits	1.86	18.31	-4.37	-1.33
6	Cooking Oil	1.75	13.43	-2.42	-0.48
7	Fresh Vegetable	1.68	-5.27	27.18	5.40
8	Rice	1.58	12.80	13.21	2.41
9	Cigarette	1.39	18.26	14.65	2.65
10	Chicken	1.36	-4.66	26.03	4.38
Total		24.98			34.11
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 Food, which is 10.3 percent in August, 2013.					

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in August 2013

Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Aug-12	Aug-13	
A. Ranked by Weighted Contribution					
1	House Rent	21.81	6.52	8.19	16.74
2	Education	3.94	9.91	8.09	3.35
3	Footwear	1.55	16.28	18.51	2.80
4	Cotton Cloth	1.73	8.68	14.94	2.76
5	Tailoring	0.88	18.26	15.78	1.90
6	Text Books	0.57	40.47	15.84	1.42
7	Ready Made Garment	0.97	18.61	12.45	1.40
8	Woolen Cloth	0.88	18.64	12.23	1.36
9	Household Servant	1.04	28.72	10.07	1.30
10	Personal Care	1.49	14.92	6.52	1.17
Total		34.88			34.21
B. Ranked by Percentage Change					
1	Postal Services	0.07	5.10	25.98	0.20
2	Woolen Readymade Garments	0.40	16.34	19.21	0.84
3	Footwear	1.55	16.28	18.51	2.80
4	Text Books	0.57	40.47	15.84	1.42
5	Tailoring	0.88	18.26	15.78	1.90
6	Dopatta	0.44	18.98	15.13	0.82
7	Cotton Cloth	1.73	8.68	14.94	2.76
8	Cleaning & Laundering	0.21	20.18	13.89	0.37
9	Sewing Needle & Dry Cell	0.15	11.23	13.66	0.21
10	Cosmetics	0.39	11.55	13.34	0.52
Total		6.38			11.85
C. Ranked by Weights					
1	House Rent	21.81	6.52	8.19	16.74
2	Electricity	4.40	16.24	0.00	0.00
3	Education	3.94	9.91	8.09	3.35
4	Communication & Apparatus	3.15	0.04	4.32	1.14
5	Motor Fuel	3.03	16.21	0.89	0.34
6	Transport Services	2.70	14.85	1.71	0.63
7	Cotton Cloth	1.73	8.68	14.94	2.76
8	Gas	1.58	-42.09	7.05	1.02
9	Footwear	1.55	16.28	18.51	2.80
10	Personal Care	1.49	14.92	6.52	1.17
Total		45.39			29.96

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 Non-food, which is 7.3 percent in August, 2013.

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: August 2013

Groups	Decrease or no change	Subdued increase (Up to 5%)	Moderate increase (5 to 10%)	More than 10% increase
Food & Non-Alcoholic Beverages	Chillies Powd.National 200 Gm, Pulse Gram, Besan Av. Qlty., Chillies Powder Loose, Gram Whole Yellow Av.Qlty, Bananas	Squash-Mitchelles, Butter Local Packed, Guava, Beef With Bone Av.Qlty., Cold Drink (Standard Size), Pulse Moong (Washed)	Pulse Masoor (Washed), Fish-Rahu Medium Size, Pulse Masoor (Whole), Mineral Water Nestle 1.5 Litre	Onion, Chillies Green, Karaila, Ice Cream Walls, Tomatoes, Cucumber (Kheera), Ginger, Tapal Danedar Tea 200 Gm, Lady Finger, Tea Lipton Yellow Label 200 Gm, Brinjal, Turai, Mango Kalmi, Wheat Flour Bag, Wheat Flour Avg. Qlty
Alcoholic Beverages & Tobacco			Betel Nuts, Betel Leaves	Cigarettes K-20,S, Cigarettes Gold Leaf 20,S, Cigarettes Morven Gold 20,S, Cigarettes Capstan 20,S
Clothing & Footwear	Gents Spoung Chappal Bata, Ladies Spoung Chappal Bata, Ladies Sandal Bata	Sewing Thread/Reel, Heavy Wt Suiting Law.Pur Av. Qlty, Pullover Ladies Oxford/Bon	Second-Hand Coat For Men, School Uni. Pant, Shirt Boys, Pullover Gents Oxford/Bon, Footwear Local (Female), Azarband Cotton Avg. Qlty	Gents Shoe, Art 1109 Servis, Gents Shoes Paul Bata, Sports Shoes, Secondhand Sweater for Men, Georgette Av.Qlty, Child Shoe Power Lite Bata, Shirting Av.Qlty., Tailoring Charges Pant (Men), Washing Charges Paint & Shirt, Second hand Winter Jacket
Housing, Water, Elect, Gas & other Fuels	Elect. Charges Upto 50 Units, Elect. Charges Above 1000 Units Elect. Charges 01 - 100 Units	Sand (Black Pit Sand), Bricks (New) 1st Class, Bajree, Iron Bar (M.S. Bar) 1/2"	Electrician Wage Rate(P/Day), Cement Blocks (6"X8"X12"), Carpenter Wage Rate, Synthetic Enemal ICI, Synthetic Enemal Robialac	Electrician Wage Rate(P/Pnt), Plumber Wage Rate, Unskilled Labour Wage Rat, Kerosene Oil, Timber Shesham Log, Mason (Raj) Wage Rate, Cement (Local)
Furnishing & Household Equip. Maintenance etc		Tube Light Philips 40 Watt, Toilet Paper Roll (R.Petal), Mattress Single (4"Thick), Thermos Starvac 1 Ltr, Table Spoon S. Steel Sup. Qlty	Sofa Set Wooden With Foam, Bulb Philips 100-Watt, Dining Table 6 Chairs, Boot Polish Liquid (Cherry), Lota Plastic (Med Size) Avg. Qlty	Match Box (Small), Boot Polish Cherry/Kiwi 50 Ml, Cleanser Powder Vim 1000 Gms, Washing Powder (Wheel/ Bonus), Robin Blue (35 Gms), Tea Set Pak. China Wear 21 Pcs, Surf Excel 400 Gms Poly Bag
Health	Calcium Syrup Sandoz, Burnol Cream 30 Gm, Amoxil Capsule 250 Mg., Polyfax Eye Ointment, Daonil Tab. 5 Mg.	Sugar Test (Random/Fasting), Gripe-Water Woodward's, Dettol (Medium), ECG Charges, Cac. 1000 Tab, Hydryllin Syrup 120 Ml.	Jouhar Joshanda, Glycerin Small Bottle, Cotton Bandage 2" - 4", Blood Test (Cp) Charges, Urine Test (Dr) Charges	O.R.S. (Nimcol), Galkos-D (450 Gm), Sancos Syrup (50 Ml.), Trisil Tab., Ear Drops (Cardisorpine), Saniplast (1 Putty), Doctor (MBBS) Clinic Fee, X-Ray (Chest) Charges, Phenergan Syrup 120 Ml.
Transport	Train Fare A/C Slp. 101-500, Train Fare A/C Slp > 500K, Train Fare A/C Slp. 1-100, CNG, Train Fare Eco. 1-100 Km.	Train Fare 1st Slp. 1-100, Train Fare Eco. > 500 Km., Taxi 4 Seater Fare, Motorcycle Yamaha 100 CC, Full Tonga Charges	Petrol Super, Motor Cycle Service Charges, Car Suzuki 800 CC (w/o. AC), Tyre Car w/o Tube, Car Service Charges, Auto Rickshaw Fare	Bus Fare Outside City (Non A/C), Cycle Overhauling Charges, Gas Cylinder S. Size (L.P.G)
Communication	Postal Envelope Domestic, Mobile Cell Charges	Postal Envelope For Saudi Arabia, Telephone Set Av. Qlty, Mobile Set Nokia/Sony/Ericsson Av.Qlty	Telephone Charges Local Call, Telephone Charges Outside City, Internet Charges	U.M.S. Reg Charges Min., T.C.S. Ch. Min.Within Zone, Postal Registration Charges, Fax Charges (Local)
Recreation & Culture	English Book BA/B.Sc, V.C.P. Panasonic/LG/National, T.V. 20" Colored Sony, TV License Fee Domestic, Weekly "Mag"	Video Cassette Blank, Tdk/Sony, Pencil Goldfish/Deer, Radio With C.Player National, Maths Book Class IX or X, Personnel Computer (Branded)	Exercise Book Lined 80/10, Urdu Book 1st Year/ Inter, Maths Book 1st. Year (T.B. Board), Ball Pen (Local), Fountain Pen Hero/Wings/China	Maths Book Calss V (T.B.Board), Urdu Book Class V (T.B.Board), Daily "Dawn", English Book Class IX or X, Daily "Jang", Daily "Nawa-e-Waqt", Cinema A/C High Class, Cinema Non-A/C High Class, Pen Ink Dollor 57 Ml Bottle, Pakistan Studies Book BA/B.Sc
Education	Coaching Charges for Class XI/ XII Commerce Group	Govt. College Fee 1st. Year, Govt. College Fee 4Th. Year, I.T. Tuition Fees, Govt. Med. College Fee MBBS 1st Year	Pvt School Fee Eng. Med (Class-V), Coaching Fee For Class IX/ X, MBA Tuition Fee	Govt. University Fee MSc/ MA, Pvt Med. College Fee MBBS (1st Year), Pvt Eng.College Fee (1st Year), Govt. Engg. College Fee 1st Year
Restaurant & Hotels			Tea Prepared (Ordinary), Bread Tandoori St. Size, Chicken Biryani Full/Double	Cooked Beef (Av. Hotel), Cooked Mutton (Av. Hotel), Cooked Dal (Av. Hotel)
Miscellaneous	Toothpaste Med Size Colgate 70Gm, Silver Tezabi 24 Ct, Gold Tezabi 24 Ct	Wrist Watch Ladies Citizen, Talc Powder Viceroy/ Black Cat, Wrist Watch Gents Citizen	Toothbrush Shield, Disposable Razor Gillette-II, Lipstick S. Miss/Medora, Hair Removing Cream (EU-Cream)	Perfume Med. Size Medora/Broche, Toilet Soap Lux 95 Gms, Purse Ladies (Leather) Av. Qlty, Artificial Jewellery Set, Shaving Charges, Toothpaste Macleans 70 Gm

