

Inflation Monitor

November 2013



State Bank of Pakistan

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Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at 10.9 percent on year-on-year basis in November 2013 as compared to 9.1 percent in the previous month and 6.9 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at 1.3 percent in November 2013 as compared to 2.0 percent in the previous and -0.4 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at 1.4 percent in November 2013 compared to 1.8 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis increased to 9.2 percent in November 2013 compared to 9.0 percent in the previous month and 8.8 percent in the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) decreased to 0.4 percent in November 2013 as compared to 0.8 percent in the previous month and 0.2 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 November 2013 compared to 8.4 percent in the previous month. It was 9.8 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis decreased to 0.4 percent in November 2013 as compared to 0.9 percent in the previous month. A 0.2 percent increase in Core NFNE index was observed in November 2012.
7. WPI inflation on year-on-year basis increased to 10.4 percent in November 2013 when compared to 9.8 percent a month earlier. During November 2012, WPI inflation was recorded at 7.7%.

8. WPI inflation on month-on-month basis is recorded at 0.2 percent in November 2013 as compared to 1.1 percent in the previous month and -0.4 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis increased to 14.6 percent in November 2013 as compared to 10.9 percent in the previous month. It was 5.5 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at 3.4 percent in November 2013 as compared to 2.3 percent in previous month and negligible increase was observed in November 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 November 2013 are described below:

- Core inflation based on new measure RSC on year-on-year basis recorded at 8.5 percent in November 2013 compared to 8.4 percent in the previous month and 7.7 percent in the corresponding month of last year.
- Core RSC inflation on month-on-month basis recorded at 0.3 percent in November 2013 compared to 0.8 percent in the previous month and 0.2 percent in the corresponding month of last year.

Monthly CPI, WPI and SPI data is summarized in the following table.

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		RSC**					
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
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	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	7.8	0.4	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	7.6	1.1	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	7.4	0.4	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	6.8	0.5	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	6.4	1.0	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	5.9	0.4	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	5.5	0.7	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	8.2	1.6	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	8.4	0.6	8.3	2.6	9.0	1.2
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	8.7	0.7	7.9	-0.1
Oct-13	9.1	2.0	9.8	1.7	8.6	2.2	8.4	0.9	9.0	0.8	8.4	0.8	9.8	1.1	10.9	2.3
Nov-13	10.9	1.3	13.0	2.6	9.4	0.3	8.5	0.4	9.2	0.4	8.5	0.3	10.4	0.2	14.6	3.4

