

Inflation Monitor

September 2013



State Bank of Pakistan

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Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at 7.4 percent on year-on-year basis in September 2013 as compared to 8.5 percent in the previous month and 8.8 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at -0.3 percent in September 2013 as compared to 1.2 percent in the previous and 0.8 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at -0.1 percent in September 2013 compared to 0.7 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis decreased to 7.6 percent in September 2013 compared to 7.9 percent in the previous month and 10.4 percent in the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) remained at the level of 0.6 percent in September 2013 as in the previous month and was 0.5 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 8.7 percent in September 2013 compared to 8.5 percent in the previous month. It was 10.5 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis remained at the level of 0.6 percent in September 2013 as in the previous month. A 0.4 percent rate of change in Core NFNE index was observed in September 2012.
7. WPI inflation on year-on-year basis increased to 8.7 percent in September 2013 when compared to 8.3 percent a month earlier. During September 2012, WPI inflation was recorded at 7.8%.

8. WPI inflation on month-on-month basis is recorded at 0.7 percent in September 2013 as compared to 2.6 percent in the previous month and 0.3 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis decreased to 7.9 percent in September 2013 as compared to 9.0 percent in the previous month. It was 7.5 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at -0.1 percent in September 2013 as compared to 1.2 percent in previous month and was 0.9 percent in September 2012.

1.1 A New Measure of Core Inflation

A new method of permanently excluding relatively volatile commodities from CPI basket in Pakistan has been developed by SBP. This is achieved by making use of trimming approach on past data on monthly CPI changes to isolate a Relatively Stable Component of CPI (RSC-CPI) as a new measure of core inflation. This method ensures inclusion of both food and non-food commodities that show persistent price behavior in Pakistan (see technical notes for details). Developments in core inflation measured by RSC- CPI for the month of September 2013 are described below:

- Core inflation based on new measure RSC on year-on-year basis recorded at 8.5 percent in September 2013 compared to 8.4 percent in the previous month and 8.7 percent in the corresponding month of last year.
- Core RSC inflation on month-on-month basis recorded at 0.5 percent in September 2013 compared to 0.6 percent in the previous month and 0.4 percent in the corresponding month of last year.

Detailed methodology of new measure of core inflation RSC-CPI is available at link given below:

<http://www.sbp.org.pk/publications/wpapers/2013/wp66.pdf>

Table 1.1 Inflation Trends (percent) (Base 2007- 08 = 100)												
Period	CPI Inflation						Core Inflation					
	General		Food		Non-food		NFNE*		Trimmed		RSC**	
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
Sep-12	8.8	0.8	7.6	0.7	9.7	0.9	10.5	0.4	10.4	0.5	8.7	0.4
Oct-12	7.7	0.4	5.8	-0.1	9.0	0.7	10.2	1.2	9.7	0.7	8.3	0.8
Nov-12	6.9	-0.4	5.3	-0.3	8.1	-0.4	9.8	0.2	8.8	0.2	7.7	0.2
Dec-12	7.9	0.2	7.7	0.0	8.1	0.4	9.8	0.5	9.2	0.3	7.8	0.4
Jan-13	8.1	1.7	8.1	1.9	8.1	1.5	10.0	1.2	9.9	1.0	7.6	1.1
Feb-13	7.4	-0.3	7.4	-1.3	7.4	0.4	9.6	0.4	9.2	0.2	7.4	0.4
Mar-13	6.6	0.4	6.3	0.5	6.7	0.3	9.0	0.4	8.4	0.2	6.8	0.5
Apr-13	5.8	1.1	5.5	1.4	6.0	0.9	8.7	1.1	7.6	0.7	6.4	1.0
May-13	5.1	0.5	6.5	1.1	4.1	0.1	8.1	0.3	6.7	0.3	5.9	0.4
Jun-13	5.9	0.7	7.9	1.1	4.4	0.5	7.8	0.4	6.8	0.6	5.5	0.7
Jul-13	8.3	2.0	9.2	3.0	7.6	1.3	8.2	1.5	7.8	1.2	8.2	1.6
Aug-13	8.5	1.2	10.3	2.0	7.3	0.6	8.5	0.6	7.9	0.6	8.4	0.6
Sep-13	7.4	-0.3	7.9	-1.5	7.0	0.6	8.7	0.6	7.6	0.6	8.5	0.5
* NFNE is Non-food non-energy ** Relatively Stable Component of CPI *** SPI for all income groups combined												

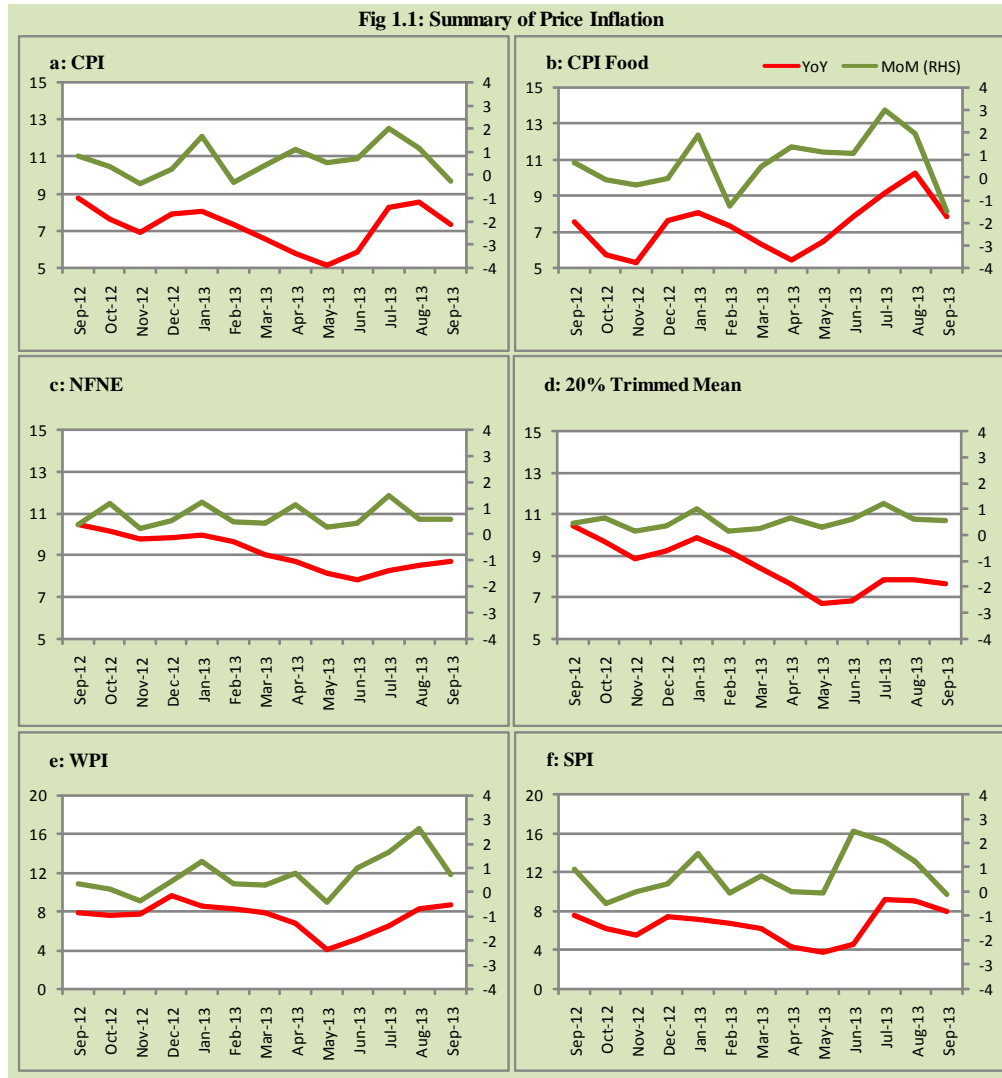
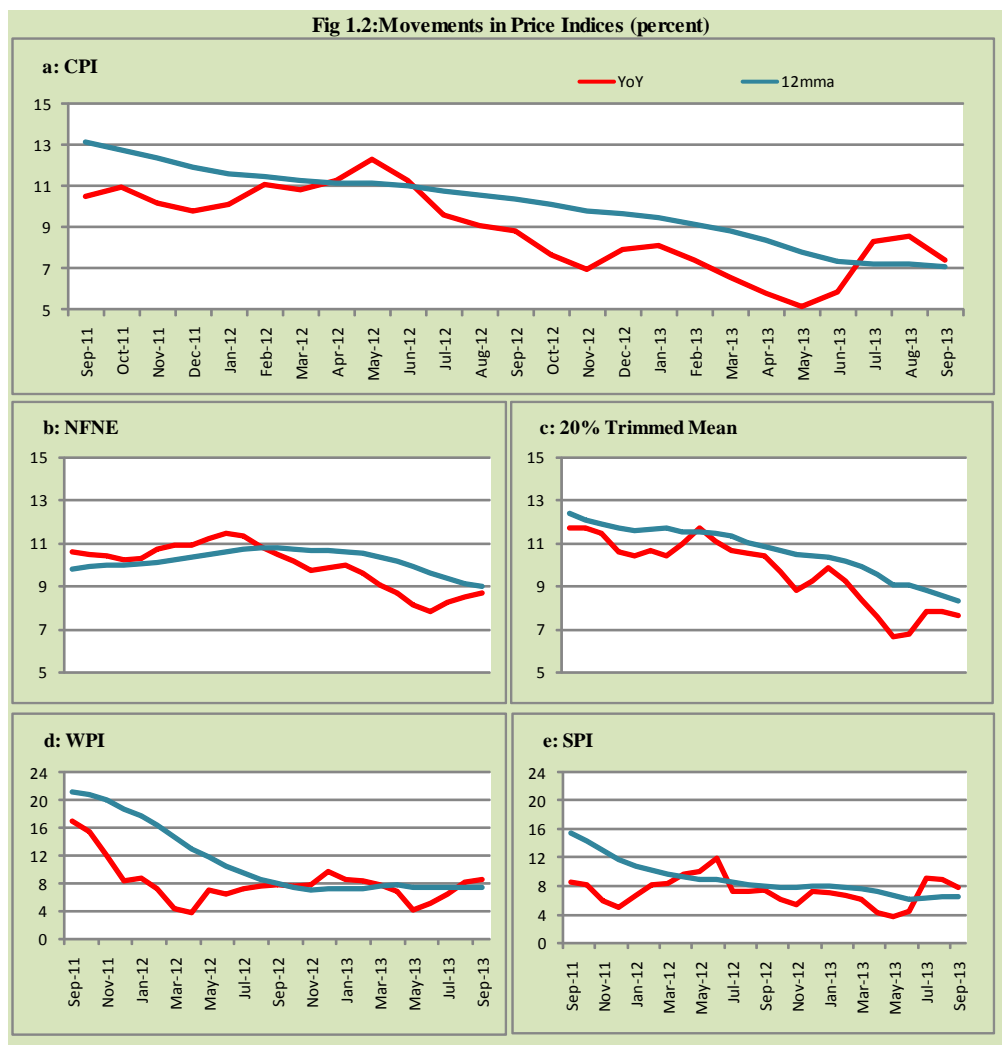


Fig 1.2: Movements in Price Indices (percent)