Table A5: City- wise CPI Inflation by Income Groups, August 2013

	Up to Rs: 8000						Rs 8001- 12000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	2.2	10.0	3.8	11.1	0.1	8.5	2.0	9.9	3.6	10.9	0.1	8.8
2 Islamabad	2.4	10.6	4.2	12.9	0.1	7.5	2.1	9.9	3.9	12.6	0.1	6.7
3 Lahore	2.0	7.6	3.4	8.7	-0.1	6.1	1.8	7.5	3.1	8.6	0.2	6.2
4 Gujranwala	1.9	7.1	3.0	7.6	0.3	6.4	1.7	6.9	2.8	7.3	0.4	6.4
5 Sialkot	0.8	9.4	1.0	9.2	0.4	9.8	0.7	9.0	1.0	8.6	0.4	9.5
6 Faisalabad	4.1	11.4	5.5	14.1	2.3	7.8	3.8	10.7	5.0	13.5	2.3	7.5
7 Multan	0.8	9.1	1.3	10.9	0.2	6.8	0.7	8.8	1.1	10.7	0.3	6.7
8 Sargodha	2.1	8.8	3.5	9.1	0.5	8.5	1.9	8.7	3.4	9.0	0.4	8.3
9 Bahawalpur	1.6	8.7	2.9	9.3	0.2	8.1	1.2	8.2	2.1	8.4	0.3	7.9
10 Karachi	1.7	9.0	2.9	13.3	0.1	3.3	1.5	8.7	2.5	12.9	0.3	3.7
11 Hyderabad	1.3	9.4	2.1	13.1	0.1	4.4	1.1	8.7	2.0	12.3	0.1	4.5
12 Sukkur	2.8	10.5	4.3	12.4	0.9	8.3	2.4	9.9	3.8	11.5	0.9	8.1
13 Larkana	1.3	13.1	1.9	12.2	0.6	14.4	1.7	13.6	2.5	13.3	0.8	13.9
14 Peshawar	0.9	12.0	0.8	11.7	1.1	12.4	0.9	11.7	0.9	11.3	0.8	12.1
15 Bannu	1.1	10.7	1.7	13.6	0.4	7.2	1.0	10.3	1.7	13.3	0.2	7.0
16 Quetta	-0.1	8.9	-0.6	8.7	0.4	9.2	0.0	8.8	-0.5	8.5	0.6	9.0
17 Khuzdar	1.7	5.7	2.6	6.6	0.6	4.6	1.6	5.8	2.6	6.4	0.6	5.2
	Rs 12001-18000						Rs 18001-35000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	1.9	10.4	3.5	11.0	0.4	9.8	1.7	9.7	3.4	10.7	0.3	8.8
2 Islamabad	2.2	10.1	3.9	12.5	0.4	7.5	1.9	9.2	3.8	12.0	0.2	6.6
3 Lahore	1.8	7.7	3.0	8.4	0.5	6.8	1.6	7.0	2.8	8.3	0.5	5.8
4 Gujranwala	1.6	6.6	2.4	6.6	0.7	6.5	1.4	5.9	2.2	6.2	0.6	5.7
5 Sialkot	0.9	9.5	1.1	9.0	0.6	10.1	0.7	8.5	1.0	8.5	0.5	8.6
6 Faisalabad	3.6	10.6	4.6	13.0	2.5	8.1	3.0	9.1	4.2	12.4	2.0	6.2
7 Multan	0.7	9.3	1.0	10.9	0.3	7.8	0.7	8.6	1.0	11.1	0.4	6.5
8 Sargodha	1.8	8.7	3.3	8.8	0.5	8.7	1.7	8.2	3.3	8.8	0.5	7.7
9 Bahawalpur	1.0	8.6	1.7	8.4	0.4	8.8	0.7	7.8	1.3	7.9	0.3	7.7
10 Karachi	1.5	8.8	2.4	12.8	0.5	4.6	1.3	8.0	2.4	12.5	0.4	4.0
11 Hyderabad	1.1	8.7	1.9	12.0	0.2	5.3	1.0	7.8	1.8	11.6	0.2	4.4
12 Sukkur	2.5	10.0	3.9	11.5	1.0	8.6	2.3	9.1	3.9	11.2	0.9	7.4
13 Larkana	1.6	13.9	2.2	13.3	0.9	14.4	1.5	13.4	2.4	14.0	0.8	12.9
14 Peshawar	1.0	11.9	1.0	11.2	1.0	12.7	0.8	10.9	0.6	10.5	1.0	11.3
15 Bannu	1.0	10.8	1.7	13.8	0.4	8.0	0.8	10.1	1.4	13.4	0.2	7.3
16 Quetta	0.3	8.9	-0.3	8.0	1.0	9.9	0.6	8.7	-0.1	7.8	1.2	9.5
17 Khuzdar	1.5	5.9	2.5	6.2	0.6	5.5	1.5	5.4	2.6	6.0	0.6	4.8
	Above Rs 35000						Combined					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	1.2	9.2	3.1	10.4	0.4	8.5	1.4	9.4	3.2	10.6	0.2	8.5
2 Islamabad	1.1	7.4	2.8	11.0	0.1	5.4	1.2	7.7	3.1	11.3	-0.4	4.8
3 Lahore	1.3	6.0	2.6	7.8	0.5	4.9	1.5	6.6	2.8	8.1	0.4	5.4
4 Gujranwala	1.1	5.2	1.7	5.4	0.7	5.0	1.4	6.0	2.2	6.4	0.7	5.7
5 Sialkot	0.7	8.2	1.1	8.6	0.5	8.0	0.7	8.6	1.1	8.6	0.5	8.5
6 Faisalabad	2.5	7.2	3.8	11.6	1.9	4.8	3.2	9.2	4.5	12.7	2.2	6.5
7 Multan	0.6	7.6	0.9	11.3	0.4	5.8	0.7	8.3	1.0	11.0	0.4	6.4
8 Sargodha	1.5	8.7	3.3	9.3	0.7	8.4	1.7	8.5	3.3	9.1	0.7	8.1
9 Bahawalpur	0.5	7.6	0.6	7.4	0.4	7.6	0.9	8.0	1.7	8.2	0.4	7.8
10 Karachi	1.1	7.4	2.3	11.8	0.5	5.1	1.2	7.8	2.4	12.2	0.4	4.4
11 Hyderabad	0.8	6.4	1.8	11.3	0.2	4.0	1.0	7.7	1.9	11.8	0.2	4.6
12 Sukkur	1.8	7.8	3.4	10.6	1.0	6.4	2.3	9.2	3.8	11.4	1.2	7.6
13 Larkana	1.4	12.5	2.3	13.9	0.9	11.8	1.5	13.2	2.3	13.4	1.0	13.1
14 Peshawar	1.9	11.0	0.3	10.3	2.7	11.3	1.3	11.2	0.7	10.9	1.8	11.5
15 Bannu	0.7	7.8	2.0	12.1	0.0	5.7	0.9	9.9	1.6	13.4	0.4	7.5
16 Quetta	0.7	8.6	-0.1	8.2	1.1	8.8	0.4	8.7	-0.2	8.1	0.9	9.1
17 Khuzdar	0.9	3.2	1.6	5.5	0.6	2.1	1.5	5.4	2.5	6.3	0.9	4.9