* NFNE is Non-food non-energy

** Relatively Stable Component of CPI

*** SPI for all income groups combined

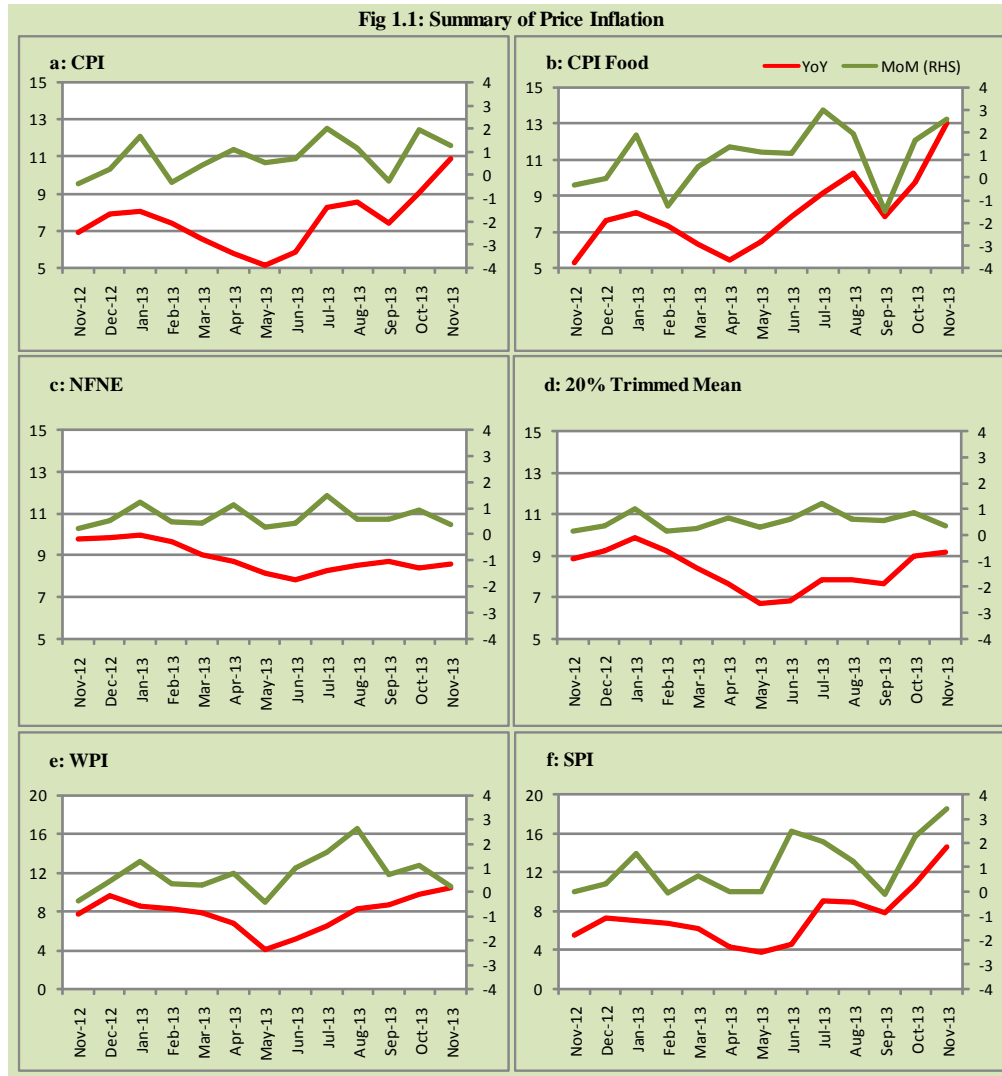
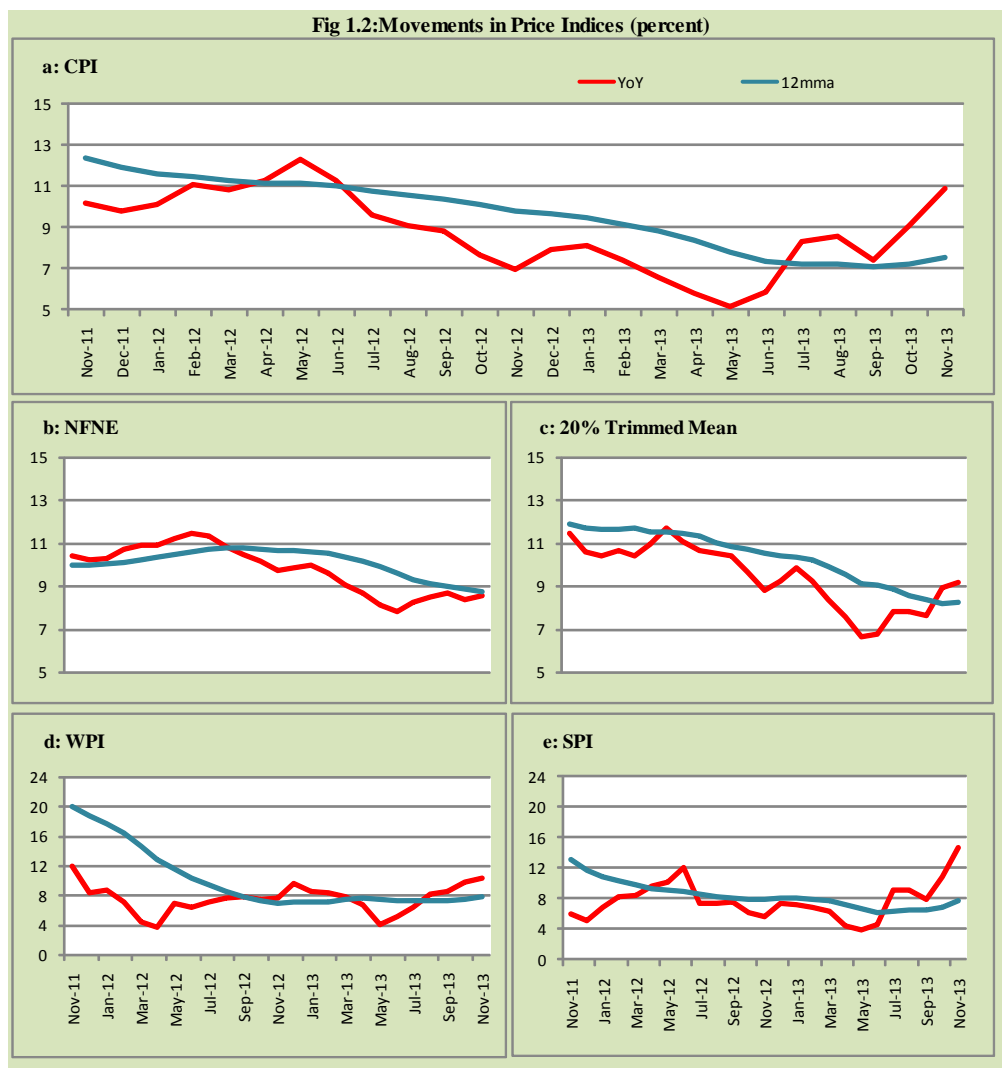


Fig 1.2: Movements in Price Indices (percent)