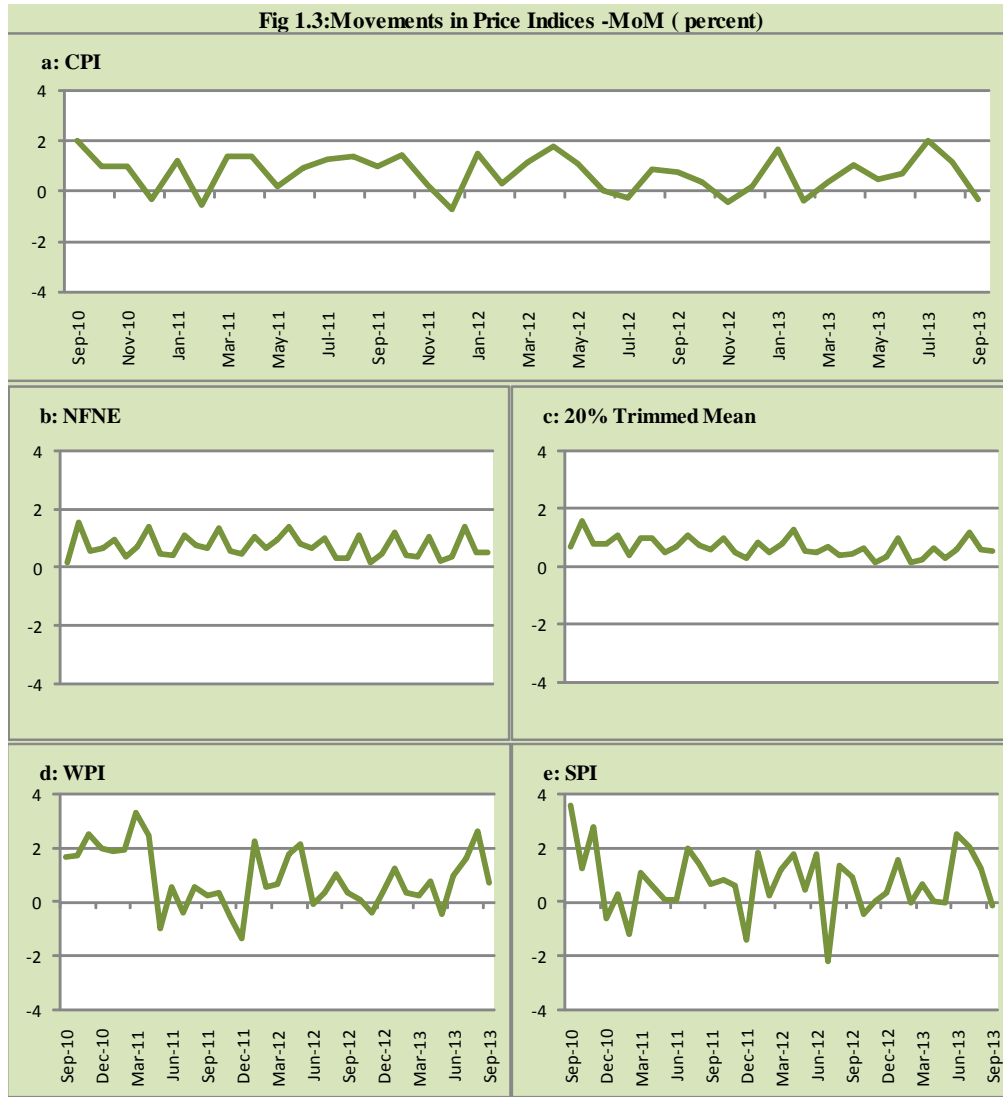
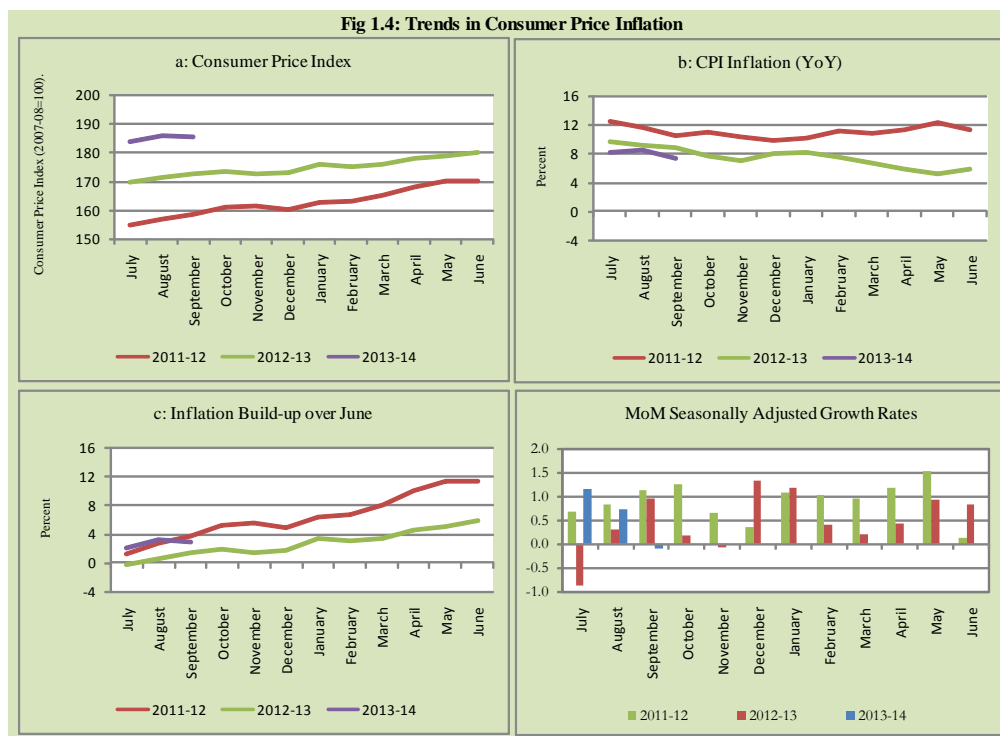


Fig 1.4: Trends in Consumer Price Inflation



2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed a mixed trend during September 2013. Among these five cities, the lowest inflation was observed in Karachi at 5.7 percent while the highest inflation was observed in Peshawar at 10.2 percent (Table A6 of annexure-A).

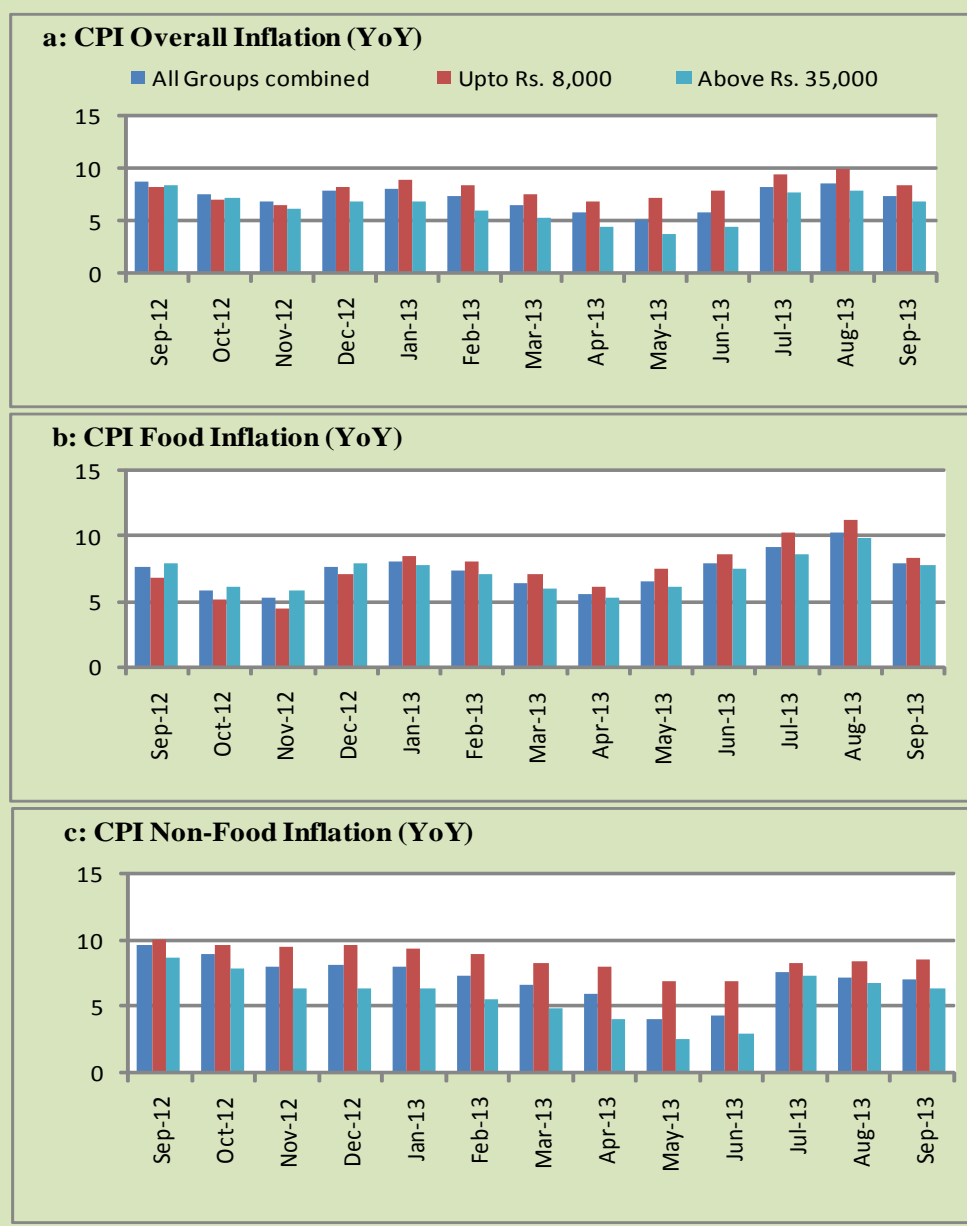
Table 2.1 City-wise Inflation of Selected Cities (percent)						
	Sep-12		Aug-13		Sep-13	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	0.8	8.8	1.2	8.5	-0.3	7.4
Islamabad	0.9	9.0	1.2	7.7	-0.6	6.1
Karachi	1.7	8.6	1.2	7.8	-0.3	5.7
Lahore	0.4	8.0	1.5	6.6	-0.4	5.8
Peshawar	1.0	7.2	1.3	11.2	0.1	10.2
Quetta	-0.1	8.7	0.4	8.7	-0.6	8.1

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 September 2013 for general and non-food groups and also lowest among these groups. The lowest income group (Up to Rs. 8, 000) has the highest inflation among the groups during the month of September 2013 (Table A7 of annexure-A).

Table 3.1 Income Group- wise Inflation (YoY)									
Income Groups	General			Food			Non-food		
	Sep-12	Aug-13	Sep-13	Sep-12	Aug-13	Sep-13	Sep-12	Aug-13	Sep-13
All Groups Combined	8.8	8.5	7.4	7.6	10.3	7.9	9.7	7.3	7.0
Up to Rs. 8,000	8.2	10.0	8.5	6.8	11.2	8.3	10.1	8.4	8.6
Rs. 8,001- 12,000	9.3	9.4	8.1	7.1	10.7	8.1	12.0	8.0	8.1
Rs. 12,001- 18,000	9.3	9.1	7.9	7.3	10.5	7.9	11.3	7.7	7.8
Rs. 18,001- 35,000	7.9	8.9	7.7	7.6	10.3	7.8	8.2	7.6	7.6
Above Rs. 35,000	8.4	7.9	6.8	8.0	9.9	7.8	8.7	6.9	6.4

Fig 3.1: Income Group- wise Inflation



4. Weighted Contribution

The weighted contribution of food group in the overall inflation decreased to 44.97 percent during September 2013 from 50.74 percent in August 2013. It was 36.69 percent in September 2012.

The weighted contribution of non-food group showed increase to touch 55.03 percent in September 2013 from 49.26 percent in August 2013.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)						
Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
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
Sep-13	44.97	14.90	22.53	0.16	3.91	13.52

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change

	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13
General	48.6	54.7	39.6	49.6	51.4	37.9	39.1	40.9	44.5	48.4	58.0	53.5	51.4
Food & Non-Alcoholic Beverages	44.2	38.3	19.1	33.0	49.6	15.2	22.5	23.9	34.6	50.4	53.5	39.8	36.3
Alcoholic Beverages & Tobacco	83.3	33.3	83.3	83.3	33.3	0.0	0.0	0.0	33.3	100.0	100.0	16.7	66.7
Clothing & Footwear	64.4	84.7	79.7	89.8	72.9	84.7	59.3	67.8	67.8	55.9	76.3	76.3	83.1
Housing, Water, Elect, Gas & other Fuels	38.9	50.0	22.2	38.9	66.7	22.2	33.3	58.3	16.7	50.0	66.7	41.7	33.3
Furnishing & Household Equip. Maintenance etc	81.2	79.7	69.6	76.8	63.8	53.6	68.1	69.6	78.3	76.8	78.3	85.5	78.3
Health	41.0	23.1	33.3	23.1	30.8	17.9	15.4	23.1	20.5	10.3	17.9	28.2	10.3
Transport	37.2	48.8	11.6	37.2	44.2	46.5	27.9	14.0	27.9	32.6	53.5	39.5	53.5
Communication	16.7	50.0	33.3	50.0	66.7	16.7	8.3	16.7	33.3	16.7	58.3	33.3	16.7
Recreation & Culture	10.3	35.9	17.9	20.5	28.2	25.6	25.6	35.9	30.8	28.2	33.3	41.0	33.3
Education	31.3	43.8	12.5	25.0	6.3	25.0	75.0	25.0	43.8	43.8	50.0	68.8	56.3
Restaurant & Hotels	83.3	100.0	66.7	100.0	83.3	100.0	66.7	50.0	83.3	66.7	100.0	100.0	100.0
Miscellaneous	54.3	80.0	65.7	65.7	51.4	51.4	57.1	54.3	60.0	57.1	60.0	65.7	74.3
NFNE	49.1	62.1	46.4	55.3	52.7	45.9	45.6	49.1	49.4	47.9	58.6	58.6	55.9