Table A6: City- wise CPI Inflation (YoY) August, 2013							
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Mardan	14.7	15.7	14.1	Multan	8.3	11.0	6.4
Dera Mrd.Jamali	13.9	18.7	10.4	Attock	8.2	9.3	7.4
Mithi	13.5	11.6	14.8	Bahawalpur	8.0	8.2	7.8
D.G. Khan	13.5	12.8	14.0	Gawadar	7.9	8.6	7.4
Larkana	13.2	13.4	13.1	Karachi	7.8	12.2	4.4
Rahim Yar Khan	13.2	17.3	10.3	Hyderabad	7.7	11.8	4.6
Mianwali	11.9	11.6	12.1	Islamabad	7.7	11.3	4.8
D.I.Khan	11.3	11.9	10.9	Abbotabad	7.4	9.0	6.4
Peshawar	11.2	10.9	11.5	Lahore	6.6	8.1	5.4
Mingora	10.8	9.8	11.5	Gujranwala	6.0	6.4	5.7
Jehlum	10.8	14.1	8.5	Khuzdar	5.4	6.3	4.9
Jhang	10.4	11.0	10.0				
Turbat	10.2	9.3	10.8				
Muzaffargarh	10.0	11.7	8.7				
Bannu	9.9	13.4	7.5				
Nawabshah	9.9	11.9	8.5				
Rawalpindi	9.4	10.6	8.5				
Vehari	9.4	13.8	6.3				
Sukkur	9.2	11.4	7.6				
Faisalabad	9.2	12.7	6.5				
Sahiwal	8.9	8.6	9.0				
Bahawalnagar	8.7	10.5	7.6				
Wazirabad	8.7	9.1	8.4				
Quetta	8.7	8.1	9.1				
Mir Pur Khas	8.6	9.6	7.9				
Dadu	8.6	12.0	6.3				
Loralai&Cantt	8.6	9.0	8.3				
Sialkot	8.6	8.6	8.5				
Sargodha	8.5	9.1	8.1				
Note: High inflation refers to equal or above average inflation, and low inflation refers to below average							

Table A7: Income Group-wise Inflation (percent)

	MoM			YoY		
	Aug-12	Jul-13	Aug-13	Aug-12	Jul-13	Aug-13
<u>Up to Rs. 8000</u>						
General	1.0	2.3	1.5	8.6	9.4	10.0
Food	1.4	3.0	2.3	7.4	10.2	11.2
Non-food	0.4	1.4	0.5	10.3	8.4	8.4
<u>Rs. 8001- 12000</u>						
General	0.9	2.2	1.4	9.8	8.9	9.4
Food	1.2	2.9	2.1	7.8	9.7	10.7
Non-food	0.5	1.4	0.5	12.2	8.0	8.0
<u>Rs. 12001- 18000</u>						
General	0.8	2.2	1.3	9.7	8.6	9.1
Food	1.1	3.0	2.0	8.2	9.5	10.5
Non-food	0.6	1.4	0.5	11.4	7.8	7.7
<u>Rs. 18001- 35000</u>						
General	0.8	2.1	1.2	8.3	8.5	8.9
Food	0.9	3.1	2.0	8.6	9.2	10.3
Non-food	0.7	1.3	0.5	8.1	7.8	7.6
<u>Above Rs. 35000</u>						
General	0.9	1.9	1.0	8.5	7.8	7.9
Food	0.7	3.0	1.8	9.1	8.7	9.9
Non-food	1.1	1.3	0.6	8.2	7.4	6.9
<u>All income groups</u>						
General	0.9	2.0	1.2	9.1	8.3	8.5
Food	0.9	3.0	2.0	8.5	9.2	10.3
Non-food	0.9	1.3	0.6	9.4	7.6	7.3

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices Aug-13	Percentage change	
				YoY	MoM
1	Wheat	10Kg.	349.8	25.0	5.5
2	Wheat Flour Bag	10Kg.	395.5	28.0	3.9
3	Rice Basmati Broken	Kg.	73.8	11.1	0.7
4	Rice Irri-6	Kg.	53.7	9.9	0.7
5	Bread Plain Med. Size (340-400 Gm.)	Each	36.5	12.0	2.1
6	Beef	Kg.	277.3	4.9	0.4
7	Mutton	Kg.	546.8	7.7	0.6
8	Chicken Live (Farm)	Kg.	171.1	17.1	1.9
9	Milk Fresh	Litr	68.3	6.2	0.5
10	Curd	Kg.	79.9	6.7	0.8
11	Milk Powdered Nido	500G	290.0	0.0	0.0
12	Egg Hen (Farm)	Doz.	85.9	7.4	7.0
13	Mustard Oil	Kg.	183.0	-2.5	0.4
14	Cooking Oil (Tin)	2.5Ltr	536.8	-1.6	-0.1
15	Veg. Ghee (Tin)	2.5Kg.	508.9	-5.1	0.0
16	Veg. Ghee Loose	Kg.	157.7	-5.9	-0.3
17	Bananas	Doz.	81.1	-16.2	-4.4
18	Masoor Pulse Washed	Kg.	110.4	11.6	0.0
19	Moong Pulse Washed	Kg.	124.9	4.6	0.9
20	Mash Pulse Washed	Kg.	129.6	-4.8	-0.5
21	Gram Pulse Washed	Kg.	76.6	-29.4	-2.6
22	Potatoes	Kg.	31.3	-0.4	8.2
23	Onions	Kg.	49.7	35.7	22.5
24	Tomatoes	Kg.	79.4	41.1	-9.5
25	Sugar	Kg.	54.3	0.6	-0.1
26	Gur	Kg.	87.9	20.4	3.5
27	Salt Powdered Loose (Lahori)	Kg.	9.1	7.2	0.4
28	Red Chilies Powder Loose	Kg.	211.0	-29.0	-1.9
29	Garlic	Kg.	124.3	13.9	3.2
30	Tea (Yellow Label)	200Gm.	171.8	31.6	0.1
31	Cooked Beef Plate	Each	73.6	12.8	1.9
32	Cooked Dal Plate	Each	44.0	12.1	3.2
33	Tea Prepared (Sada)	Cup	16.1	7.4	0.9
34	Cigarettes K-2 (20'S)	20'S	37.6	17.4	0.5
35	Long Cloth (Coarse Latha)	Mtr.	171.0	21.8	0.5
36	Shirting	Mtr.	140.2	20.6	0.8
37	Lawn	Mtr.	189.7	17.9	0.0
38	Georgette (Voil Printed)	Mtr.	110.0	14.7	0.3
39	Sandal Gents Bata	Pair	649.0	30.1	8.3
40	Chappal Spong. Bata (Gents)	Pair	179.0	0.0	0.0
41	Sandal Ladies Bata	Pair	499.0	25.1	0.0
42	Electric Charges 1-50	Unit	2.0	0.0	0.0
43	Gas Charges upto 3.3719	Mmbtu	124.2	7.1	0.0
44	Kerosene	Litr	120.8	8.7	3.3
45	Firewood	40Kg	509.8	8.0	0.4
46	Energy Savor 14 Watts	Each	160.5	9.7	0.2
47	Washing Soap (200-250 Gm.)	Cake	22.4	10.4	0.9
48	Match Box	Each	1.2	9.2	0.8
49	Petrol	Litr	105.8	10.1	2.3
50	Diesel	Litr	111.2	6.2	2.5
51	L.P.G.(11 Kg Cylinder.)	Each	1456.3	5.2	-2.1
52	Tele. Local Call	Call	3.9	9.7	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	35.4	10.5	1.0
Maximum				41.1	22.5
Median				9.2	0.5
Minimum				-29.4	-9.5