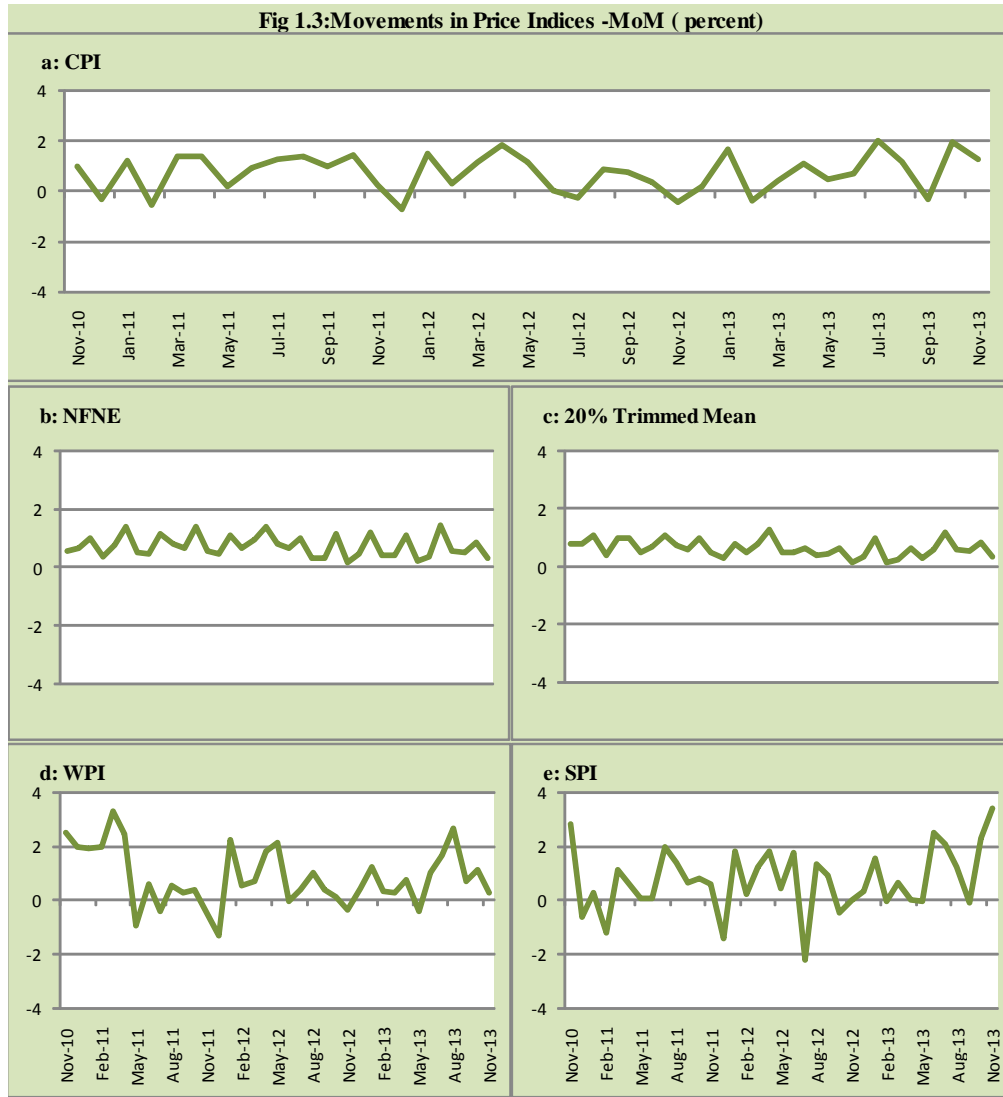
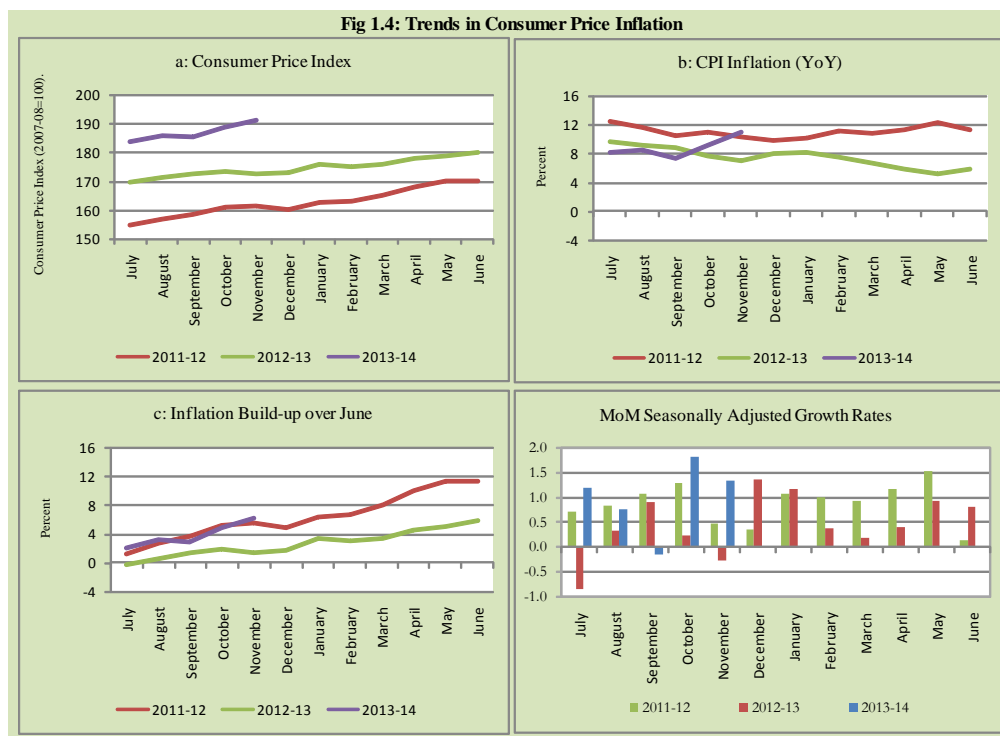


Fig 1.4: Trends in Consumer Price Inflation



2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed a mixed trend during November 2013. Among these five cities, the lowest inflation was observed in Karachi at 8.5 percent while the highest inflation was observed in Islamabad at 16.0 percent (Table A6 of annexure-A).

Table 2.1 City-wise Inflation of Selected Cities (percent)						
	Nov-12		Oct-13		Nov-13	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	-0.4	6.9	2.0	9.1	1.3	10.9
Islamabad	-0.9	7.1	7.7	14.3	0.5	16.0
Karachi	-0.4	7.4	1.5	6.7	1.2	8.5
Lahore	-0.2	7.6	2.6	8.7	0.8	9.9
Peshawar	-0.4	4.9	1.2	11.6	1.9	14.1
Quetta	0.7	8.7	1.7	8.9	1.5	9.7