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	Sep-12		Aug-13		Sep-13	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	10.63	4.98	26.78	4.94	24.31	2.93
2	Wheat Flour Bag	10 Kg	10.68	6.43	27.16	5.23	22.67	2.67
3	Rice Basmati Sup. Qlty.	Kg	19.42	1.61	18.57	1.08	17.55	0.74
4	Pulse Masoor (Washed)	Kg	-6.38	0.95	9.92	-0.23	10.16	1.16
5	Pulse Moong (Washed)	Kg	-14.87	-2.34	3.43	-0.29	4.60	-1.23
6	Pulse Mash (Washed)	Kg	-9.98	0.21	-3.39	0.02	-3.45	0.15
7	Pulse Gram	Kg	47.86	0.74	-28.25	-4.71	-31.06	-3.20
8	Vegetable Ghee (Loose)	Kg	1.81	-0.71	-5.26	-0.21	-5.04	-0.49
9	Sugar Refined	Kg	-28.83	-1.11	-0.07	-0.40	0.72	-0.33
10	Milk Fresh (Unboiled)	Ltr	13.74	0.74	7.84	1.30	7.05	0.00
11	Tea- Tapal Danedar	200 Gm	-1.74	0.00	36.24	0.00	37.40	0.85
12	Beef With Bone Av. Qlty.	Kg	9.61	1.21	3.91	0.00	3.61	0.93
13	Mutton Av. Qlty.	Kg	10.19	0.69	6.83	1.02	6.89	0.74
14	Chicken Farm Broiler (Live)	Kg	-11.88	-15.46	26.02	12.15	12.56	-24.50
15	Eggs Farm	Doz	10.35	12.08	8.34	6.23	9.42	13.20
16	Potatoes	Kg	-2.87	2.24	12.43	7.36	14.95	4.53
17	Onion	Kg	18.86	13.77	70.08	34.57	26.13	-15.63
18	Tomatoes	Kg	32.32	-14.33	45.05	-11.54	29.36	-23.60
19	Ginger	Kg	-23.22	0.14	40.93	3.58	57.97	12.24
20	Garlic	Kg	-15.82	4.85	17.49	2.00	12.10	0.03

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Sep-12		Aug-13		Sep-13	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-0.9	0.8	0.1	1.1	-1.0	-0.3
Food	4.0	-2.1	-6.4	-5.2	-7.8	-3.5
Metals	-19.7	4.3	4.9	4.8	-1.1	-1.7
Energy	3.2	0.9	1.0	2.3	0.8	0.7
Agricultural Raw Material	-11.0	1.6	4.1	-1.2	2.4	0.0
Cotton	-27.9	-0.3	9.9	0.1	7.1	-2.8

Source: IMF

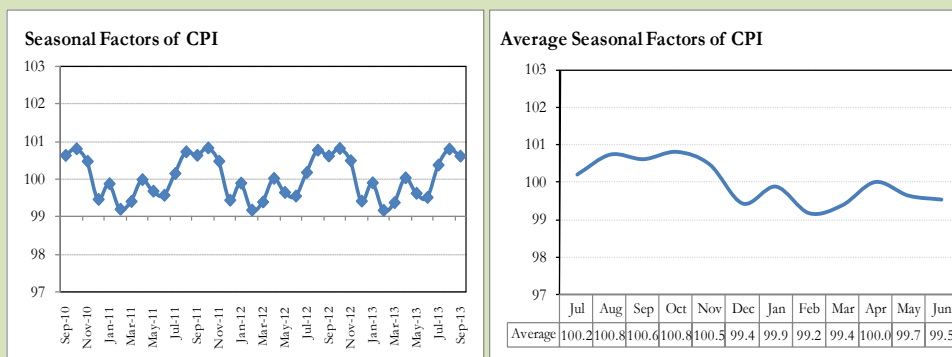
8. Seasonal Adjustment in CPI

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 September 2013 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

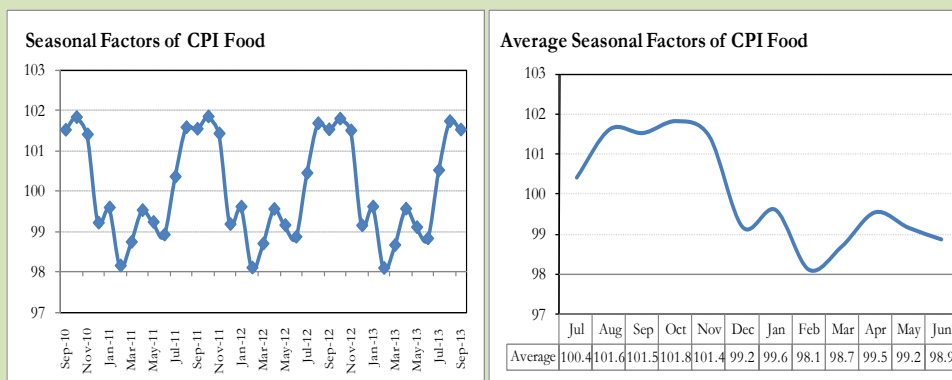
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November & April and downward seasonality in the remaining months 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

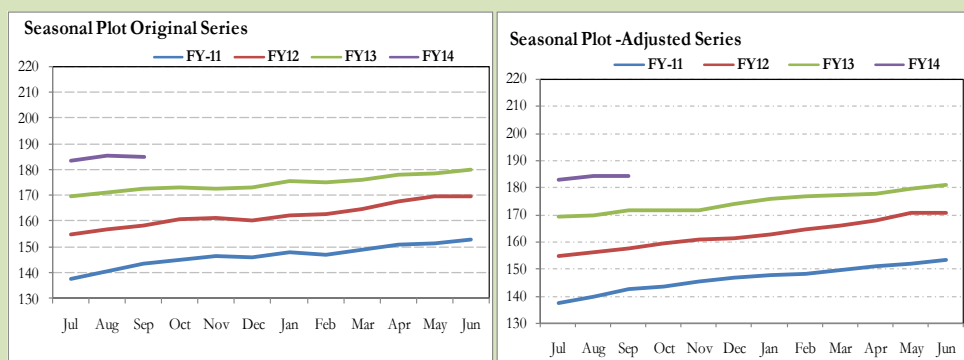
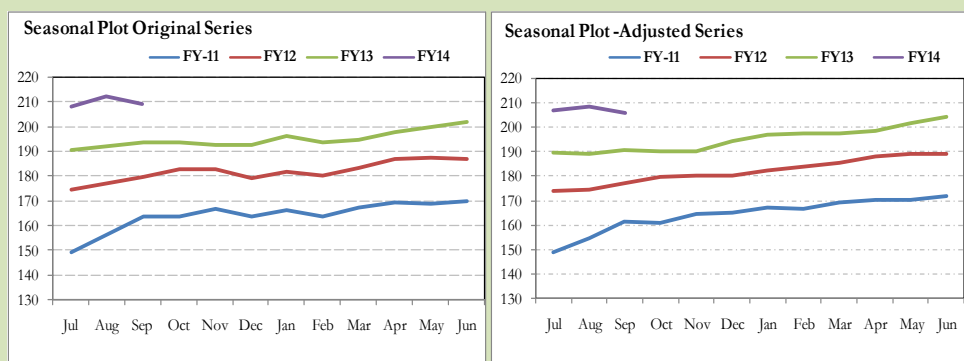


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for September 2013 stood at 184.04 against 185.18 in original series showing a decrease of 1.14 on account of adjustment of upward seasonality in September 2013.

Seasonally adjusted CPI food group for September 2013 stood at 205.96 against 209.09 in original series showing a decrease of 3.13 on account of adjustment of upward seasonality in September 2013.

Month-on-month change of seasonally adjusted CPI series stood at -0.10% reflecting decrease during September 2013 over August 2013 and a decrease of 0.29% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at -1.29% reflecting decrease during September 2013 over August 2013 and a decrease of 1.50% 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 September 2013 (corresponding to the seasonally adjusted month-on-month rate) is -1.17 percent.

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

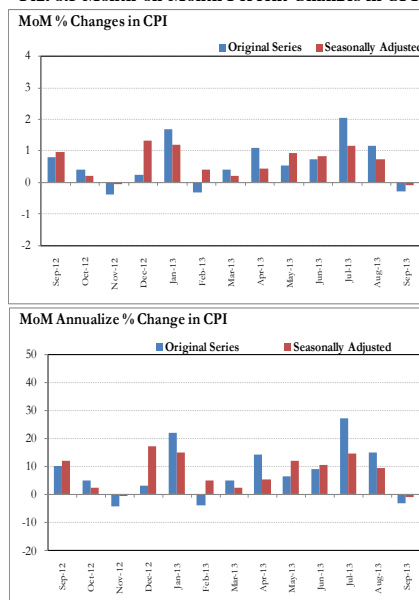
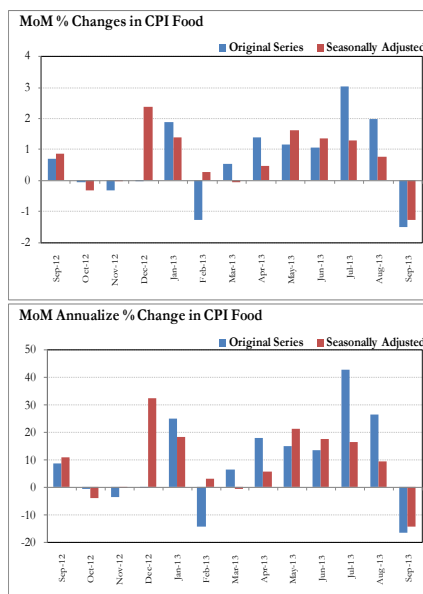


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weight	MoM change			YoY change		
		Sep-12	Aug-13	Sep-13	Sep-12	Aug-13	Sep-13
I. Food Group	37.5	0.7	2.0	-1.5	7.6	10.3	7.9
Food & Non-Alcoholic	34.8	0.7	2.1	-1.7	7.1	10.1	7.5
Alcoholic Beverages & Tobacco	1.4	0.2	0.0	0.2	17.8	14.5	14.5
Restaurant & Hotels	1.2	0.7	1.1	2.5	9.8	10.1	12.0
II. Non-Food Group	62.5	0.9	0.6	0.6	9.7	7.3	7.0
Clothing & Footwear	7.6	0.8	1.0	0.6	14.9	15.0	14.9
Housing, Water, Elect, Gas & other Fuels	29.4	0.0	0.0	0.1	4.4	6.5	6.6
Furnishing & Household Equip. Maintenance etc	4.2	0.8	0.9	1.1	17.3	8.6	8.9
Health	2.2	1.0	0.5	1.2	15.2	6.5	6.7
Transport	7.2	4.1	1.0	2.1	19.2	2.2	0.1
Communication	3.2	0.0	0.0	0.0	0.2	4.9	4.9
Recreation & Culture	2.0	0.0	1.6	0.3	18.4	9.7	10.1
Education	3.9	0.2	1.1	0.3	9.7	8.1	8.2
Miscellaneous	2.8	1.7	1.6	1.4	10.1	6.0	5.7
Headline	100	0.8	1.2	-0.3	8.8	8.5	7.4

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)	
		Sep-12	Sep-13	Sep-12	Sep-13	Sep-12	Sep-13	Sep-12	Sep-13	Sep-12	Sep-13
I. Food Group	7.9	127	127	25	28	20	20	33	29	49	50
Food & Non-Alcoholic Beverages	7.5	115	115	25	28	20	20	27	26	43	41
Alcoholic Beverages & Tobacco	14.5	6	6	0	0	0	0	2	2	4	4
Restaurant & Hotels	12.0	6	6	0	0	0	0	4	1	2	5
II. Non-Food Group	7.0	348	348	39	57	47	62	53	121	209	108
Clothing & Footwear	14.9	59	59	4	3	1	3	4	13	50	40
Housing, Water, Elect, Gas & other Fuels	6.6	36	36	6	6	2	3	11	22	17	5
Furnishing & Household Equip. Maintenance etc	8.9	69	69	2	0	5	15	14	37	48	17
Health	6.7	39	39	10	20	8	7	1	5	20	7
Transport	0.1	43	43	2	13	4	11	4	16	33	3
Communication	4.9	12	12	5	2	4	3	0	3	3	4
Recreation & Culture	10.1	39	39	6	8	11	11	6	6	16	14
Education	8.2	16	16	2	1	6	4	3	8	5	3
Miscellaneous	5.7	35	35	2	4	6	5	10	11	17	15
Overall	7.4	475	475	64	85	67	82	86	150	258	158

Note: Prices of 12 seasonal items were not reported during the month.