Table A9: Distribution of Price Changes (YoY) - WPI Items: August 2013

Groups	Decrease or no change	Subdued increase (Up to 5%)	Moderate increase (5 to 10%)	More than 10% increase
Agriculture Forestry & Fishery Products	Pulses, Fresh Fruits, Cotton Seeds, Other Oil Seeds, Sugar Crops	Hides and Fur Skins, Raw	Dry Fruits, Milk from Bovine Animals, Millet/Bajra, Unmanufactured Tobacco	Stimulant and Spice Crops, Fish Live Fresh or Chilled, Vegetables, Sorghum/Jowar, Poultry, Wheat, Fibre Crops, Maize, Raw Animal Material/Wool, Fuel Wood in Logs, Rice, Edible Roots/Potatoes, Eggs
Ores & Minerals, Electricity Gas & Water			Natural Gas Liquefied	Salt & Pure Sodium Chloride, Electrical Energy, Coal not Agglomerated
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Spices, Other Cereal Flour, Synthetic Carpets, Vegetable Ghee, Other Food Products, Processed Liquid Milk, Chocolate, Woolen Carpets	Dried Fruits & Nuts, Dairy Products N.E.C, Meat of Animals, Sugar Refined, Beverages, Sugar Confectionary, Vegetable Oil Refined	Cotton Yarn, Footwear, Mineral Water, Cotton Fabrics, Nylon Yarn, Quilts, Blended Yarn, Other Fabrics, Milk and Cream in Solid Form, Vegetables & Fruit Juices, Fruit Juices	Other Leather N.E.C, Woven Fabrics, Wheat Flour, Leather without Hairs, Ice Cream, Coffee and Tea, Tobacco Products, Bed Sheets, Ready Made Garments, Oil Cakes, Hosiery Products, Towels, Silk and Rayon Fabrics, Blankets
Other Transportable Goods except Metal Products, Machinery and Equipments	Furnace Oil, Other Glass Articles, Coke	Plastic Products, Medicines, Bed Foams, Fertilizers, Dying Materials	Motor Sprit, Bricks Blocks and Tiles, Cement, Kerosene Oil, Printing Paper, Ceramics and Sanitary, Mobil Oil, Paints & Varnishes, Insecticides, Diesel Oil, Auto Tyres	Hard Board, Matches, Pesticides, Chemicals, Soaps & Detergent, Glass Sheets, Timber
Metal Product Machinery & Equipment	Radio and Television, Motor Cycles, Tractors, Pig Iron, Engines and Motors, Vacuum Pumps, Concrete Mixer, Lathe Machines	Pipe Fittings, Chuff Cutter, Steel Products, Motor Vehicles, Air Conditioners, Bicycles, Cultivators, Steel Bars & Sheets	Refrige, Wash & Sew Mach, Iron, Fan, Electrical Wires	Lighting Equipments

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities				
Items and specification	Weights	Index		
		Aug-12	Jul-13	Aug-13
General	100.00	171.09	183.58	185.71
Food & Non-Alcoholic Beverages.	34.83	192.43	207.61	211.91
1 Wheat	0.35	161.25	194.81	204.43
2 Wheat Flour	4.16	168.22	204.57	213.76
3 Wheat Product	0.10	164.31	191.61	196.14
4 Besan	0.15	236.13	180.85	174.75
5 Rice	1.58	168.45	189.10	190.71
6 Cereals	0.16	197.29	219.23	223.43
7 Bakery & Confectionary	1.16	170.69	183.59	186.63
8 Nimco	0.46	192.39	208.18	210.08
9 Meat	2.43	215.44	225.18	225.95
10 Chicken	1.36	181.15	203.56	228.30
11 Fish	0.30	184.21	200.39	202.20
12 Milk Fresh	6.68	213.26	226.78	229.63
13 Milk Product	0.63	207.43	219.34	223.35
14 Milk Powder	0.11	181.39	192.03	192.47
15 Egg	0.46	163.77	167.03	177.43
16 Mustard Oil	0.10	160.17	158.64	157.73
17 Cooking Oil	1.75	164.15	161.62	160.17
18 Vegetable Ghee	2.07	163.86	155.82	155.90
19 Dry Fruits	0.25	203.16	217.86	218.07
20 Fresh Fruits	1.86	238.71	234.05	228.27
21 Pulse Masoor	0.27	142.88	157.42	156.96
22 Pulse Moong	0.23	228.62	237.14	236.45
23 Pulse Mash (Washed)	0.21	193.59	187.00	187.03
24 Pulse Gram	0.24	238.30	179.42	170.97
25 Gram Whole	0.16	229.65	187.26	180.87
26 Beans	0.03	207.20	228.13	232.00
27 Potatoes	0.47	201.64	211.16	226.71
28 Onion	0.53	197.41	249.51	335.76
29 Tomatoes	0.44	196.52	322.23	285.06
30 Fresh Vegetable	1.68	172.97	211.21	219.98
31 Sugar	1.04	195.29	195.93	195.15
32 Gur	0.02	222.88	261.46	271.23
33 Honey	0.04	237.13	256.65	256.90
34 Sweet Meet	0.25	201.85	211.81	214.63
35 Beverages	1.20	170.95	186.90	189.21
36 Jam, Tomato Ketchup & Pickle	0.25	173.19	187.26	187.53
37 Condiments	0.27	211.99	217.51	217.77
38 Spices	0.54	267.12	216.85	216.40
39 Tea	0.84	202.38	252.69	253.02
Alcoholic Beverages, Tobacco	1.41	189.91	217.46	217.51
40 Cigarette	1.39	190.12	217.93	217.97
41 Betel Leaves & Nuts	0.02	177.28	188.57	189.38
Clothing & Footwear	7.57	167.23	190.42	192.38
42 Cotton Cloth	1.73	156.24	177.82	179.59
43 Woolen Cloth	0.88	185.59	206.87	208.28
44 Ready Made Garment	0.97	168.36	185.06	189.32
45 Woolen Readymade Garments	0.40	161.44	192.45	192.45
46 Hosiery	0.51	175.66	195.40	197.66
47 Dopatta	0.44	180.00	205.47	207.23
48 Cleaning & Laundering	0.21	185.07	208.19	210.77

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities

Items and specification	Weights	Index		
		Aug-12	Jul-13	Aug-13
49 Tailoring	0.88	199.50	226.68	230.99
50 Footwear	1.55	142.67	168.99	169.08
Housing, Water, Elect, Gas & Other Fuel	29.41	147.95	157.54	157.59
51 House Rent	21.81	137.02	148.24	148.24
52 Construction Input Item	0.56	199.78	214.61	215.23
53 Construction Wage Rate	0.33	168.30	185.33	187.03
54 Water Supply	0.50	133.23	141.36	141.53
55 Electricity	4.40	196.37	196.37	196.37
56 Gas	1.58	134.34	143.81	143.81
57 Kerosene Oil	0.01	253.42	274.98	280.70
58 Fire Wood Whole	0.23	226.19	244.09	245.25
Furnished H.Hold Equip. & Maint. Etc	4.21	174.05	187.23	188.99
59 Furniture	0.33	164.07	177.21	178.39
60 Household Textile	0.65	170.63	182.53	183.82
61 Household Equipment	0.59	155.95	162.88	163.24
62 Utensils	0.32	172.04	185.91	187.69
63 Plastic Products	0.25	173.77	183.11	185.38
64 Washing Soap & Detergent	0.79	189.11	204.48	207.01
65 Sewing Needle & Dry Cell	0.15	148.18	166.67	168.42
66 Household Servant	1.04	181.54	197.48	199.82
67 Marriage Hall Charges	0.08	189.00	201.35	202.60
Health	2.19	152.39	161.45	162.32
68 Drug Medicine	1.27	135.65	141.18	141.30
69 Medical Equipment	0.01	191.94	205.49	205.83
70 Doctor (MBBS) Clinic Fee	0.59	187.93	204.66	207.25
71 Medical Test	0.32	152.08	160.87	161.52
Transport	7.20	186.61	188.83	190.63
72 Motor Vehicle	0.66	150.97	158.19	158.44
73 Motor Vehicle Accessories	0.24	203.89	217.18	218.09
74 Motor Fuel	3.03	183.29	181.80	184.92
75 Mechanical Service	0.46	179.46	190.80	192.91
76 Motor Vehicle Tax	0.11	152.02	153.74	153.74
77 Transport Services	2.70	200.12	202.74	203.54
Communication	3.22	123.56	129.62	129.65
78 Postal Services	0.07	171.37	215.89	215.89
79 Communication & Apparatus	3.15	122.55	127.81	127.84
Recreation & Culture	2.02	165.19	178.48	181.28
80 Recreation & Culture	0.86	121.64	123.55	124.61
81 Text Books	0.57	230.37	260.03	266.87
82 News Papers	0.19	154.22	170.49	170.49
83 Stationery	0.40	171.61	184.67	186.81
Education	3.94	153.60	164.25	166.03
84 Education	3.94	153.60	164.25	166.03
Restaurants And Hotels	1.23	196.56	213.87	216.32
85 Ready Made Food	1.23	196.56	213.87	216.32
Miscellaneous Goods And Services	2.76	192.44	200.91	204.07
86 Personal Care	1.49	175.58	185.88	187.02
87 Cosmetics	0.39	148.35	166.59	168.14
88 Blades	0.03	169.56	177.70	178.04
89 Personal Equipments	0.84	243.27	244.06	251.61