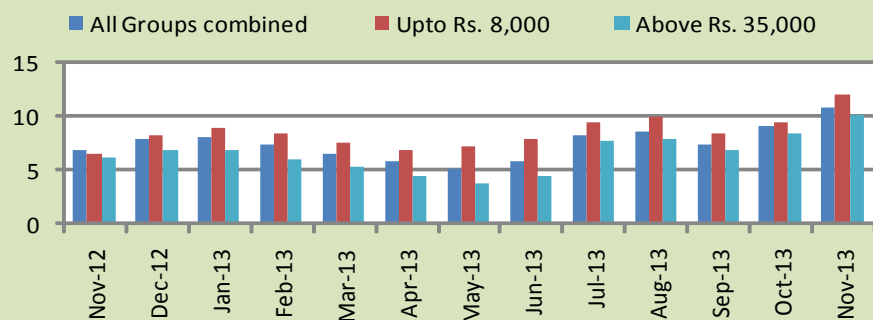
3. Income Group wise Inflation

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

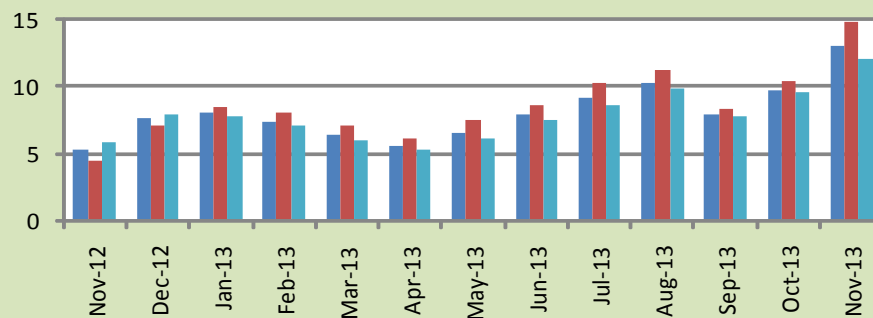
Table 3.1 Income Group- wise Inflation (YoY)									
Income Groups	General			Food			Non-food		
	Nov-12	Oct-13	Nov-13	Nov-12	Oct-13	Nov-13	Nov-12	Oct-13	Nov-13
All Groups Combined	6.9	9.1	10.9	5.3	9.8	13.0	8.1	8.6	9.4
Up to Rs. 8,000	6.6	9.6	12.1	4.4	10.4	14.9	9.5	8.4	8.5
Rs. 8,001- 12,000	7.8	9.1	11.2	4.8	10.1	14.1	11.4	8.0	8.1
Rs. 12,001- 18,000	7.7	9.9	11.9	5.1	9.9	13.6	10.5	10.0	10.2
Rs. 18,001- 35,000	6.4	9.8	11.5	5.4	9.8	13.1	7.4	9.9	10.2
Above Rs. 35,000	6.2	8.4	10.1	5.8	9.5	12.1	6.5	7.9	9.1

Fig 3.1: Income Group- wise Inflation

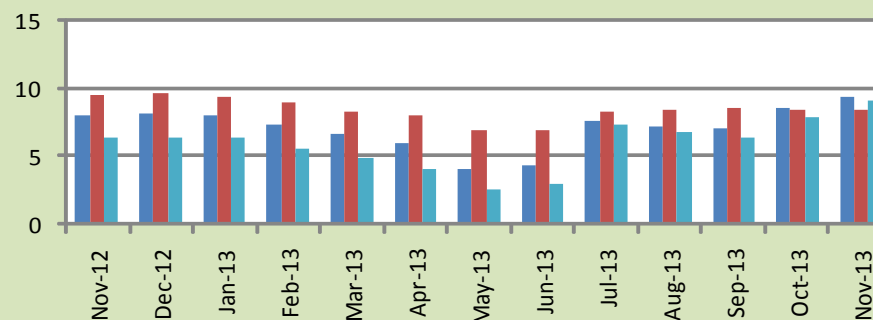
a: CPI Overall Inflation (YoY)



b: CPI Food Inflation (YoY)



c: CPI Non-Food Inflation (YoY)



4. Weighted Contribution

The weighted contribution of food group in the overall inflation increased to 50.12 percent during November 2013 from 45.18 percent in October 2013. It was 32.78 percent in November 2012.

The weighted contribution of non-food group showed decrease to touch 49.88 percent in November 2013 from 54.82 percent in October 2013.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)						
Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
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
Oct-13	45.18	11.62	26.61	2.68	3.37	10.55
Nov-13	50.12	9.70	22.42	6.24	2.76	8.76

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13
General	39.6	49.6	51.4	37.9	39.1	40.9	44.5	48.4	58.0	53.5	51.4	53.9	49.7
Food & Non-Alcoholic Beverages	19.1	33.0	49.6	15.2	22.5	23.9	34.6	50.4	53.5	39.8	36.3	57.4	49.6
Alcoholic Beverages & Tobacco	83.3	83.3	33.3	0.0	0.0	0.0	33.3	100.0	100.0	16.7	66.7	50.0	-33.3
Clothing & Footwear	79.7	89.8	72.9	84.7	59.3	67.8	67.8	55.9	76.3	76.3	83.1	78.0	83.1
Housing, Water, Elect, Gas & other Fuels	22.2	38.9	66.7	22.2	33.3	58.3	16.7	50.0	66.7	41.7	33.3	61.1	44.4
Furnishing & Household Equip. Maintenance etc	69.6	76.8	63.8	53.6	68.1	69.6	78.3	76.8	78.3	85.5	78.3	82.6	85.5
Health	33.3	23.1	30.8	17.9	15.4	23.1	20.5	10.3	17.9	28.2	10.3	17.9	15.4
Transport	11.6	37.2	44.2	46.5	27.9	14.0	27.9	32.6	53.5	39.5	53.5	48.8	30.2
Communication	33.3	50.0	66.7	16.7	8.3	16.7	33.3	16.7	58.3	33.3	16.7	16.7	25.0
Recreation & Culture	17.9	20.5	28.2	25.6	25.6	35.9	30.8	28.2	33.3	41.0	33.3	23.1	20.5
Education	12.5	25.0	6.3	25.0	75.0	25.0	43.8	43.8	50.0	68.8	56.3	25.0	0.0
Restaurant & Hotels	66.7	100.0	83.3	100.0	66.7	50.0	83.3	66.7	100.0	100.0	100.0	83.3	83.3
Miscellaneous	65.7	65.7	51.4	51.4	57.1	54.3	60.0	57.1	60.0	65.7	74.3	40.0	62.9
NFNE	46.4	55.3	52.7	45.9	45.6	49.1	49.4	47.9	58.6	58.6	55.9	51.8	52.4