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in September 2013					
Top 15 Contributors		YoY Change		Weighted Contribution	
Items/ Contributors	Weights	Sep-12	Sep-13		
Ranked by Weighted Contribution					
1	House Rent	21.81	6.52	8.19	19.21
2	Wheat Flour	4.16	9.90	23.56	13.70
3	Milk Fresh	6.68	13.82	6.88	7.75
4	Education	3.94	9.72	8.20	3.91
5	Tea	0.84	1.00	25.97	3.45
6	Cotton Cloth	1.73	6.92	15.72	3.33
7	Footwear	1.55	15.94	18.56	3.22
8	Cigarette	1.39	17.98	14.58	3.03
9	Rice	1.58	13.07	12.30	2.61
10	Onion	0.52	18.86	26.13	2.41
11	Fresh Vegetable	1.71	-4.09	8.14	2.33
12	Ready Made Food	1.23	9.81	12.04	2.30
13	Tailoring	0.88	18.09	15.46	2.16
14	Chicken	1.36	-11.88	12.56	2.05
15	Meat	2.43	9.80	4.69	1.95
Total		51.83			73.41
Bottom 15 Contributors					
1	Motor Fuel	3.03	26.68	-5.43	-2.60
2	Spices	0.54	9.94	-19.19	-2.18
3	Fresh Fruits	1.86	12.52	-7.08	-2.15
4	Pulse Gram	0.24	47.87	-31.06	-1.38
5	Vegetable Ghee	2.07	4.87	-5.03	-1.34
6	Besan	0.15	42.47	-26.91	-0.75
7	Gram Whole	0.16	17.67	-22.62	-0.66
8	Cooking Oil	1.75	13.43	-2.22	-0.50
9	Pulse Mash (Washed)	0.21	-9.98	-3.44	-0.11
10	Mustard Oil	0.10	7.92	-1.71	-0.02
11	Electricity	4.40	16.39	0.00	0.00
12	Kerosene Oil	0.01	17.72	7.29	0.01
13	Medical Equipment	0.01	14.86	7.48	0.01
14	Motor Vehicle Tax	0.11	25.73	1.13	0.01
15	Betel Leaves & Nuts	0.02	8.18	6.85	0.02
Total		14.66			-11.63

Table A3.1: Top and Bottom 15 Contributors to CPI Inflation (MoM) in September 2013

<u>Top 15 Contributors</u>		<u>MoM Change</u>		Weighted Contribution	
Items/ Contributors	Weights	Aug-13	Sep-13		
Ranked by Weighted Contribution					
1	Wheat Flour	4.16	4.49	2.80	47.07
2	Fresh Vegetable	1.71	4.15	4.79	33.98
3	Motor Fuel	3.03	1.72	2.93	30.95
4	Egg	0.46	6.23	13.20	20.13
5	Transport Services	2.70	0.39	1.71	17.80
6	Ready Made Food	1.23	1.15	2.48	12.43
7	Bakery & Confectionary	1.16	1.66	2.98	12.14
8	Personal Equipments	0.84	3.09	2.42	9.70
9	Meat	2.43	0.34	0.86	8.94
10	Potatoes	0.46	7.36	4.53	8.92
11	Doctor (MBBS) Clinic Fee	0.59	1.27	2.52	5.81
12	Household Servant	1.04	1.18	1.19	4.68
13	Washing Soap & Detergent	0.79	1.24	1.46	4.51
14	Water Supply	0.50	0.12	3.02	4.00
15	Wheat	0.35	4.94	2.93	3.94
Total		21.45			225.01
Bottom 15 Contributors					
1	Chicken	1.36	12.15	-24.50	-143.48
2	Fresh Fruits	1.86	-2.47	-15.48	-124.31
3	Tomatoes	0.43	-11.54	-23.60	-54.81
4	Onion	0.52	34.57	-15.63	-51.87
5	Beverages	1.20	1.24	-0.80	-3.42
6	Pulse Gram	0.24	-4.71	-3.20	-2.44
7	Spices	0.54	-0.21	-0.72	-1.59
8	Sugar	1.04	-0.40	-0.33	-1.28
9	Pulse Moong	0.23	-0.29	-1.22	-1.27
10	Gram Whole	0.16	-3.41	-2.29	-1.27
11	Vegetable Ghee	2.07	0.05	-0.12	-0.74
12	Besan	0.15	-3.37	-1.19	-0.59
13	Mustard Oil	0.10	-0.57	0.00	0.00
14	Electricity	4.40	0.00	0.00	0.00
15	Motor Vehicle Tax	0.11	0.00	0.00	0.00
Total		14.42			-387.06

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in September 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-12	Sep-13	
A. Ranked by Percentage Change					
1	Tomatoes	0.43	32.32	29.36	1.68
2	Onion	0.52	18.86	26.13	2.41
3	Tea	0.84	1.00	25.97	3.45
4	Postal Services	0.07	5.09	25.93	0.23
5	Wheat	0.35	10.63	24.31	1.12
6	Wheat Flour	4.16	9.90	23.56	13.70
7	Gur	0.02	-19.20	23.16	0.09
8	Footwear	1.55	15.94	18.56	3.22
9	Woolen Readymade Garments	0.40	17.35	18.05	0.93
10	Wheat Product	0.10	7.40	17.68	0.23
11	Text Books	0.57	39.98	15.92	1.64
12	Cotton Cloth	1.73	6.92	15.72	3.33
13	Tailoring	0.88	18.09	15.46	2.16
14	Potatoes	0.46	-2.87	14.95	1.11
15	Cigarette	1.39	17.98	14.58	3.03
Total		13.47			38.34
B. Ranked by Weights					
1	House Rent	21.81	6.52	8.19	19.21
2	Milk Fresh	6.68	13.82	6.88	7.75
3	Electricity	4.40	16.39	0.00	0.00
4	Wheat Flour	4.16	9.90	23.56	13.70
5	Education	3.94	9.72	8.20	3.91
6	Communication & Apparatus	3.15	0.06	4.32	1.31
7	Motor Fuel	3.03	26.68	-5.43	-2.60
8	Transport Services	2.70	14.00	3.45	1.47
9	Meat	2.43	9.80	4.69	1.95
10	Vegetable Ghee	2.07	4.87	-5.03	-1.34
11	Fresh Fruits	1.86	12.52	-7.08	-2.15
12	Cooking Oil	1.75	13.43	-2.22	-0.50
13	Cotton Cloth	1.73	6.92	15.72	3.33
14	Fresh Vegetable	1.71	-4.09	8.14	2.33
15	Rice	1.58	13.07	12.30	2.61
Total		63.03			50.96
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, which is 7.4 percent in September, 2013.					

Table A3.3: Top Ten Contributors to CPI Food Inflation (YoY) in September 2013

Top 10 Items/ Contributors by Weighted Contribution to GDP in India (2012 and September 2013)					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-12	Sep-13	
A. Ranked by Weighted Contribution					
1	Wheat Flour	4.16	9.90	23.56	13.70
2	Milk Fresh	6.68	13.82	6.88	7.75
3	Tea	0.84	1.00	25.97	3.45
4	Cigarette	1.39	17.98	14.58	3.03
5	Rice	1.58	13.07	12.30	2.61
6	Onion	0.52	18.86	26.13	2.41
7	Fresh Vegetable	1.71	-4.09	8.14	2.33
8	Ready Made Food	1.23	9.81	12.04	2.30
9	Chicken	1.36	-11.88	12.56	2.05
10	Meat	2.43	9.80	4.69	1.95
Total		21.91			41.58
B. Ranked by Percentage Change					
1	Tomatoes	0.43	32.32	29.36	1.68
2	Onion	0.52	18.86	26.13	2.41
3	Tea	0.84	1.00	25.97	3.45
4	Wheat	0.35	10.63	24.31	1.12
5	Wheat Flour	4.16	9.90	23.56	13.70
6	Gur	0.02	-19.20	23.16	0.09
7	Wheat Product	0.10	7.40	17.68	0.23
8	Potatoes	0.46	-2.87	14.95	1.11
9	Cigarette	1.39	17.98	14.58	3.03
10	Cereals	0.16	9.58	12.79	0.31
Total		8.43			27.14
C. Ranked by Weights					
1	Milk Fresh	6.68	13.82	6.88	7.75
2	Wheat Flour	4.16	9.90	23.56	13.70
3	Meat	2.43	9.80	4.69	1.95
4	Vegetable Ghee	2.07	4.87	-5.03	-1.34
5	Fresh Fruits	1.86	12.52	-7.08	-2.15
6	Cooking Oil	1.75	13.43	-2.22	-0.50
7	Fresh Vegetable	1.71	-4.09	8.14	2.33
8	Rice	1.58	13.07	12.30	2.61
9	Cigarette	1.39	17.98	14.58	3.03
10	Chicken	1.36	-11.88	12.56	2.05
Total		25.01			29.42

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 7.9 percent in September, 2013.

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in September 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-12	Sep-13	
A. Ranked by Weighted Contribution					
1	House Rent	21.81	6.52	8.19	19.21
2	Education	3.94	9.72	8.20	3.91
3	Cotton Cloth	1.73	6.92	15.72	3.33
4	Footwear	1.55	15.94	18.56	3.22
5	Tailoring	0.88	18.09	15.46	2.16
6	Ready Made Garment	0.97	16.66	12.85	1.66
7	Text Books	0.57	39.98	15.92	1.64
8	Household Servant	1.04	30.36	9.95	1.50
9	Transport Services	2.70	14.00	3.45	1.47
10	Woolen Cloth	0.88	17.05	11.04	1.43
Total		36.09			39.53
B. Ranked by Percentage Change					
1	Postal Services	0.07	5.09	25.93	0.23
2	Footwear	1.55	15.94	18.56	3.22
3	Woolen Readymade Garments	0.40	17.35	18.05	0.93
4	Text Books	0.57	39.98	15.92	1.64
5	Cotton Cloth	1.73	6.92	15.72	3.33
6	Tailoring	0.88	18.09	15.46	2.16
7	Dopatta	0.44	19.08	14.28	0.91
8	Cosmetics	0.39	9.40	14.16	0.64
9	Cleaning & Laundering	0.21	20.00	13.76	0.43
10	Sewing Needle & Dry Cell	0.15	11.37	13.04	0.23
Total		6.38			13.71
C. Ranked by Weights					
1	House Rent	21.81	6.52	8.19	19.21
2	Electricity	4.40	16.39	0.00	0.00
3	Education	3.94	9.72	8.20	3.91
4	Communication & Apparatus	3.15	0.06	4.32	1.31
5	Motor Fuel	3.03	26.68	-5.43	-2.60
6	Transport Services	2.70	14.00	3.45	1.47
7	Cotton Cloth	1.73	6.92	15.72	3.33
8	Gas	1.58	-42.09	7.05	1.17
9	Footwear	1.55	15.94	18.56	3.22
10	Personal Care	1.49	13.92	6.75	1.40
Total		45.39			32.42
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 7.0 percent in September, 2013.					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: September 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., Lemon, Chillies Powder Loose, Gram Whole Yellow Av.Qlty	Pulse Moong (Washed), Squash-Mitchelles, Sweetmelon (Garma), Dates Av.Qlty., Cloves Loose Av.Qlty	Rice Basmati Broken Av. Qlty, Custard Powder Rafhan 300, Eggs Farm, Rusk (Papay), Tomato Ketchup Ahmed/Mitchells	Ginger, Ice Cream Walls, Chillies Green, Tapal Danedar Tea 200 Gm, Tea Lipton Yellow Label 200 Gm, Tomatoes, Onion, Wheat Flour Fine/Superior, Wheat, Wheat Flour Avg. Qlty, Gur Av.Qlty, Wheat Flour Bag, Maida, Radish
Alcoholic Beverages & Tobacco			Betel Leaves, Betel Nuts	Cigarettes K-20,S, Cigarettes Gold Leaf 20,S, Cigarettes Capstan 20,S, Cigarettes Morven Gold 20.S
Clothing & Footwear	Gents Spoung Chappal Bata, Ladies Spoung Chappal Bata, Ladies Sandal Bata	Tropical Suiting Law.Pur, Pullover Ladies Oxford/Bon, Heavy Wt Suiting Law.Pur Av. Qlty	Vest/Shameez (Women) Avg. Qlty, Foot Wear Local (Female), School Uni. Pant, Shirt Boys, Pant Cloth Wash & Wear Av.Qlty, Socks Nylon (Pakistani)	Gents Shoe, Art 1109 Servis, Gents Shoes Paul Bata, Sports Shoes, Secondhand Sweater For Men, Secondhand Winter Jacket, Child Shoe Power Lite Bata, Shirting Av.Qlty., Lawn Printed Gul Ahmed/Al Karam, Georgette Av.Qlty, Tailoring Suit (Female)
Housing, Water, Elect, Gas & other Fuels	Elect. Charges Upto 50 Units, Elect. Charges Above 1000 Units Elect. Charges 01 - 100 Units	Bricks (New) 1st Class, Iron Bar (M.S. Bar) 1/2", Bajree	Firewood Whole, Unskilled Labour Wage Rat, Electrician Wage Rate(P/Day), Cement (Local), Water Charges Per House	Electrician Wage Rate(P/Pnt), Plumber Wage Rate, Mason (Raj) Wage Rate, Synthetic Enemal Robialac, Timber Shesham Log
Furnishing & Household Equip. Maintenance etc		Pedestal Fan 22" Super Qlty, Thermos Starvac 1 Ltr, Tube Light Philips 40 Watt, Mattress Single (4"Thick), Table Spoon S. Steel Sup. Qlty	Sofa Set Wooden With Foam, Household Servant Female (Part Time), Dining Table 6 Chairs, Bed Sheet Double With Two Pillow Cover	Match Box (Small), Boot Polish Cherry/Kiwi 50 Ml, Washing Powder (Wheel/ Bonus), Cleanser Powder Vim 1000 Gms, Bed Sheet Single Bed Sup. Qlty, Surf Excel 400 Gms Poly Bag, Boot Polish Liquid (Cherry)
Health	Calcium Syrup Sandoz, Burnol Cream 30 Gm, Amoxil Capsule 250 Mg., Polyfax Eye Ointment, Daonil Tab. 5 Mg.	Urine Test (Dr) Charges, Dettol (Medium), Sugar Test (Random/Fasting), Glycerin Small Bottle, Gripe-Water Woodward, Cac. 1000 Tab	X-Ray (Chest) Charges, Cotton Bandage 2" - 4", Blood Test (Cp) Charges, Thermometer China, Ear Drops (Cardisporine)	Galxos-D (450 Gm), Jouhar Joshanda, Sancos Syrup (50 Ml), Saniplast (1 Putty), Doctor (MBBS) Clinic Fee, Trisil Tab., Phenergan Syrup 120 Ml.
Transport	Train Fare A/C Slp. 101-500, Train Fare A/C Slp > 500K, CNG, Train Fare A/C Slp. 1-100, Train Fare Eco. 1-100 Km.	Train Fare 1st Slp. 1-100, Motorcycle Yamaha 100 CC, Suzuki Fare Min.Within City, Train Fare Eco. > 500 Km., Taxi 4 Seater Fare	Minibus Fare Min.Within City, Motor Cycle Service Charges, Car Service Charges, Car Suzuki 800 CC (W/O. Ac), Car Honda Civic 1500 Cc	Bus Fare Outside City (Non A/C), Gas Cylinder S. Size (L.P.G), Cycle Overhauling Charges
Communication	Postal Envelope Domestic, Mobile Cell Charges	Telephone Set Av. Qlty, Postal Envelope For Saudi Arabia, 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, T.V. 20" Colored Sony, Tape Recorder Cassette (Blank), V.C.P. Panasonic/LG/National, TV License Fee Domestic	Video Cassette Blank, Tdk/Sony, Personnel Computer (Branded), Photostat Paper 70 Gm, Radio With C.Player National, Maths Book Class IX or X	Urdu Book 1st Year/ Inter, Maths Book Ist. Year (T.B. Board), Ball Pen (Local), Fountain Pen Hero/Wings/China, Paper Fool Scape (27"X17")	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	I.T. Tuition Fees, Govt. Engg. Coll. Fee 1st Year, 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)
Restaurant & Hotels			Chicken Biryani Full/Double	Cooked Beef (Av. Hotel), Cooked Mutton (Av. Hotel), Cooked Dal (Av. Hotel), Bread Tandoori St. Size, Tea Prepared (Ordinary)
Miscellaneous	Toothpaste Med Size Colgate 70Gms, Silver Tezabi 24 Ct, Gold Tezabi 24 Ct	Blade 7-O-Clock Steel (5), Talc Powder Viceroy/ Black Cat, Gel Medium Size	Toothbrush Shield, Disposable Razor Gillette-II, Beauty Parlor Hair Style Charges	Perfume Med. Size Medora/Broche, Toilet Soap Lux 95 Gms, Purse Ladies (Leather) Av. Qlty, Artificial Jewellery Set, Shaving Charges, Toothpaste Macleans 70 Gms