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities			
Items and Specifications	Index		
	Aug-12	Jul-13	Aug-13
General	191.99	202.49	207.85
Agriculture Forestry & Fishery	196.79	214.77	218.23
1 Wheat	168.38	206.16	215.13
2 Maize	170.14	193.96	194.89
3 Rice	158.39	177.08	177.57
4 Sorghum/Jowar	201.88	270.15	265.69
5 Millet/Bajra	179.34	193.87	190.24
6 Vegetables	210.80	273.46	297.02
7 Fresh Fruits	280.12	253.15	245.49
8 Dry Fruits	174.44	192.88	191.77
9 Cotton Seeds	174.78	165.17	165.07
10 Other Oil Seeds	176.96	169.50	173.57
11 Edible Roots/ Potatoes	195.16	188.79	217.93
12 Stimulant And Spice Crops	166.85	231.75	241.41
13 Pulses	219.37	184.78	180.97
14 Sugar Crops	267.92	267.92	267.92
15 Fibre Crops	186.59	210.28	214.52
16 Unmanufactured Tobacco	167.67	176.34	176.34
17 Poultry	185.32	215.62	237.40
18 Milk From Bovine Animals	208.85	220.27	221.65
19 Eggs	161.94	167.37	180.14
20 Raw Animal Material/Wool	134.22	151.73	153.23
21 Hides And Fur Skins, Raw	137.25	140.52	140.87
22 Fuel Wood In Logs	203.50	230.69	231.13
23 Fishes Live Fresh Or Chilled	175.63	247.49	250.91
Ores/Minerals, Gas & Elect.	207.36	215.17	239.51
24 Coal Not Agglomerated	196.08	223.53	223.53
25 Natural Gas Liquefied	191.36	203.74	203.57
26 Salt & Pure Sodium Chloride	162.41	204.73	205.80
27 Electrical Energy	226.10	226.10	279.61
Food, Beverages, Tobacco, Textiles	183.90	195.21	197.43
28 Meat Of Animals	225.92	232.94	233.93
29 Vegetables & Fruit Juices	181.33	190.74	191.31
30 Dried Fruits & Nuts	212.89	222.76	223.20
31 Fruit Juices	156.91	164.49	165.05
32 Vegetable Oil Refined	157.66	160.21	160.13
33 Vegetable Ghee	144.58	141.00	140.30
34 Oil Cakes	155.00	175.62	174.89
35 Processed Liquid Milk	205.63	205.54	205.54
36 Milk And Cream In Solid Form	169.45	178.39	179.40
37 Ice Cream	170.00	204.00	209.53
38 Dairy Products N.E.C	204.36	216.21	212.59
39 Wheat Flour	155.10	190.04	195.91
40 Other Cereal Flour	210.99	150.06	144.64
41 Sugar Refined	204.68	212.01	211.85
42 Chocolate	99.19	99.19	99.19
43 Sugar Confectionary	100.40	102.28	102.28
44 Coffee And Tea	190.97	229.54	230.71
45 Spices	304.33	197.26	195.67
46 Other Food Products	317.63	316.68	316.68
47 Mineral Water	166.05	177.53	180.22
48 Beverages	135.30	139.35	139.63
49 Tobacco Products	208.80	242.41	242.41
50 Cotton Yarn	200.46	210.89	217.78
51 Nylon Yarn	176.45	188.58	187.63
52 Blended Yarn	187.05	197.47	198.41
53 Woven Fabrics	169.72	208.98	217.16
54 Cotton Fabrics	174.86	183.43	187.43
55 Other Fabrics	165.74	175.06	175.74

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities

Items and Specifications		Index		
		Aug-12	Jul-13	Aug-13
56	Silk And Rayon Fabrics	143.08	159.34	160.08
57	Towels	193.36	213.19	216.98
58	Blankets	165.83	185.21	185.21
59	Bed Sheets	189.27	213.18	215.79
60	Quilts	147.05	156.32	156.32
61	Woolen Carpets	106.55	106.55	106.55
62	Synthetic Carpets	128.41	114.41	114.41
63	Hosiery Products	164.85	185.30	185.30
64	Ready Made Garments	134.39	150.00	152.13
65	Leather With Out Hairs	109.83	132.51	136.23
66	Other Leather N.E.C	122.57	203.07	238.82
67	Footwear's	128.50	139.49	139.49
Other Transportable Goods		202.63	206.44	209.59
68	Timber	145.58	157.52	160.48
69	Printing Paper	153.92	164.45	164.45
70	Hard Board	166.67	200.00	200.00
71	Coke	163.45	163.45	163.45
72	Motor Sprit	160.78	171.92	176.54
73	Diesel Oil	251.19	254.92	264.12
74	Kerosene Oil	252.20	256.74	270.07
75	Furnace Oil	199.36	171.62	172.70
76	Mobil Oil	179.57	191.04	191.04
77	Chemicals	145.05	163.56	164.53
78	Dying Materials	104.26	107.23	107.23
79	Fertilizers	261.86	268.23	269.62
80	Pesticides	184.15	208.72	212.36
81	Insecticides	117.64	124.43	124.43
82	Paints & Varnishes	233.80	247.56	247.56
83	Medicines	134.51	138.83	138.85
84	Soaps & Detergent	157.22	176.55	177.56
85	Auto Tyres	176.49	185.57	185.57
86	Plastic Products	191.29	198.15	199.06
87	Glass Sheets	183.78	203.49	203.49
88	Other Glass Articles	217.98	206.09	206.09
89	Ceramics And Sanitary	154.64	164.06	165.08
90	Bricks Blocks And Tiles	171.37	184.78	186.85
91	Cement	180.22	194.83	194.84
92	Bed Foams	139.83	144.33	144.33
93	Matches	122.82	143.20	143.20
Metal Product Machinery & Equip		158.17	164.46	166.14
94	Pig Iron	128.97	128.97	128.97
95	Steel Bars & Sheets	138.84	138.21	140.51
96	Pipe Fittings	142.07	149.13	149.13
97	Steel Products	160.60	167.61	167.61
98	Engines And Motors	109.07	109.07	109.07
99	Vacuum Pumps	115.39	115.39	115.39
100	Air Conditioners	172.67	179.78	179.78
101	Cultivators	184.66	189.23	189.23
102	Chuff Cutter	138.54	144.94	144.94
103	Tractors	161.96	161.96	161.96
104	Lathe Machines	147.68	147.68	147.68
105	Concrete Mixer	138.83	138.83	138.83
106	Refrige,Wash& Sew Mach, Iron,Fan	164.34	179.92	179.92
107	Electrical Wires	159.57	167.53	168.13
108	Lighting Equipments	144.85	159.47	162.27
109	Radio And Television	132.73	126.49	126.49
110	Motor Vehicles	167.04	173.99	173.99
111	Motor Cycles	125.19	124.80	124.80
112	Bicycles	175.08	178.81	180.99