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	Nov-12		Oct-13		Nov-13	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	10.42	2.12	25.26	0.97	27.35	3.82
2	Wheat Flour Bag	10 Kg	10.66	0.95	23.48	0.82	25.32	2.46
3	Rice Basmati Sup. Qlty.	Kg	19.33	1.57	17.73	0.79	16.87	0.83
4	Pulse Masoor (Washed)	Kg	-5.15	-0.30	11.50	0.63	13.37	1.37
5	Pulse Moong (Washed)	Kg	-13.07	-2.04	5.87	-0.32	10.56	2.30
6	Pulse Mash (Washed)	Kg	-9.20	-0.21	-3.23	-0.09	-2.25	0.80
7	Pulse Gram	Kg	44.30	-2.03	-31.25	-1.08	-30.41	-0.85
8	Vegetable Ghee (Loose)	Kg	1.20	-0.78	-3.36	0.36	-1.28	1.35
9	Sugar Refined	Kg	-18.65	-0.16	2.59	3.16	10.38	7.42
10	Milk Fresh (Unboiled)	Ltr	11.76	1.03	7.48	0.51	6.77	0.36
11	Tea- Tapal Danedar	200 Gm	9.98	11.93	38.10	0.51	22.75	-0.51
12	Beef With Bone Av. Qlty.	Kg	7.03	0.05	3.36	0.30	3.40	0.09
13	Mutton Av. Qlty.	Kg	7.13	0.13	7.07	0.37	6.94	0.00
14	Chicken Farm Broiler (Live)	Kg	-0.36	7.69	19.71	0.18	4.56	-5.94
15	Eggs Farm	Doz	24.70	6.49	-7.65	-0.98	-3.68	11.06
16	Potatoes	Kg	1.70	-3.79	44.40	24.54	116.89	44.51
17	Onion	Kg	-36.74	-14.76	31.15	13.88	72.83	12.33
18	Tomatoes	Kg	-41.86	-16.23	50.80	7.85	216.48	75.81
19	Ginger	Kg	-5.56	-12.52	33.77	8.39	63.47	6.89
20	Garlic	Kg	-9.87	1.40	11.55	0.89	11.93	1.75

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Nov-12		Oct-13		Nov-13	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-3.0	-1.4	0.4	-1.3	0.3	-1.5
Food	8.2	-0.7	-0.7	1.0	-0.7	-0.7
Metals	-5.8	-0.7	-2.4	0.6	-2.3	-0.6
Energy	-4.8	-1.7	1.2	-2.4	0.7	-2.1
Agricultural Raw Material	-2.4	-0.6	4.1	2.3	6.3	1.5
Cotton	-22.7	-1.3	9.0	-0.8	4.7	-5.3

Source: IMF

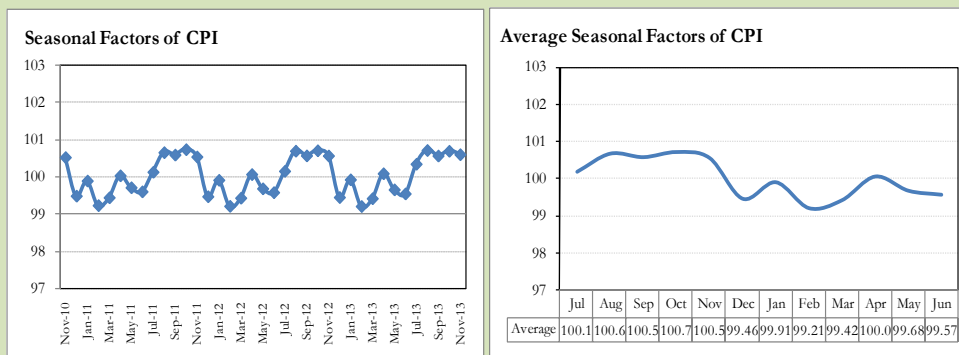
8. Seasonal Adjustment in CPI

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

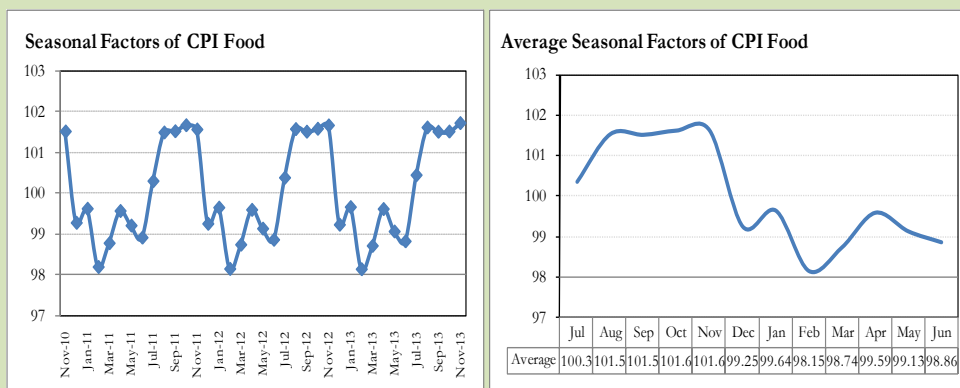
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November & April and downward seasonality in the remaining months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