Table A5: City- wise CPI Inflation by Income Groups, September 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	-1.4	8.0	-2.6	7.6	0.3	8.5	-1.5	7.9	-2.8	7.5	0.0	8.4
2 Islamabad	-1.0	8.8	-2.1	9.5	0.6	7.8	1.2	10.9	-1.8	10.4	4.9	11.4
3 Lahore	-0.4	6.5	-0.9	6.8	0.4	6.1	0.4	7.6	-0.7	7.6	1.8	7.5
4 Gujranwala	-0.6	6.5	-1.4	6.6	0.5	6.4	-0.4	6.8	-1.5	6.6	1.0	6.9
5 Sialkot	-1.3	6.7	-2.4	4.9	0.3	9.1	-0.5	7.6	-2.0	5.6	1.4	10.0
6 Faisalabad	-0.2	8.8	-0.8	9.2	0.6	8.4	1.1	10.1	0.0	10.2	2.5	9.9
7 Multan	-0.1	7.3	-0.5	7.8	0.4	6.8	0.5	7.7	-0.8	7.2	2.0	8.2
8 Sargodha	-0.6	6.8	-1.4	5.8	0.4	8.0	-0.4	7.2	-1.2	6.3	0.5	8.0
9 Bahawalpur	-0.1	6.3	-0.4	5.0	0.2	7.9	0.4	6.9	-0.5	5.2	1.2	8.7
10 Karachi	-1.0	6.6	-2.0	9.0	0.6	3.3	-1.1	6.0	-2.2	8.2	0.3	3.4
11 Hyderabad	-0.3	7.0	-0.8	8.8	0.4	4.4	0.0	7.0	-0.5	8.6	0.7	5.0
12 Sukkur	-1.7	6.2	-2.8	5.2	-0.1	7.5	-0.6	7.0	-2.0	5.7	0.9	8.5
13 Larkana	-0.6	11.9	-1.7	9.4	0.8	15.0	-1.4	11.1	-3.0	8.7	0.2	13.8
14 Peshawar	0.1	10.8	-0.5	9.1	0.9	12.8	0.8	11.4	-0.5	9.1	2.2	13.9
15 Bannu	-1.0	7.8	-2.1	8.7	0.3	6.8	1.1	9.8	-1.1	9.7	3.4	9.9
16 Quetta	-0.9	8.5	-1.6	8.1	0.0	9.1	-0.4	8.7	-1.3	8.1	0.6	9.3
17 Khuzdar	0.8	6.0	1.2	7.2	0.4	4.6	1.1	6.3	1.3	7.0	0.8	5.5
	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	-1.1	8.7	-2.2	8.3	-0.1	9.2	-1.0	8.3	-1.7	9.0	-0.4	7.7
2 Islamabad	1.8	11.9	-1.7	10.8	5.7	13.0	3.2	12.6	-1.4	11.0	7.6	14.0
3 Lahore	1.3	8.7	-0.5	7.7	3.5	9.7	1.8	8.5	-0.4	8.2	3.9	8.9
4 Gujranwala	0.3	7.5	-1.4	6.6	2.2	8.4	0.2	7.0	-1.5	6.8	1.8	7.2
5 Sialkot	-0.3	8.4	-1.7	6.8	1.2	10.2	-0.4	7.6	-1.7	6.8	0.8	8.4
6 Faisalabad	3.0	12.1	0.5	10.7	5.7	13.6	4.4	12.6	0.8	11.4	7.9	13.7
7 Multan	1.3	9.2	-0.8	7.7	3.5	10.6	1.3	8.7	-1.2	7.8	3.6	9.4
8 Sargodha	0.4	8.1	-0.4	7.3	1.1	8.9	0.3	7.8	-0.6	7.5	1.0	8.0
9 Bahawalpur	0.6	7.7	-0.6	5.3	1.8	9.8	0.9	7.6	-0.3	6.1	1.8	8.8
10 Karachi	-0.6	6.6	-2.1	8.2	1.1	4.9	-0.3	6.2	-1.9	8.3	1.2	4.4
11 Hyderabad	1.1	8.1	-0.3	8.7	2.7	7.4	1.1	7.3	-0.2	8.6	2.3	6.1
12 Sukkur	0.6	8.3	-1.7	5.9	3.0	10.8	-0.3	6.7	-2.4	5.2	1.5	8.0
13 Larkana	-0.8	12.2	-3.1	8.9	1.4	15.5	-1.3	11.1	-4.1	8.0	1.1	13.7
14 Peshawar	2.0	13.0	-0.2	9.5	4.0	16.4	2.2	12.4	-0.2	9.2	4.1	15.1
15 Bannu	1.7	11.0	-1.7	9.4	5.2	12.6	2.3	11.2	-2.0	8.9	6.1	13.1
16 Quetta	0.6	9.7	-0.9	8.0	2.2	11.6	0.4	9.2	-0.7	8.1	1.3	10.2
17 Khuzdar	2.2	7.5	1.0	6.8	3.3	8.1	1.5	6.4	1.0	6.7	1.9	6.1
	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	0.2	8.6	-1.6	9.2	1.1	8.3	-0.1	8.7	-1.8	8.9	1.2	8.6
2 Islamabad	8.9	15.9	0.3	12.3	13.8	17.8	8.4	15.7	-0.1	12.0	15.5	18.6
3 Lahore	4.7	10.6	-0.7	8.1	7.9	12.0	3.2	9.6	-0.6	7.9	6.4	11.0
4 Gujranwala	2.3	8.3	-1.5	6.8	4.4	9.0	0.8	7.5	-1.5	6.7	2.6	8.0
5 Sialkot	1.4	9.3	-1.8	7.4	3.1	10.3	0.5	8.5	-1.8	6.8	2.2	9.9
6 Faisalabad	7.2	13.7	1.5	12.3	10.4	14.4	4.1	12.1	0.5	10.9	6.9	12.9
7 Multan	4.0	10.5	-1.4	8.2	6.8	11.6	2.4	9.4	-1.1	7.8	5.0	10.6
8 Sargodha	-0.1	7.5	-1.0	7.7	0.3	7.5	0.1	7.7	-0.8	7.2	0.7	8.0
9 Bahawalpur	1.8	8.9	-0.8	6.2	3.1	10.1	1.1	7.9	-0.6	5.6	2.1	9.4
10 Karachi	2.3	7.9	-1.2	8.9	4.3	7.3	1.5	7.6	-1.6	8.6	4.0	6.8
11 Hyderabad	2.8	7.8	-0.1	8.7	4.4	7.3	1.5	7.6	-0.3	8.7	2.9	6.8
12 Sukkur	0.9	6.9	-2.5	5.2	2.6	7.8	0.1	7.1	-2.2	5.5	1.7	8.3
13 Larkana	0.3	12.0	-3.7	8.4	2.3	13.7	-0.8	11.6	-3.1	8.8	0.8	13.5
14 Peshawar	3.7	13.9	0.0	9.8	5.6	15.9	2.6	13.0	-0.2	9.5	4.5	15.3
15 Bannu	4.1	10.9	-0.8	9.8	6.7	11.4	1.9	10.5	-1.5	9.4	4.4	11.2
16 Quetta	0.8	9.3	-0.6	8.5	1.6	9.7	0.4	9.2	-0.8	8.3	1.3	9.8
17 Khuzdar	1.9	4.6	1.2	6.4	2.2	3.8	1.4	6.3	1.2	6.9	1.5	5.9

Table A6: City- wise CPI Inflation (YoY) September, 2013

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Mardan	12.9	12.	13.1	Loralai & Cantt	7.3	8.1	6.7
Mithi	12.4	9.7	14.2	Wazirabad	7.1	6.6	7.4
Mingora	12.2	11.	12.6	Dadu	7.0	9.2	5.5
Larkana	12.1	10.	13.2	Sargodha	6.9	6.2	7.4
Mianwali	11.3	9.3	12.8	Abbotabad	6.8	6.9	6.7
D. G. Khan	11.0	7.8	13.3	Nawabshah	6.6	5.9	7.1
Rahim Yar Khan	10.9	12.	10.1	Multan	6.5	7.4	5.8
Dera Mrd.Jamali	10.8	12.	9.5	Sialkot	6.4	5.0	7.3
Turbat	10.7	10.	11.0	Vehari	6.3	7.0	5.8
Peshawar	10.2	8.8	11.1	Bahawalpur	6.1	5.0	6.8
D.I.Khan	10.0	9.8	10.2	Islamabad	6.1	9.4	3.5
Muzaffargarh	9.3	10.	8.7	Hyderabad	5.8	8.0	4.2
Jehlum	8.7	10.	7.8	Khuzdar	5.8	7.0	5.1
Jhang	8.2	6.5	9.4	Lahore	5.8	7.0	4.9
Sahiwal	8.1	7.3	8.7	Karachi	5.7	8.0	4.0
Quetta	8.1	7.5	8.6	Gujranwala	5.5	5.7	5.3
Gawadar	8.1	9.6	7.1	Sukkur	5.5	4.8	5.9
Attock	7.9	9.8	6.5				
Rawalpindi	7.8	8.0	7.6				
Bannu	7.7	8.8	6.9				
Bahawalnagar	7.6	8.4	7.1				
Faisalabad	7.6	9.1	6.5				
Mir Pur Khas	7.5	7.9	7.3				

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		
	Sep-12	Aug-13	Sep-13	Sep-12	Aug-13	Sep-13
<u>Up to Rs. 8000</u>						
General	1.1	1.5	-0.4	8.2	10.0	8.5
Food	1.6	2.3	-1.0	6.8	11.2	8.3
Non-food	0.4	0.5	0.5	10.1	8.4	8.6
<u>Rs. 8001- 12000</u>						
General	0.8	1.4	-0.4	9.3	9.4	8.1
Food	1.2	2.1	-1.2	7.1	10.7	8.1
Non-food	0.4	0.5	0.5	12.0	8.0	8.1
<u>Rs. 12001- 18000</u>						
General	0.7	1.3	-0.4	9.3	9.1	7.9
Food	1.0	2.0	-1.4	7.3	10.5	7.9
Non-food	0.5	0.5	0.6	11.3	7.7	7.8
<u>Rs. 18001- 35000</u>						
General	0.7	1.2	-0.4	7.9	8.9	7.7
Food	0.7	2.0	-1.5	7.6	10.3	7.8
Non-food	0.7	0.5	0.6	8.2	7.6	7.6
<u>Above Rs. 35000</u>						
General	0.8	1.0	-0.2	8.4	7.9	6.8
Food	0.3	1.8	-1.7	8.0	9.9	7.8
Non-food	1.1	0.6	0.6	8.7	6.9	6.4
<u>All income groups</u>						
General	0.8	1.2	-0.3	8.8	8.5	7.4
Food	0.7	2.0	-1.5	7.6	10.3	7.9
Non-food	0.9	0.6	0.6	9.7	7.3	7.0