Table A12: Price Indices - Base 2007-08 = 100								
Period		CPI			WPI			SPI *
		Overall	Food	Non-food	Overall	Food	Non-Food	
2008-09		117.03	123.12	113.38	118.93	119.68	118.45	123.26
2009-10		128.85	139.05	122.73	135.40	136.85	134.48	139.84
2010-11		146.45	164.10	135.87	164.17	159.26	167.28	164.02
2011-12		162.57	182.20	150.80	181.28	181.32	181.26	178.67
2012-13		174.53	195.18	162.16	194.61	197.21	192.95	189.64
2010	Dec	145.90	163.69	135.24	162.48	155.88	166.67	166.52
2011	Jan	147.67	166.52	136.37	165.58	159.08	169.70	166.96
	Feb	146.85	163.56	136.83	168.82	158.33	175.47	164.99
	Mar	148.91	167.10	138.01	174.41	162.92	181.70	166.81
	Apr	150.99	169.25	140.05	178.69	165.46	187.09	167.83
	May	151.33	168.76	140.88	176.97	167.15	183.20	167.98
	Jun	152.78	169.88	142.53	177.98	172.14	181.68	168.09
	Jul	154.72	174.80	142.68	177.26	175.45	178.41	171.45
	Aug	156.89	177.32	144.65	178.24	178.67	177.97	173.86
	Sep	158.50	180.16	145.52	178.68	181.88	176.65	175.02
	Oct	160.79	183.07	147.44	179.34	182.82	177.13	176.45
	Nov	161.25	183.26	148.06	178.39	181.48	176.43	177.53
	Dec	160.12	179.21	148.67	176.01	178.29	174.57	175.04
2012	Jan	162.58	181.90	151.00	179.99	178.95	180.65	178.25
	Feb	163.07	180.69	152.51	180.99	177.56	183.17	178.63
	Mar	164.98	183.46	153.90	182.20	180.41	183.34	180.79
	Apr	168.00	187.43	156.35	185.48	184.45	186.13	184.03
	May	169.93	187.75	159.25	189.46	186.57	191.29	184.88
	Jun	169.99	187.35	159.58	189.37	189.36	189.37	188.14
	Jul	169.57	190.72	156.89	190.05	193.92	187.59	183.98
	Aug	171.09	192.47	158.27	191.99	195.30	189.89	186.47
	Sep	172.44	193.80	159.64	192.66	195.81	190.66	188.21
	Oct	173.10	193.66	160.77	192.88	196.21	190.77	187.32
	Nov	172.42	193.03	160.07	192.16	193.02	191.61	187.35
	Dec	172.82	192.97	160.74	192.98	195.49	191.39	187.95
2013	Jan	175.70	196.58	163.19	195.39	198.81	193.22	190.89
	Feb	175.11	194.05	163.76	196.06	197.22	195.32	190.79
	Mar	175.82	195.06	164.29	196.57	196.02	196.92	192.01
	Apr	177.74	197.74	165.75	198.09	199.00	197.51	192.02
	May	178.65	200.00	165.85	197.23	201.14	194.75	191.96
	Jun	179.94	202.11	166.65	199.21	204.60	195.79	196.75
	Jul	183.58	208.19	168.83	202.49	209.34	198.15	200.80
	Aug	185.71	212.27	169.79	207.85	211.45	205.57	203.29

*: all groups combined

Table A13: International Commodity Prices/ Indices

	May-13	Jun-13	Jul-13	Aug-13
Energy				
Crude Oil (US\$ per barrel) *	99.3	99.7	105.2	108.1
IMF Energy Index (2005 = 100)	184.5	184.9	192.4	196.9
WB Energy Index (2005 = 100) @	179.0	178.7	186.6	190.7
Food				
Rice (\$/MT)	552.1	546.3	538.3	503.8
Wheat (\$/MT)	319.1	313.5	304.7	305.5
Sugar (US cent/ pound)	17.4	16.9	16.4	16.7
Palm Oil (\$/MT)	763.4	763.0	729.9	722.8
Soybean Oil (\$/MT)	1,082.8	1,058.6	1,000.8	944.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	92.6	93.1	92.6	92.7
IMF Metal Price Index (2005 = 100)	176.4	169.7	172.7	180.9
Copper (\$/MT)	7,248.7	7,000.2	6,906.6	7,186.3
Aluminum (\$/MT)	1,832.6	1,814.5	1,769.6	1,816.2
Iron Ore (\$ cents/dry MT)	124.0	114.8	127.2	137.1
Tin (\$/MT)	20,781.6	20,267.4	19,563.8	21,638.2
Nickle (\$/MT)	14,948.2	14,280.3	13,750.3	14,308.3
Zinc (\$/MT)	1,831.0	1,839.0	1,837.6	1,896.4
Lead (\$/MT)	2,031.9	2,099.7	2,047.7	2,173.1
Uranium (\$/MT)	40.6	39.9	38.0	35.6
DAP (\$/MT)	485.1	476.1	460.0	438.1
Urea (\$/MT)	344.4	321.4	321.5	303.3

Source: IMF and World Bank

\$/MT = US\$ per metric ton.

* 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

Table 14. CPI Data Series Original and Seasonally Adjusted				
Original Series				
Period	FY11	FY12	FY13	FY14
Jul	137.62	154.72	169.57	183.58
Aug	140.63	156.88	171.09	185.71
Sep	143.49	158.50	172.44	
Oct	144.90	160.79	173.10	
Nov	146.34	161.25	172.42	
Dec	145.90	160.12	172.82	
Jan	147.67	162.58	175.70	
Feb	146.85	163.07	175.11	
Mar	148.91	164.98	175.82	
Apr	150.99	168.00	177.74	
May	151.33	169.93	178.65	
Jun	152.78	169.99	179.94	
Seasonally Adjusted Series				
Jul	137.45	154.53	169.32	182.95
Aug	139.72	155.82	169.87	184.36
Sep	142.48	157.36	171.21	
Oct	143.65	159.36	171.56	
Nov	145.57	160.39	171.47	
Dec	146.69	161.03	173.86	
Jan	147.87	162.77	175.88	
Feb	148.03	164.41	176.56	
Mar	149.87	166.09	177.04	
Apr	151.10	168.07	177.80	
May	151.85	170.58	179.38	
Jun	153.40	170.71	180.76	

Table 15. CPI Food Data Series Original and Seasonally Adjusted

Original Series				
Period	FY11	FY12	FY13	FY14
Jul	149.33	174.80	190.72	208.19
Aug	156.70	177.32	192.47	212.27
Sep	163.96	180.16	193.80	
Oct	163.91	183.07	193.66	
Nov	166.59	183.26	193.03	
Dec	163.69	179.21	192.97	
Jan	166.52	181.90	196.58	
Feb	163.56	180.69	194.05	
Mar	167.10	183.46	195.06	
Apr	169.25	187.43	197.74	
May	168.77	187.75	200.00	
Jun	169.88	187.35	202.11	
Seasonally Adjusted Series				
Jul	149.01	174.41	190.17	207.48
Aug	154.65	174.90	189.73	209.21
Sep	161.30	177.14	190.52	
Oct	160.79	179.53	189.99	
Nov	164.27	180.66	190.15	
Dec	164.95	180.65	194.58	
Jan	167.15	182.53	197.24	
Feb	166.53	184.04	197.64	
Mar	169.25	185.91	197.74	
Apr	170.08	188.29	198.64	
May	170.14	189.44	201.91	
Jun	171.86	189.65	204.68	

Table 16: CPI Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.12	100.12	100.15	100.34	100.19
Aug	100.65	100.69	100.72	100.73	100.70
Sep	100.71	100.73	100.72		100.72
Oct	100.87	100.90	100.89		100.89
Nov	100.53	100.54	100.55		100.54
Dec	99.46	99.44	99.40		99.43
Jan	99.86	99.88	99.90		99.88
Feb	99.20	99.18	99.18		99.19
Mar	99.36	99.33	99.31		99.33
Apr	99.93	99.96	99.97		99.95
May	99.65	99.62	99.60		99.62
Jun	99.60	99.58	99.55		99.57

Table 17: CPI Food Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.22	100.22	100.29	100.34	100.27
Aug	101.33	101.38	101.45	101.46	101.40
Sep	101.65	101.71	101.72		101.69
Oct	101.94	101.97	101.93		101.95
Nov	101.41	101.44	101.51		101.45
Dec	99.24	99.20	99.17		99.20
Jan	99.63	99.65	99.66		99.65
Feb	98.22	98.18	98.18		98.19
Mar	98.73	98.68	98.64		98.69
Apr	99.52	99.54	99.55		99.54
May	99.19	99.11	99.06		99.12
Jun	98.85	98.79	98.74		98.79