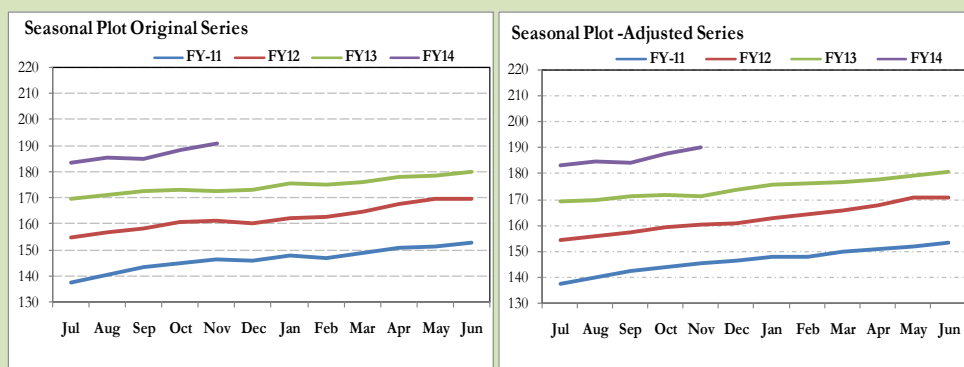
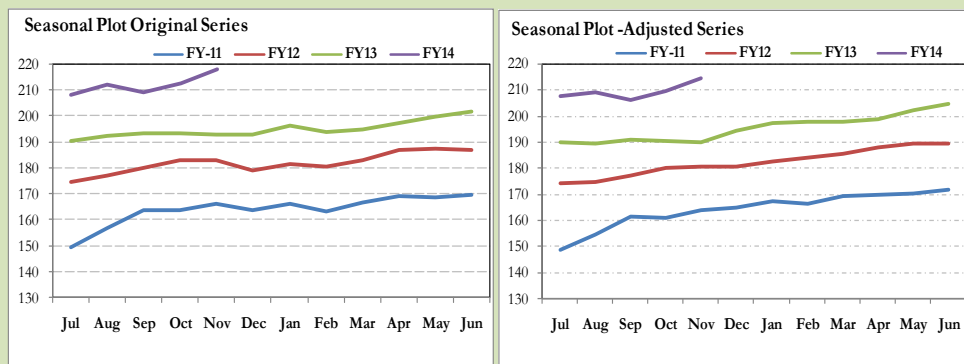


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for November 2013 stood at 190.06 against 191.21 in original series showing a decrease of 1.15 on account of adjustment of upward seasonality in November 2013.

Seasonally adjusted CPI food group for November 2013 stood at 214.47 against 218.16 in original series showing a decrease of 3.69 on account of adjustment of upward seasonality in November 2013.

Month-on-month change of seasonally adjusted CPI series stood at 1.36% reflecting decrease during November 2013 over October 2013 and an increase of 1.27% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at 2.40% reflecting increase during November 2013 over October 2013 and an increase of 2.61% 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 November 2013 (corresponding to the seasonally adjusted month-on-month rate) is 17.59 percent.

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

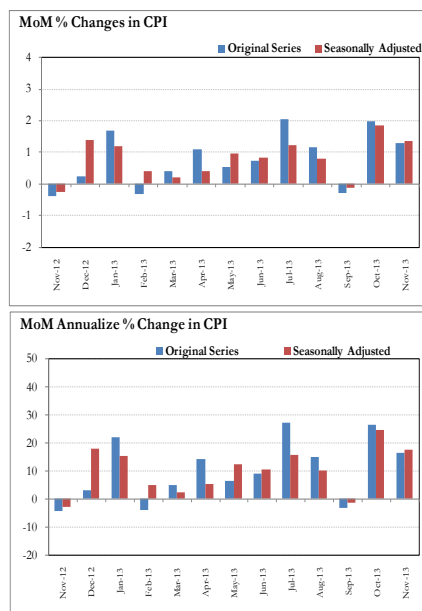
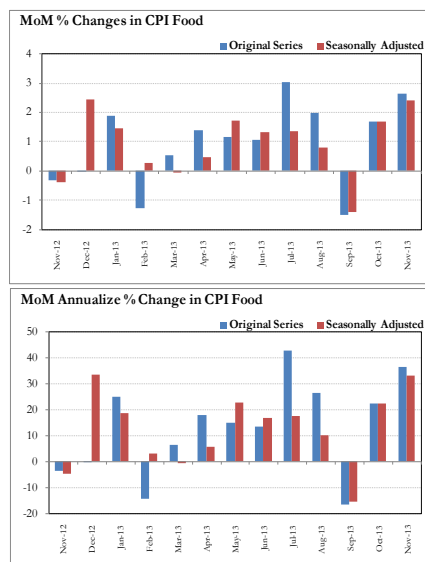


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weight	MoM change			YoY change		
		Nov-12	Oct-13	Nov-13	Nov-12	Oct-13	Nov-13
I. Food Group	37.5	-0.3	1.7	2.6	5.3	9.8	13.0
Food & Non-Alcoholic Beverages	34.8	-0.4	1.8	2.8	4.7	9.5	13.0
Alcoholic Beverages & Tobacco	1.4	0.1	0.2	0.0	18.0	14.6	14.4
Restaurant & Hotels	1.2	0.4	0.9	0.9	10.3	11.7	12.3
II. Non-Food Group	62.5	-0.4	2.2	0.3	8.1	8.6	9.4
Clothing & Footwear	7.6	1.1	0.5	0.9	14.5	14.2	14.0
Housing, Water, Elect, Gas & other Fuels	29.4	0.0	4.1	0.1	4.2	9.5	9.5
Furnishing & Household Equip. Maintenance etc	4.2	1.0	0.7	0.9	13.4	8.8	8.7
Health	2.2	0.6	0.6	0.4	14.9	6.5	6.2
Transport	7.2	-5.5	1.3	0.0	9.4	3.1	9.0
Communication	3.2	0.1	0.0	0.0	0.5	4.9	4.8
Recreation & Culture	2.0	0.2	0.2	0.3	18.1	9.8	9.9
Education	3.9	0.2	0.9	0.0	9.8	8.7	8.5
Miscellaneous	2.8	0.7	0.7	0.6	11.5	4.7	4.6
Headline	100	-0.4	2.0	1.3	6.9	9.1	10.9