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices Sep-13	Percentage change	
				YoY	MoM
1	Wheat	10Kg.	362.3	25.8	3.6
2	Wheat Flour Bag	10Kg.	407.3	21.8	3.0
3	Rice Basmati Broken	Kg.	74.2	10.3	0.5
4	Rice Irri-6	Kg.	53.9	9.9	0.4
5	Bread Plain Med. Size (340-400 Gm.)	Each	37.8	15.7	3.6
6	Beef	Kg.	280.1	5.1	1.0
7	Mutton	Kg.	551.3	8.1	0.8
8	Chicken Live (Farm)	Kg.	148.8	14.6	-13.0
9	Milk Fresh	Litr	68.4	5.9	0.2
10	Curd	Kg.	80.5	7.2	0.8
11	Milk Powdered Nido	500G	294.3	1.5	1.5
12	Egg Hen (Farm)	Doz.	98.3	8.3	14.5
13	Mustard Oil	Kg.	183.6	-2.2	0.3
14	Cooking Oil (Tin)	2.5Ltr	537.4	-2.3	0.1
15	Veg. Ghee (Tin)	2.5Kg.	510.3	-5.4	0.3
16	Veg. Ghee Loose	Kg.	157.7	-4.5	0.0
17	Bananas	Doz.	61.3	-17.1	-24.4
18	Masoor Pulse Washed	Kg.	112.4	13.5	1.8
19	Moong Pulse Washed	Kg.	122.9	4.4	-1.6
20	Mash Pulse Washed	Kg.	128.6	-4.7	-0.7
21	Gram Pulse Washed	Kg.	73.4	-31.7	-4.1
22	Potatoes	Kg.	34.7	9.9	10.9
23	Onions	Kg.	47.2	12.4	-5.1
24	Tomatoes	Kg.	64.5	30.4	-18.8
25	Sugar	Kg.	53.8	2.0	-0.8
26	Gur	Kg.	89.9	21.8	2.3
27	Salt Powdered Loose (Lahori)	Kg.	9.2	6.6	0.4
28	Red Chilies Powder Loose	Kg.	216.9	-25.0	2.8
29	Garlic	Kg.	124.9	7.8	0.4
30	Tea (Yellow Label)	200Gm.	172.1	31.9	0.2
31	Cooked Beef Plate	Each	75.5	14.5	2.6
32	Cooked Dal Plate	Each	45.0	14.7	2.3
33	Tea Prepared (Sada)	Cup	16.3	8.7	1.8
34	Cigarettes K-2 (20'S)	20'S	37.6	17.4	0.0
35	Long Cloth (Coarse Latha)	Mtr.	171.1	20.8	0.1
36	Shirting	Mtr.	141.0	20.2	0.6
37	Lawn	Mtr.	189.8	17.4	0.0
38	Georgette (Voil Printed)	Mtr.	110.3	13.4	0.3
39	Sandal Gents Bata	Pair	649.0	30.1	0.0
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	124.8	4.4	3.3
45	Firewood	40Kg	517.4	9.5	1.5
46	Energy Savor 14 Watts	Each	161.5	9.4	0.6
47	Washing Soap (200-250 Gm.)	Cake	23.0	11.0	2.6
48	Match Box	Each	1.3	18.3	8.4
49	Petrol	Litr	110.9	4.5	4.8
50	Diesel	Litr	113.9	-0.6	2.4
51	L.P.G.(11 Kg Cylinder.)	Each	1529.7	2.3	5.0
52	Tele. Local Call	Call	3.9	9.7	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	35.9	12.3	1.6
Maximum				31.9	14.5
Median				9.4	0.4
Minimum				-31.7	-24.4

Table A9: Distribution of Price Changes (YoY) - WPI Items: September 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, Millet/Bajra, Other Oil Seeds, Sugar Crops	Cotton Seeds	Rice, Dry Fruits, Unmanufactured Tobacco, Eggs, Milk from Bovine Animals, Hides and Fur Skins, Raw	Stimulant and Spice Crops, Fish Live Fresh or Chilled, Sorghum/Jowar, Wheat, Vegetables, Fibre Crops, Poultry, Edible Roots/Potatoes, Fuel Wood in Logs, Raw Animal Material/Wool, Maize
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, Other Food Products, Vegetable Ghee, Processed Liquid Milk, Chocolate, Woolen Carpets	Milk and Cream in Solid Form, Vegetables & Fruit Juices, Nylon Yarn, Beverages, Meat of Animals, Dried Fruits & Nuts, Vegetable Oil Refined, Sugar Confectionary, Synthetic Carpets	Cotton Fabrics, Footwear, Mineral Water, Blankets, Oil Cakes, Other Fabrics, Sugar Refined, Blended Yarn, Quilts, Dairy Products N.E.C, Fruit Juices	Other Leather N.E.C, Leather without Hairs, Wheat Flour, Woven Fabrics, Ice Cream, Coffee and Tea, Ready Made Garments, Tobacco Products, Hosiery Products, Towels, Bed Sheets, Silk and Rayon Fabrics, Cotton Yarn
Other Transportable Goods except Metal Products, Machinery and Equipments	Furnace Oil, Diesel Oil, Medicines, Coke, Dying Materials	Fertilizers, Plastic Products, Motor Sprit, Bed Foams, Kerosene Oil, Auto Tyres	Bricks Blocks and Tiles, Timber, Other Glass Articles, Pesticides, Mobil Oil, Glass Sheets, Printing Paper, Ceramics and Sanitary, Paints & Varnishes	Hard Board, Matches, Soaps & Detergent, Cement, Chemicals, Insecticides
Metal Product Machinery & Equipment	Motor Cycles, Tractors, Pig Iron, Engines and Motors, Vacuum Pumps, Concrete Mixer	Steel Products, Chuff Cutter, Motor Vehicles, Air Conditioners, Cultivators, Bicycles, Steel Bars & Sheets, Lathe Machines, Radio and Television	Pipe Fittings, Electrical Wires	Lighting Equipments, Refrige,Wash& Sew Mach,Iron,Fan

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

Items and specification	Weights	Index		
		Sep-12	Aug-13	Sep-13
General	100.00	172.44	185.71	185.18
Food & Non-Alcoholic Beverages.	34.83	193.80	211.91	208.29
1 Wheat	0.35	169.28	204.43	210.43
2 Wheat Flour	4.16	177.85	213.76	219.75
3 Wheat Product	0.10	170.63	196.14	200.79
4 Besan	0.15	236.24	174.75	172.67
5 Rice	1.58	170.51	190.71	191.49
6 Cereals	0.16	199.55	223.43	225.08
7 Bakery & Confectionary	1.16	171.50	186.63	192.20
8 Nimco	0.46	195.37	210.08	212.27
9 Meat	2.43	217.68	225.95	227.90
10 Chicken	1.36	153.14	228.30	172.37
11 Fish	0.30	184.50	202.20	204.54
12 Milk Fresh	6.68	214.85	229.63	229.63
13 Milk Product	0.63	208.08	223.35	224.25
14 Milk Powder	0.11	182.22	192.47	196.38
15 Egg	0.46	183.56	177.43	200.85
16 Mustard Oil	0.10	160.47	157.73	157.73
17 Cooking Oil	1.75	164.65	160.17	161.00
18 Vegetable Ghee	2.07	163.96	155.90	155.71
19 Dry Fruits	0.25	200.92	218.07	219.52
20 Fresh Fruits	1.86	207.64	228.27	192.94
21 Pulse Masoor	0.27	143.69	156.96	158.34
22 Pulse Moong	0.23	223.28	236.45	233.56
23 Pulse Mash (Washed)	0.21	193.99	187.03	187.31
24 Pulse Gram	0.24	240.06	170.97	165.50
25 Gram Whole	0.16	228.39	180.87	176.72
26 Beans	0.03	207.52	232.00	233.29
27 Potatoes	0.46	206.16	226.71	236.99
28 Onion	0.52	224.60	335.76	283.29
29 Tomatoes	0.43	168.36	285.06	217.79
30 Fresh Vegetable	1.71	213.15	219.98	230.51
31 Sugar	1.04	193.11	195.15	194.50
32 Gur	0.02	223.96	271.23	275.82
33 Honey	0.04	238.98	256.90	257.91
34 Sweet Meet	0.25	202.90	214.63	217.22
35 Beverages	1.20	170.37	189.21	187.70
36 Jam, Tomato Ketchup & Pickle	0.25	174.05	187.53	188.19
37 Condiments	0.27	212.32	217.77	219.19
38 Spices	0.54	265.88	216.40	214.85
39 Tea	0.84	202.17	253.02	254.67
Alcoholic Beverages, Tobacco	1.41	190.34	217.51	217.85
40 Cigarette	1.39	190.53	217.97	218.30
41 Betel Leaves & Nuts	0.02	178.59	189.38	190.83
Clothing & Footwear	7.57	168.51	192.38	193.59
42 Cotton Cloth	1.73	155.96	179.59	180.48
43 Woolen Cloth	0.88	188.17	208.28	208.95
44 Ready Made Garment	0.97	169.35	189.32	191.11
45 Woolen Readymade Garments	0.40	165.18	192.45	194.99
46 Hosiery	0.51	179.11	197.66	200.13
47 Dopatta	0.44	183.24	207.23	209.40
48 Cleaning & Laundering	0.21	186.62	210.77	212.30

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities				
Items and specification	Weights	Index		
		Sep-12	Aug-13	Sep-13
49 Tailoring	0.88	201.54	230.99	232.70
50 Footwear	1.55	142.75	169.08	169.25
Housing,Water,Elect,Gas & Other Fuel	29.41	147.99	157.59	157.75
51 House Rent	21.81	137.02	148.24	148.24
52 Construction Input Item	0.56	200.34	215.23	217.40
53 Construction Wage Rate	0.33	169.83	187.03	188.19
54 Water Supply	0.50	133.23	141.53	145.80
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	269.26	280.70	288.89
58 Fire Wood Whole	0.23	227.21	245.25	249.90
Furnished H.Hold Equip.& Maint. Etc	4.21	175.40	188.99	190.99
59 Furniture	0.33	165.35	178.39	180.68
60 Household Textile	0.65	171.59	183.82	186.39
61 Household Equipment	0.59	156.33	163.24	163.50
62 Utensils	0.32	173.70	187.69	189.05
63 Plastic Products	0.25	174.14	185.38	186.86
64 Washing Soap & Detergent	0.79	190.56	207.01	210.04
65 Sewing Needle & Dry Cell	0.15	149.01	168.42	168.44
66 Household Servant	1.04	183.91	199.82	202.20
67 Marriage Hall Charges	0.08	189.76	202.60	204.59
Health	2.19	153.94	162.32	164.23
68 Drug Medicine	1.27	137.28	141.30	142.09
69 Medical Equipment	0.01	194.20	205.83	208.73
70 Doctor (MBBS) Clinic Fee	0.59	189.17	207.25	212.47
71 Medical Test	0.32	153.85	161.52	161.78
Transport	7.20	194.25	190.63	194.54
72 Motor Vehicle	0.66	151.17	158.44	159.74
73 Motor Vehicle Accessories	0.24	204.52	218.09	219.28
74 Motor Fuel	3.03	201.27	184.92	190.34
75 Mechanical Service	0.46	180.11	192.91	195.60
76 Motor Vehicle Tax	0.11	152.02	153.74	153.74
77 Transport Services	2.70	200.12	203.54	207.03
Communication	3.22	123.56	129.65	129.66
78 Postal Services	0.07	171.43	215.89	215.89
79 Communication & Apparatus	3.15	122.56	127.84	127.85
Recreation & Culture	2.02	165.24	181.28	181.87
80 Recreation & Culture	0.86	121.68	124.61	124.90
81 Text Books	0.57	230.23	266.87	266.88
82 News Papers	0.19	154.22	170.49	170.49
83 Stationery	0.40	171.95	186.81	189.17
Education	3.94	153.87	166.03	166.49
84 Education	3.94	153.87	166.03	166.49
Restaurants And Hotels	1.23	197.85	216.32	221.68
85 Ready Made Food	1.23	197.85	216.32	221.68
Miscellaneous Goods And Services	2.76	195.65	204.07	206.86
86 Personal Care	1.49	176.39	187.02	188.30
87 Cosmetics	0.39	148.59	168.14	169.63
88 Blades	0.03	169.80	178.04	180.16
89 Personal Equipments	0.84	252.20	251.61	257.70