Table 18: CPI Month-on-Month Change Original & Seasonally Adjusted				
Original Series				
Period	FY11	FY12	FY13	FY14
Jul	2.07	1.27	-0.25	2.02
Aug	2.19	1.40	0.90	1.16
Sep	2.03	1.03	0.79	
Oct	0.98	1.44	0.38	
Nov	0.99	0.29	-0.39	
Dec	-0.30	-0.70	0.23	
Jan	1.21	1.54	1.67	
Feb	-0.56	0.30	-0.34	
Mar	1.40	1.17	0.41	
Apr	1.40	1.83	1.09	
May	0.23	1.15	0.51	
Jun	0.96	0.04	0.72	
Seasonally Adjusted Series				
Jul		0.74	-0.81	1.21
Aug	1.65	0.84	0.33	0.77
Sep	1.97	0.99	0.79	
Oct	0.83	1.27	0.21	
Nov	1.34	0.65	-0.06	
Dec	0.77	0.40	1.39	
Jan	0.81	1.08	1.17	
Feb	0.11	1.01	0.38	
Mar	1.25	1.02	0.28	
Apr	0.82	1.19	0.42	
May	0.50	1.49	0.89	
Jun	1.02	0.08	0.77	

Table 19: CPI Food Month-on-Month Change Original & Seasonally Adjusted Series				
Original Series				
Period	FY11	FY12	FY13	FY14
Jul	1.84	2.90	1.80	3.01
Aug	4.93	1.44	0.92	1.96
Sep	4.64	1.60	0.69	
Oct	-0.04	1.62	-0.07	
Nov	1.64	0.10	-0.33	
Dec	-1.74	-2.21	-0.03	
Jan	1.73	1.50	1.87	
Feb	-1.77	-0.66	-1.29	
Mar	2.16	1.53	0.52	
Apr	1.28	2.16	1.37	
May	-0.28	0.17	1.14	
Jun	0.66	-0.21	1.06	
Seasonally Adjusted Series				
Jul		1.48	0.27	1.36
Aug	3.79	0.28	-0.23	0.84
Sep	4.30	1.28	0.42	
Oct	-0.32	1.35	-0.28	
Nov	2.17	0.63	0.09	
Dec	0.42	-0.01	2.33	
Jan	1.33	1.04	1.37	
Feb	-0.37	0.83	0.20	
Mar	1.63	1.02	0.05	
Apr	0.49	1.28	0.45	
May	0.04	0.61	1.65	
Jun	1.01	0.11	1.37	