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)	
		Nov-12	Nov-13	Nov-12	Nov-13	Nov-12	Nov-13	Nov-12	Nov-13	Nov-12	Nov-13
I. Food Group	13.0	129	129	35	23	17	19	36	27	41	60
Food & Non-Alcoholic Beverages	13.0	117	117	35	23	17	18	30	25	35	51
Alcoholic Beverages & Tobacco	14.4	6	6	0	0	0	1	3	1	3	4
Restaurant & Hotels	12.3	6	6	0	0	0	0	3	1	3	5
II. Non-Food Group	9.4	348	348	44	54	43	53	69	118	192	123
Clothing & Footwear	14.0	59	59	4	3	1	2	6	13	48	41
Housing, Water, Elect, Gas & other Fuels	9.5	36	36	7	2	3	2	11	17	15	15
Furnishing & Household Equip. Maintenance etc	8.7	69	69	3	1	8	8	17	41	41	19
Health	6.2	39	39	12	22	5	7	4	3	18	7
Transport	9.0	43	43	3	12	6	6	6	20	28	5
Communication	4.8	12	12	5	2	3	2	1	4	3	4
Recreation & Culture	9.9	39	39	7	8	8	14	8	4	16	13
Education	8.5	16	16	3	1	4	6	3	4	6	5
Miscellaneous	4.6	35	35	0	3	5	6	13	12	17	14
Overall	10.9	477	477	79	77	60	72	105	145	233	183

Note: Prices of 10 seasonal items were not reported during the month.

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in November 2013					
Top 15 Contributors		YoY Change		Weighted Contribution	
Items/ Contributors	Weights	Nov-12	Nov-13		
Ranked by Weighted Contribution					
1	House Rent	21.81	6.27	7.86	12.75
2	Wheat Flour	4.16	9.64	26.48	10.57
3	Electricity	4.40	16.39	15.82	7.27
4	Tomatoes	0.41	-41.86	216.49	6.22
5	Fresh Vegetable	1.77	-3.81	31.55	5.96
6	Potatoes	0.44	1.70	116.90	5.40
7	Milk Fresh	6.68	11.81	6.54	5.05
8	Onion	0.51	-36.74	72.83	4.11
9	Motor Fuel	3.03	7.37	12.83	3.57
10	Education	3.94	9.84	8.48	2.76
11	Footwear	1.55	16.22	18.44	2.18
12	Cotton Cloth	1.73	7.26	14.05	2.06
13	Cigarette	1.39	18.14	14.61	2.06
14	Transport Services	2.70	9.64	6.55	1.84
15	Rice	1.58	12.87	12.05	1.74
Total		56.11			73.54
Bottom 15 Contributors					
1	Spices	0.54	3.74	-16.73	-1.25
2	Pulse Gram	0.24	44.30	-30.41	-0.89
3	Besan	0.15	42.57	-28.16	-0.53
4	Gram Whole	0.16	13.55	-22.90	-0.45
5	Vegetable Ghee	2.07	3.47	-2.13	-0.38
6	Egg	0.46	24.70	-3.68	-0.20
7	Cooking Oil	1.75	11.76	-0.97	-0.15
8	Personal Equipments	0.84	14.03	-1.11	-0.13
9	Fresh Fruits	1.86	-0.30	-0.31	-0.06
10	Pulse Mash (Washed)	0.21	-9.20	-2.25	-0.05
11	Mustard Oil	0.10	5.61	-1.28	-0.01
12	Medical Equipment	0.01	15.06	6.46	0.01
13	Kerosene Oil	0.01	20.60	7.80	0.01
14	Motor Vehicle Tax	0.11	27.23	1.13	0.01
15	Betel Leaves & Nuts	0.02	7.14	4.60	0.01
Total		8.53			-4.06

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

<u>Top 15 Contributors</u>		<u>MoM Change</u>		Weighted Contribution	
Items/ Contributors	Weights	Oct-13	Nov-13		
Ranked by Weighted Contribution					
1	Tomatoes	0.41	7.85	75.81	30.82
2	Potatoes	0.44	24.54	44.51	24.27
3	Wheat Flour	4.16	0.79	2.86	11.03
4	Onion	0.51	13.89	12.32	8.41
5	Fresh Vegetable	1.77	10.10	4.20	7.88
6	Sugar	1.04	3.16	7.42	6.50
7	Egg	0.46	-0.98	11.06	4.19
8	Milk Fresh	6.68	0.49	0.35	2.26
9	Woolen Cloth	0.88	1.00	1.99	1.54
10	Wheat	0.35	0.97	3.82	1.18
11	Personal Equipments	0.84	-0.64	1.21	1.10
12	Ready Made Food	1.23	0.94	0.89	1.02
13	Bakery & Confectionary	1.16	0.82	1.02	0.96
14	Vegetable Ghee	2.07	0.21	0.67	0.91
15	Tailoring	0.88	0.19	1.02	0.88
Total		22.88			102.95
Bottom 15 Contributors					
1	Fresh Fruits	1.86	1.19	-6.80	-10.35
2	Chicken	1.36	0.18	-5.94	-5.83
3	Motor Fuel	3.03	2.58	-0.20	-0.51
4	Tea	0.84	-0.30	-0.34	-0.30
5	Cooking Oil	1.75	0.13	-0.12	-0.14
6	Pulse Gram	0.24	-1.08	-0.84	-0.14
7	Besan	0.15	-0.87	-1.05	-0.11
8	Spices	0.54	-0.02	-0.13	-0.06
9	Betel Leaves & Nuts	0.02	0.94	-0.55	-0.01
10	Motor Vehicle Tax	0.11	0.00	0.00	0.00
11	News Papers	0.19	0.00	0.00	0.00
12	Gas	1.58	0.00	0.00	0.00
13	Postal Services	0.07	0.00	0.00	0.00
14	Text Books	0.57	0.08	0.00	0.00
15	Marriage Hall Charges	0.08	0.94	0.00	0.00
Total		12.39			-17.45