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

Items and Specifications	Index		
	Sep-12	Aug-13	Sep-13
General	192.66	207.85	209.33
Agriculture Forestry & Fishery	194.63	218.23	218.32
1 Wheat	177.08	215.13	221.91
2 Maize	174.03	194.89	193.51
3 Rice	162.33	177.57	178.15
4 Sorghum/Jowar	197.09	265.69	266.44
5 Millet/Bajra	192.59	190.24	187.35
6 Vegetables	253.47	297.02	314.40
7 Fresh Fruits	228.22	245.49	220.14
8 Dry Fruits	173.12	191.77	188.16
9 Cotton Seeds	162.42	165.07	165.07
10 Other Oil Seeds	179.64	173.57	175.36
11 Edible Roots/ Potatoes	201.22	217.93	231.30
12 Stimulant And Spice Crops	166.95	241.41	254.77
13 Pulses	216.53	180.97	176.48
14 Sugar Crops	267.92	267.92	267.92
15 Fibre Crops	180.60	214.52	219.53
16 Unmanufactured Tobacco	168.46	176.34	181.07
17 Poultry	152.21	237.40	177.47
18 Milk From Bovine Animals	208.85	221.65	222.52
19 Eggs	192.74	180.14	205.51
20 Raw Animal Material/Wool	135.45	153.23	153.55
21 Hides And Fur Skins, Raw	137.35	140.87	145.03
22 Fuel Wood In Logs	204.59	231.13	234.96
23 Fishes Live Fresh Or Chilled	176.07	250.91	249.62
Ores/Minerals, Gas & Elect.	207.86	239.51	240.04
24 Coal Not Agglomerated	196.08	223.53	223.53
25 Natural Gas Liquefied	192.41	203.57	204.58
26 Salt & Pure Sodium Chloride	162.41	205.80	217.04
27 Electrical Energy	226.10	279.61	279.61
Food, Beverages, Tobacco, Textiles	184.53	197.43	199.08
28 Meat Of Animals	226.71	233.93	233.93
29 Vegetables & Fruit Juices	183.67	191.31	192.05
30 Dried Fruits & Nuts	217.12	223.20	223.21
31 Fruit Juices	156.65	165.05	165.08
32 Vegetable Oil Refined	157.46	160.13	161.04
33 Vegetable Ghee	143.63	140.30	140.69
34 Oil Cakes	164.48	174.89	176.21
35 Processed Liquid Milk	208.43	205.54	205.54
36 Milk And Cream In Solid Form	171.00	179.40	179.40
37 Ice Cream	170.00	209.53	209.53
38 Dairy Products N.E.C	204.36	212.59	216.63
39 Wheat Flour	162.40	195.91	202.67
40 Other Cereal Flour	207.98	144.64	138.44
41 Sugar Refined	198.63	211.85	212.34
42 Chocolate	99.19	99.19	99.19
43 Sugar Confectionary	100.40	102.28	102.28
44 Coffee And Tea	190.66	230.71	230.54
45 Spices	307.94	195.67	195.85
46 Other Food Products	328.55	316.68	316.68
47 Mineral Water	166.05	180.22	180.22
48 Beverages	135.30	139.63	139.63
49 Tobacco Products	208.80	242.41	242.41
50 Cotton Yarn	200.46	217.78	222.40
51 Nylon Yarn	176.45	187.63	182.19
52 Blended Yarn	188.46	198.41	200.64
53 Woven Fabrics	174.25	217.16	217.16
54 Cotton Fabrics	172.55	187.43	187.43
55 Other Fabrics	164.13	175.74	175.74

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities				
		Index		
Items and Specifications		Sep-12	Aug-13	Sep-13
56 Silk And Rayon Fabrics		143.52	160.08	160.08
57 Towels		193.36	216.98	218.47
58 Blankets		172.59	185.21	185.21
59 Bed Sheets		194.91	215.79	217.78
60 Quilts		147.05	156.32	156.32
61 Woolen Carpets		106.55	106.55	106.55
62 Synthetic Carpets		113.15	114.41	114.41
63 Hosiery Products		163.76	185.30	185.30
64 Ready Made Garments		128.64	152.13	152.13
65 Leather With Out Hairs		109.83	136.23	140.50
66 Other Leather N.E.C		122.57	238.82	263.79
67 Footwear's		128.50	139.49	139.49
Other Transportable Goods		207.14	209.59	213.44
68 Timber		148.07	160.48	161.45
69 Printing Paper		153.92	164.45	164.84
70 Hard Board		166.67	200.00	208.33
71 Coke		163.45	163.45	163.45
72 Motor Sprit		177.23	176.54	184.38
73 Diesel Oil		272.24	264.12	270.32
74 Kerosene Oil		275.06	270.07	282.64
75 Furnace Oil		186.02	172.70	179.02
76 Mobil Oil		179.59	191.04	192.70
77 Chemicals		148.29	164.53	165.49
78 Dying Materials		104.26	107.23	104.26
79 Fertilizers		258.16	269.62	269.45
80 Pesticides		197.39	212.36	213.45
81 Insecticides		117.64	124.43	129.93
82 Paints & Varnishes		233.80	247.56	247.70
83 Medicines		139.44	138.85	138.77
84 Soaps & Detergent		158.01	177.56	178.79
85 Auto Tyres		180.62	185.57	185.57
86 Plastic Products		191.31	199.06	199.06
87 Glass Sheets		190.93	203.49	204.55
88 Other Glass Articles		189.11	206.09	206.09
89 Ceramics And Sanitary		157.32	165.08	166.88
90 Bricks Blocks And Tiles		172.01	186.85	188.17
91 Cement		180.43	194.84	201.55
92 Bed Foams		140.00	144.33	145.33
93 Matches		122.82	143.20	143.20
Metal Product Machinery & Equip		157.74	166.14	166.39
94 Pig Iron		128.97	128.97	128.97
95 Steel Bars & Sheets		137.60	140.51	141.14
96 Pipe Fittings		141.47	149.13	150.29
97 Steel Products		160.60	167.61	168.46
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	191.51
102 Chuff Cutter		138.54	144.94	144.94
103 Tractors		161.96	161.96	161.96
104 Lathe Machines		147.68	147.68	148.86
105 Concrete Mixer		138.83	138.83	138.83
106 Refrige,Wash& Sew Mach, Iron,Fan		163.64	179.92	180.51
107 Electrical Wires		159.57	168.13	168.13
108 Lighting Equipments		144.85	162.27	162.27
109 Radio And Television		126.46	126.49	126.49
110 Motor Vehicles		167.04	173.99	174.21
111 Motor Cycles		125.19	124.80	124.80
112 Bicycles		175.08	180.99	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
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
	Sep	185.18	209.09	170.85	209.33	211.29	208.09	203.05

*: all groups combined

Table A13: International Commodity Prices/ Indices				
	Jun-13	Jul-13	Aug-13	Sep-13
Energy				
Crude Oil (US\$ per barrel) *	99.7	105.2	108.1	108.8
IMF Energy Index (2005 = 100)	184.9	192.3	196.7	198.1
WB Energy Index (2005 = 100) @	178.7	186.5	191.0	192.1
Food				
Rice (\$/MT)	546.3	538.3	503.8	470.0
Wheat (\$/MT)	313.5	304.7	305.5	307.5
Sugar (US cent/ pound)	17.0	17.1	17.2	17.6
Palm Oil (\$/MT)	763.0	729.9	722.8	725.8
Soybean Oil (\$/MT)	1,058.6	1,000.8	944.3	935.0
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	93.1	92.6	92.7	90.1
IMF Metal Price Index (2005 = 100)	169.7	172.7	180.9	177.9
Copper (\$/MT)	7,000.2	6,906.6	7,186.3	7,159.3
Aluminum (\$/MT)	1,814.5	1,769.6	1,816.2	1,761.3
Iron Ore (\$ cents/dry MT)	114.8	127.2	137.1	134.2
Tin (\$/MT)	20,267.4	19,563.8	21,638.2	22,735.1
Nickle (\$/MT)	14,280.3	13,750.3	14,308.3	13,801.4
Zinc (\$/MT)	1,839.0	1,837.6	1,896.4	1,846.9
Lead (\$/MT)	2,099.7	2,047.7	2,173.1	2,084.9
Uranium (\$/MT)	39.9	38.0	35.6	35.8
DAP (\$/MT)	476.1	460.0	438.1	398.1
Urea (\$/MT)	321.4	321.5	303.3	297.8
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	185.18
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	137.42	154.48	169.26	182.89
Aug	139.67	155.75	169.77	184.22
Sep	142.58	157.49	171.38	184.04
Oct	143.73	159.45	171.69	
Nov	145.64	160.48	171.57	
Dec	146.69	161.02	173.84	
Jan	147.85	162.75	175.87	
Feb	148.04	164.43	176.58	
Mar	149.80	165.99	176.93	
Apr	151.01	167.96	177.67	
May	151.81	170.53	179.33	
Jun	153.44	170.76	180.82	

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	209.09
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	148.84	174.18	189.88	207.13
Aug	154.40	174.56	189.29	208.66
Sep	161.51	177.43	190.89	205.96
Oct	160.95	179.75	190.25	
Nov	164.29	180.69	190.18	
Dec	165.00	180.70	194.64	
Jan	167.21	182.62	197.35	
Feb	166.65	184.20	197.84	
Mar	169.24	185.90	197.72	
Apr	170.06	188.28	198.62	
May	170.08	189.36	201.82	
Jun	171.75	189.51	204.52	

Table 16: CPI Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.15	100.15	100.18	100.38	100.22
Aug	100.69	100.73	100.78	100.81	100.75
Sep	100.64	100.64	100.62	100.62	100.63
Oct	100.82	100.84	100.82		100.83
Nov	100.48	100.48	100.50		100.49
Dec	99.46	99.44	99.41		99.44
Jan	99.88	99.90	99.90		99.89
Feb	99.20	99.17	99.17		99.18
Mar	99.41	99.39	99.37		99.39
Apr	99.99	100.02	100.04		100.02
May	99.68	99.65	99.62		99.65
Jun	99.57	99.55	99.51		99.54

Table 17: CPI Food Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.33	100.35	100.44	100.51	100.41
Aug	101.49	101.58	101.68	101.73	101.62
Sep	101.52	101.54	101.53	101.52	101.53
Oct	101.83	101.85	101.79		101.82
Nov	101.40	101.42	101.50		101.44
Dec	99.21	99.18	99.14		99.18
Jan	99.59	99.61	99.61		99.60
Feb	98.15	98.09	98.09		98.11
Mar	98.73	98.69	98.66		98.69
Apr	99.52	99.55	99.56		99.54
May	99.23	99.15	99.10		99.16
Jun	98.91	98.86	98.82		98.86

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	-0.29
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		0.68	-0.88	1.14
Aug	1.64	0.82	0.30	0.73
Sep	2.08	1.12	0.95	-0.10
Oct	0.81	1.25	0.18	
Nov	1.33	0.64	-0.07	
Dec	0.72	0.34	1.32	
Jan	0.79	1.07	1.17	
Feb	0.13	1.03	0.40	
Mar	1.19	0.95	0.20	
Apr	0.80	1.19	0.42	
May	0.54	1.53	0.93	
Jun	1.07	0.13	0.83	

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	-1.50
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		1.42	0.19	1.27
Aug	3.74	0.22	-0.31	0.74
Sep	4.61	1.64	0.84	-1.29
Oct	-0.35	1.31	-0.33	
Nov	2.07	0.52	-0.04	
Dec	0.43	0.01	2.35	
Jan	1.34	1.06	1.39	
Feb	-0.33	0.87	0.25	
Mar	1.56	0.92	-0.06	
Apr	0.48	1.28	0.46	
May	0.01	0.58	1.61	
Jun	0.98	0.08	1.34	