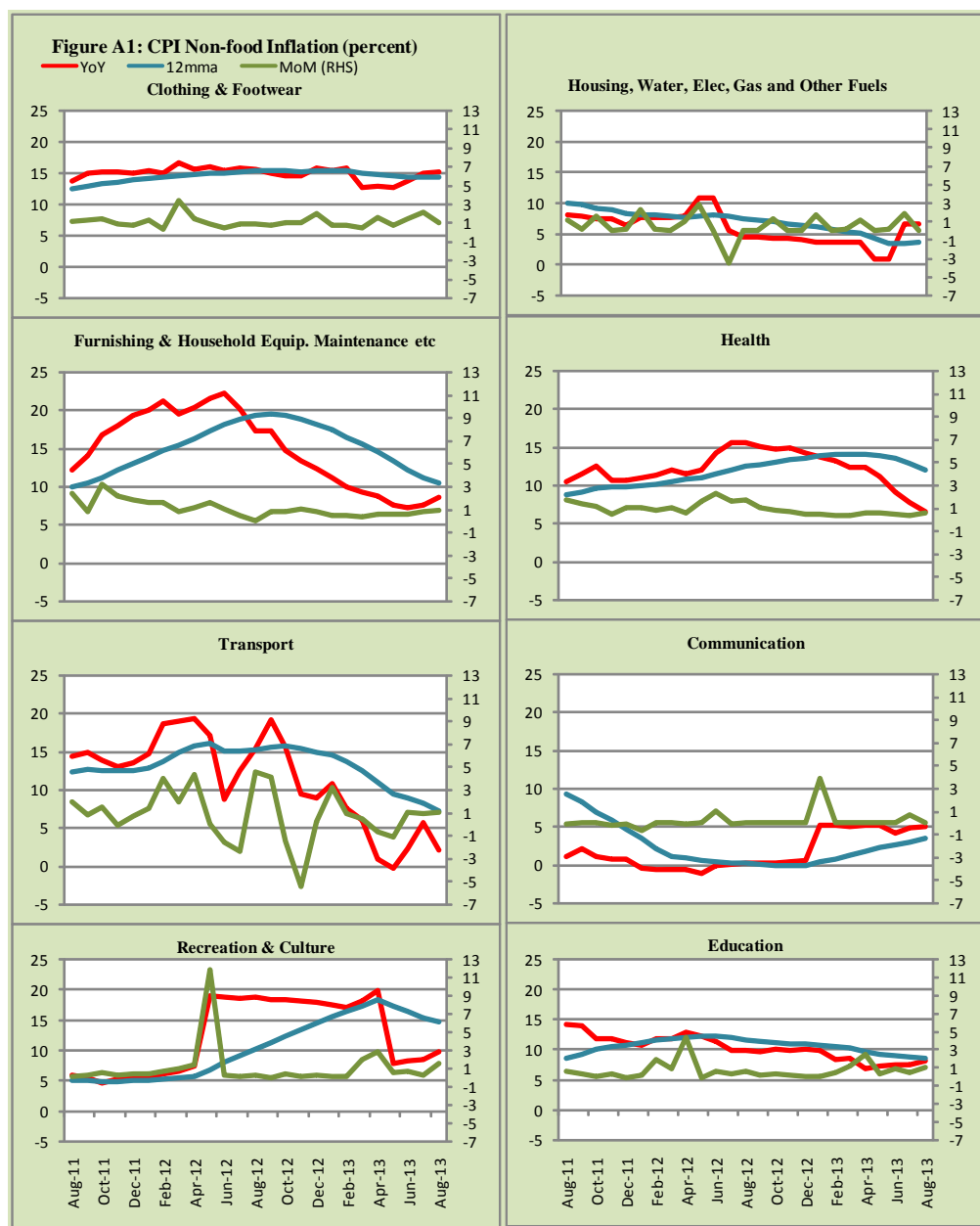


Figure A2: Frequency Distribution of Price Changes of CPI Items, August 2013

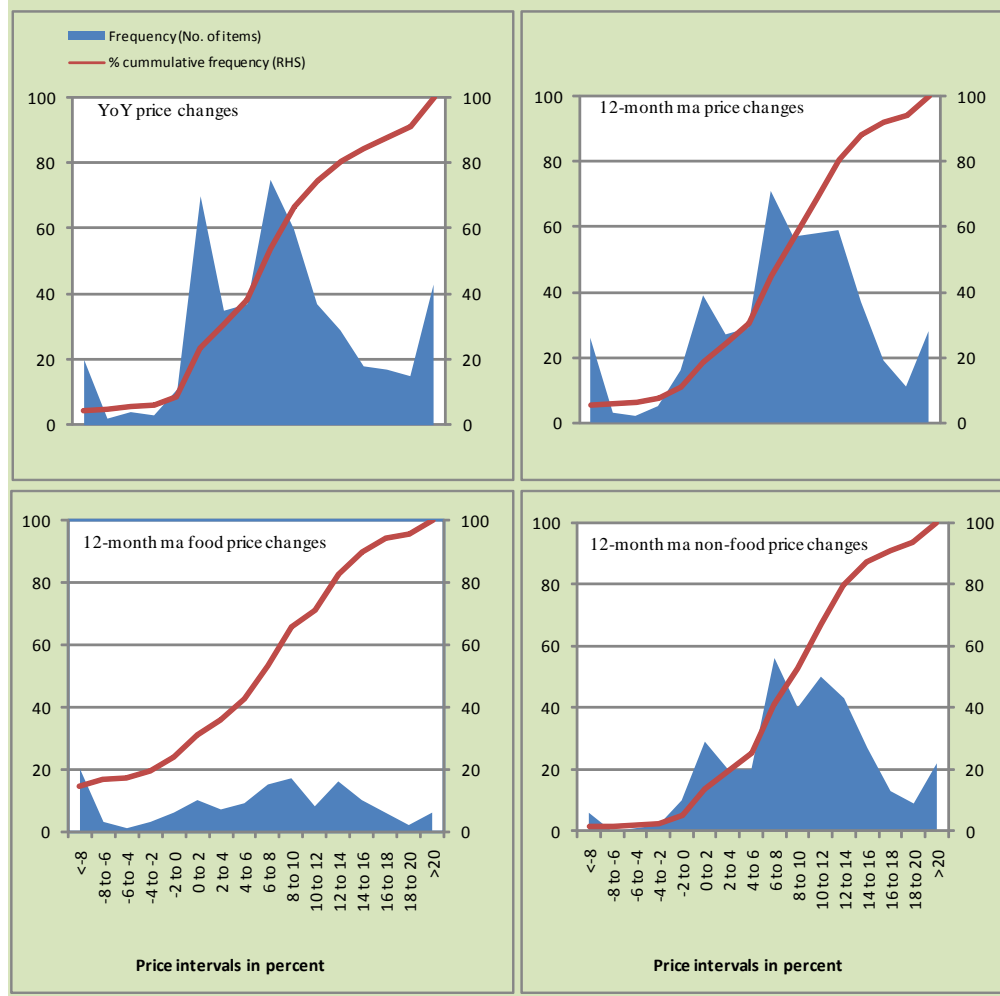
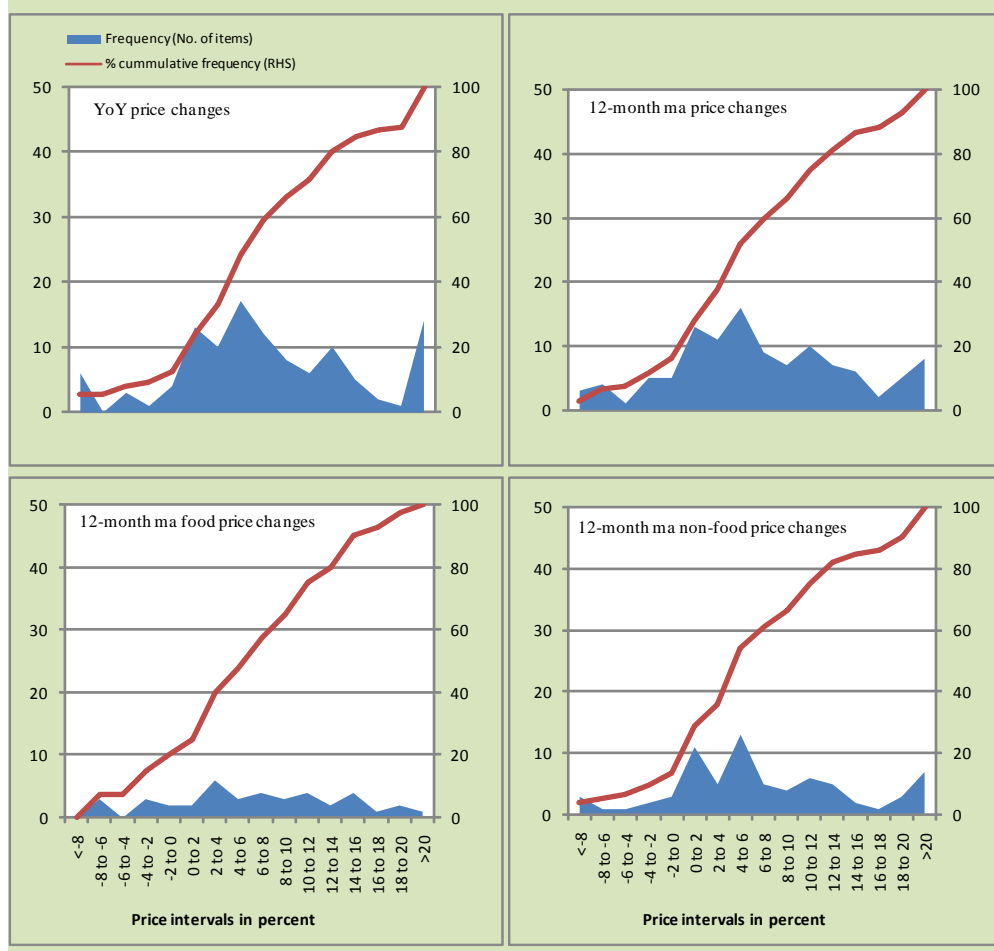
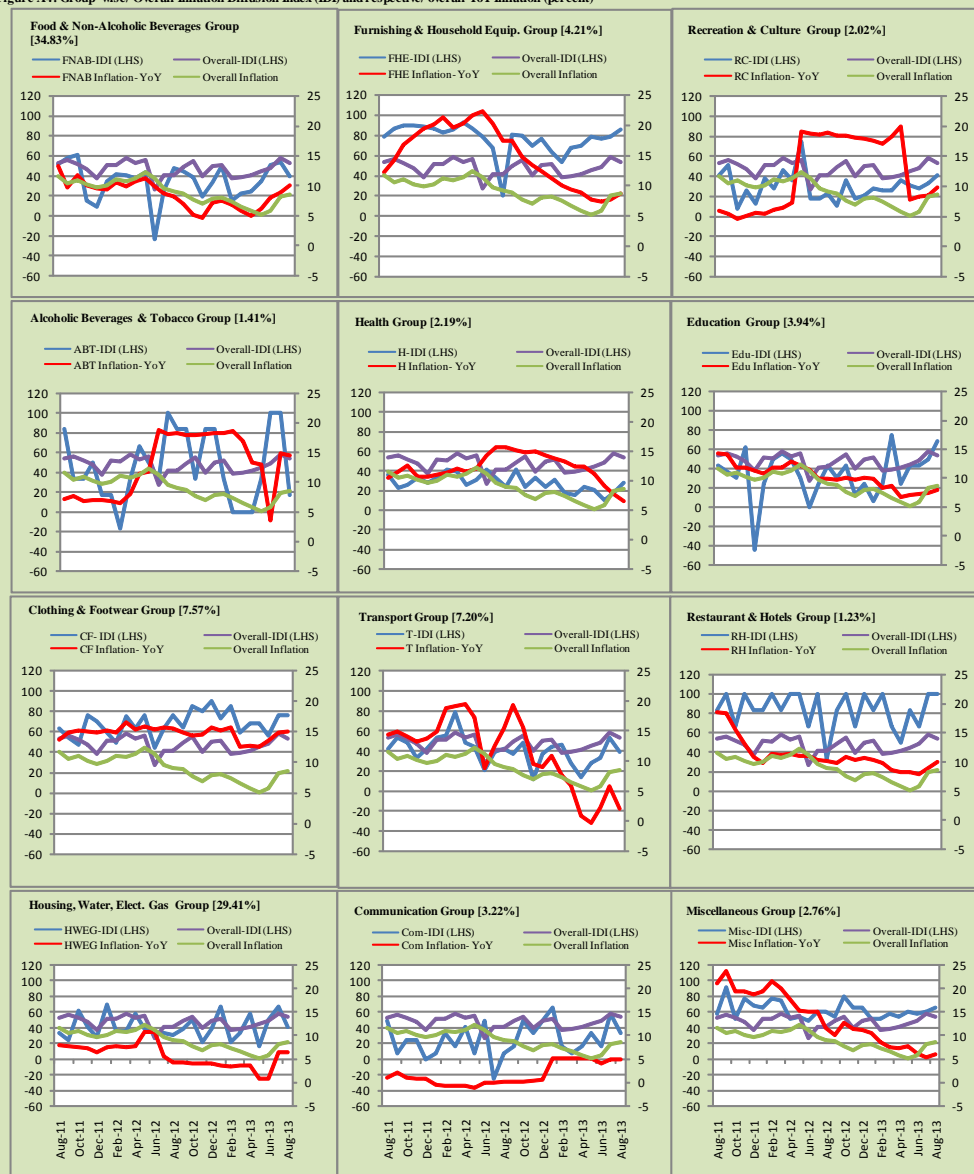


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, August 2013



Inflation Monitor, August 2013

Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



Numbers in square brackets show the weights of respective groups in the CPI baskets.

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 2007-08.
3. CPI basket contains 487 consumers' goods; WPI basket contains 463 items; SPI contains 53 items.
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

10. Annualized rate of inflation (based on a month-on-month rate π) is computed as follows

$$\text{Annualized } \pi = \left(\left(1 + \frac{\pi}{100} \right)^{12} - 1 \right) \times 100$$

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 487 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 constant¹.

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 analysis² suggests that IDI is a leading indicator for Pakistan’s YoY inflation.

¹ 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.

² Formal test shows one way ‘Granger’ causality from IDI to YoY inflation.