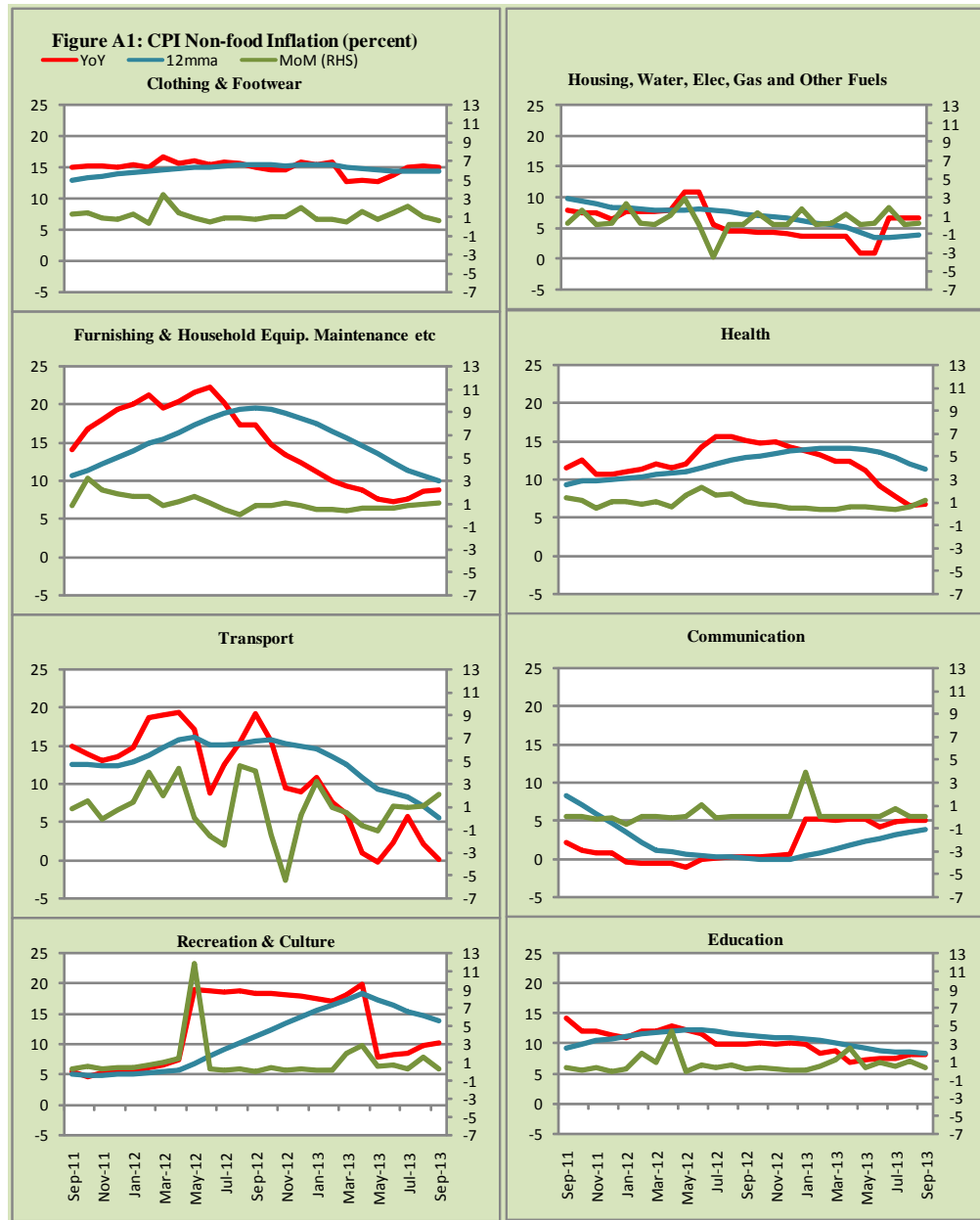


Figure A2: Frequency Distribution of Price Changes of CPI Items, September 2013

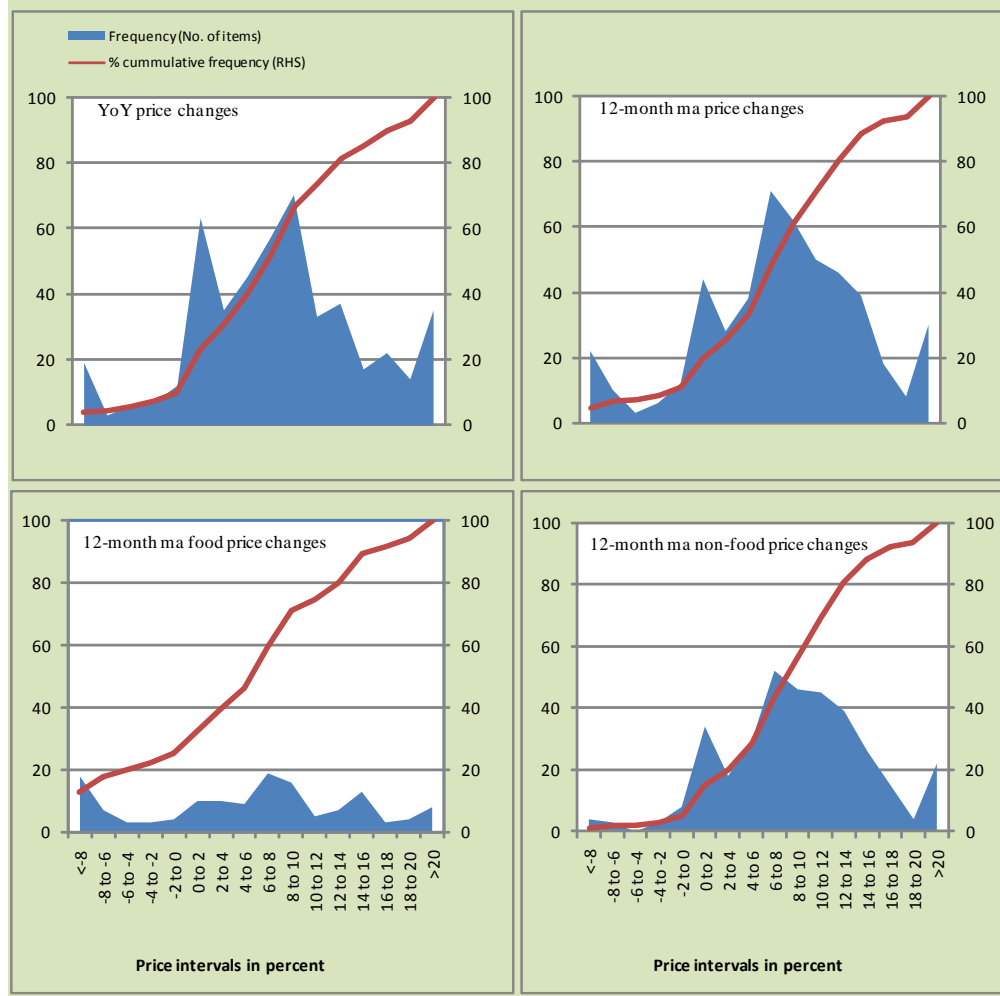


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, September 2013

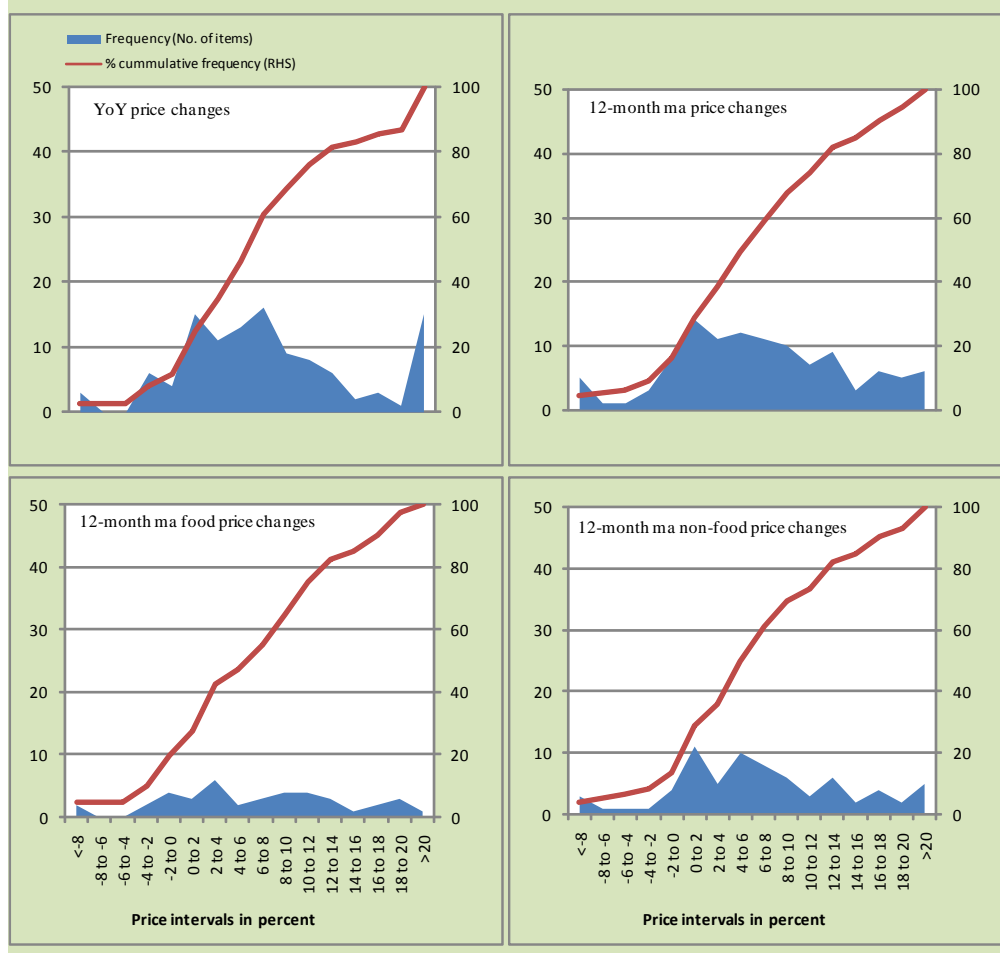
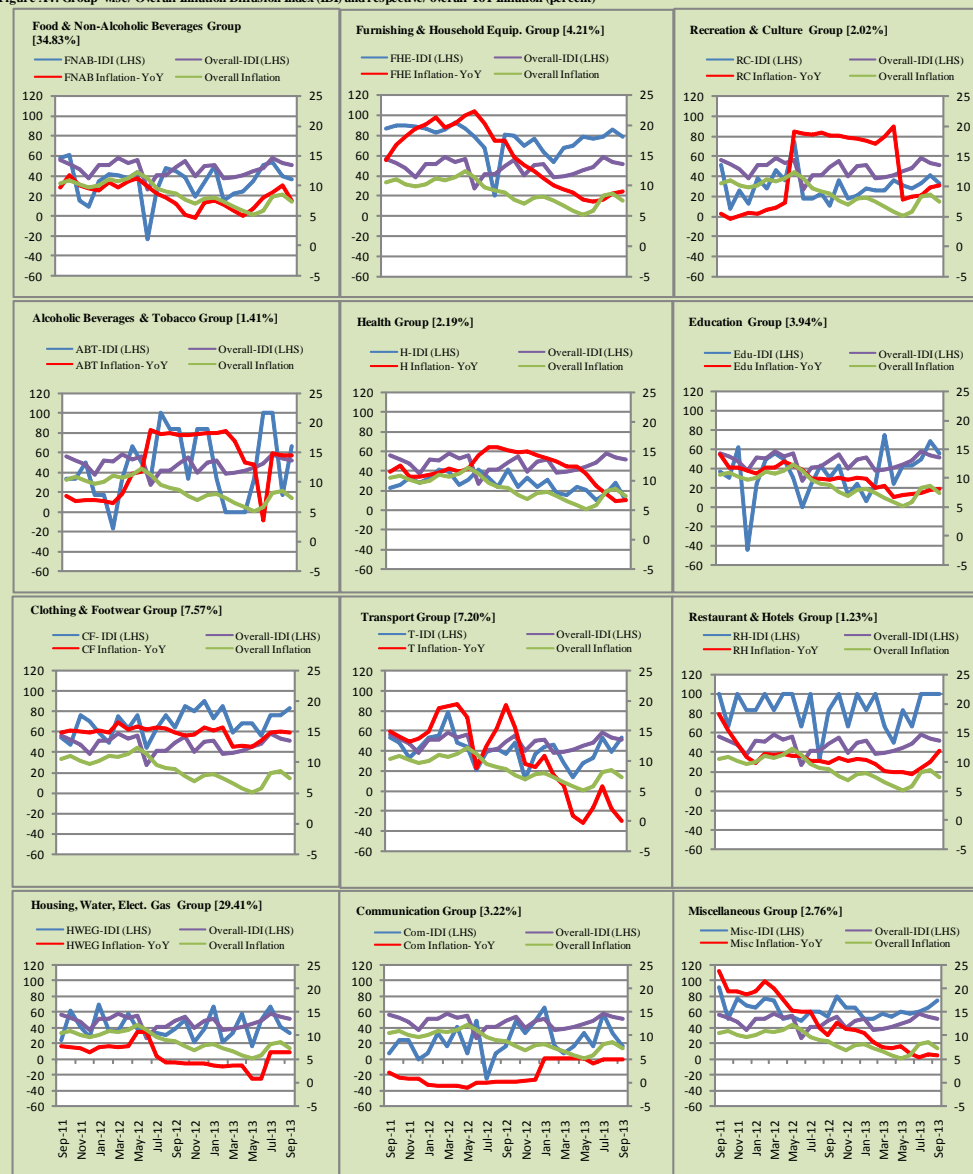


Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



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:

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.
- c) Relatively Stable Component of CPI (RSC-CPI) developed by State Bank of Pakistan is a hybrid method based on permanent exclusion criteria. Volatile price items, to be excluded in the newly proposed

measure RSC-CPI, are identified by analyzing the list and frequency of commodities that have been trimmed frequently in the past while computing monthly weighted trimmed mean measure. Commodities that were trimmed out 13 and above times since July 2008 to February 2013 are selected for permanently excluding from the CPI basket. This newly developed component includes a mix of both food and non-food commodities that show persistent price behavior. Fifty Commodities included comprise relatively stable component (RSC-CPI) with a weight of 67.69. The detailed methodology of RSC-CPI and group wise items along their weights can be viewed at the following link;

<http://www.sbp.org.pk/publications/wpapers/2013/wp66.pdf>

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.