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in November 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Nov-12	Nov-13	
A. Ranked by Percentage Change					
1	Tomatoes	0.41	-41.86	216.49	6.22
2	Potatoes	0.44	1.70	116.90	5.40
3	Onion	0.51	-36.74	72.83	4.11
4	Fresh Vegetable	1.77	-3.81	31.55	5.96
5	Wheat	0.35	10.42	27.35	0.88
6	Wheat Flour	4.16	9.64	26.48	10.57
7	Postal Services	0.07	5.20	24.60	0.15
8	Gur	0.02	-14.21	23.11	0.06
9	Wheat Product	0.10	7.14	21.26	0.19
10	Footwear	1.55	16.22	18.44	2.18
11	Tea	0.84	8.02	16.68	1.61
12	Cosmetics	0.39	7.73	16.61	0.51
13	Text Books	0.57	39.99	16.02	1.12
14	Electricity	4.40	16.39	15.82	7.27
15	Tailoring	0.88	16.08	14.87	1.43
Total		16.45			47.66
B. Ranked by Weights					
1	House Rent	21.81	6.27	7.86	12.75
2	Milk Fresh	6.68	11.81	6.54	5.05
3	Electricity	4.40	16.39	15.82	7.27
4	Wheat Flour	4.16	9.64	26.48	10.57
5	Education	3.94	9.84	8.48	2.76
6	Communication & Apparatus	3.15	0.32	4.23	0.87
7	Motor Fuel	3.03	7.37	12.83	3.57
8	Transport Services	2.70	9.64	6.55	1.84
9	Meat	2.43	7.06	4.57	1.29
10	Vegetable Ghee	2.07	3.47	-2.13	-0.38
11	Fresh Fruits	1.86	-0.30	-0.31	-0.06
12	Fresh Vegetable	1.77	-3.81	31.55	5.96
13	Cooking Oil	1.75	11.76	-0.97	-0.15
14	Cotton Cloth	1.73	7.26	14.05	2.06
15	Rice	1.58	12.87	12.05	1.74
Total		63.08			55.16
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 10.9 percent in November, 2013.					

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

Table 1: Top 10 Contributors to GDP Contribution (2012) in November 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Nov-12	Nov-13	
A. Ranked by Weighted Contribution					
1	Wheat Flour	4.16	9.64	26.48	10.57
2	Tomatoes	0.41	-41.86	216.49	6.22
3	Fresh Vegetable	1.77	-3.81	31.55	5.96
4	Potatoes	0.44	1.70	116.90	5.40
5	Milk Fresh	6.68	11.81	6.54	5.05
6	Onion	0.51	-36.74	72.83	4.11
7	Cigarette	1.39	18.14	14.61	2.06
8	Rice	1.58	12.87	12.05	1.74
9	Tea	0.84	8.02	16.68	1.61
10	Ready Made Food	1.23	10.31	12.26	1.61
Total		19.01			44.34
B. Ranked by Percentage Change					
1	Tomatoes	0.41	-41.86	216.49	6.22
2	Potatoes	0.44	1.70	116.90	5.40
3	Onion	0.51	-36.74	72.83	4.11
4	Fresh Vegetable	1.77	-3.81	31.55	5.96
5	Wheat	0.35	10.42	27.35	0.88
6	Wheat Flour	4.16	9.64	26.48	10.57
7	Gur	0.02	-14.21	23.11	0.06
8	Wheat Product	0.10	7.14	21.26	0.19
9	Tea	0.84	8.02	16.68	1.61
10	Cigarette	1.39	18.14	14.61	2.06
Total		9.98			37.06
C. Ranked by Weights					
1	Milk Fresh	6.68	11.81	6.54	5.05
2	Wheat Flour	4.16	9.64	26.48	10.57
3	Meat	2.43	7.06	4.57	1.29
4	Vegetable Ghee	2.07	3.47	-2.13	-0.38
5	Fresh Fruits	1.86	-0.30	-0.31	-0.06
6	Fresh Vegetable	1.77	-3.81	31.55	5.96
7	Cooking Oil	1.75	11.76	-0.97	-0.15
8	Rice	1.58	12.87	12.05	1.74
9	Cigarette	1.39	18.14	14.61	2.06
10	Chicken	1.36	-0.37	4.56	0.51
Total		25.06			26.61

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 13.0 percent in November, 2013.

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in November 2013					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Nov-12	Nov-13	
A. Ranked by Weighted Contribution					
1	House Rent	21.81	6.27	7.86	12.75
2	Electricity	4.40	16.39	15.82	7.27
3	Motor Fuel	3.03	7.37	12.83	3.57
4	Education	3.94	9.84	8.48	2.76
5	Footwear	1.55	16.22	18.44	2.18
6	Cotton Cloth	1.73	7.26	14.05	2.06
7	Transport Services	2.70	9.64	6.55	1.84
8	Tailoring	0.88	16.08	14.87	1.43
9	Text Books	0.57	39.99	16.02	1.12
10	Ready Made Garment	0.97	16.62	12.27	1.10
Total		41.59			36.08
B. Ranked by Percentage Change					
1	Postal Services	0.07	5.20	24.60	0.15
2	Footwear	1.55	16.22	18.44	2.18
3	Cosmetics	0.39	7.73	16.61	0.51
4	Text Books	0.57	39.99	16.02	1.12
5	Electricity	4.40	16.39	15.82	7.27
6	Tailoring	0.88	16.08	14.87	1.43
7	Cotton Cloth	1.73	7.26	14.05	2.06
8	Sewing Needle & Dry Cell	0.15	11.03	13.70	0.17
9	Motor Fuel	3.03	7.37	12.83	3.57
10	Woolen Readymade Garments	0.40	24.26	12.81	0.48
Total		13.16			18.94
C. Ranked by Weights					
1	House Rent	21.81	6.27	7.86	12.75
2	Electricity	4.40	16.39	15.82	7.27
3	Education	3.94	9.84	8.48	2.76
4	Communication & Apparatus	3.15	0.32	4.23	0.87
5	Motor Fuel	3.03	7.37	12.83	3.57
6	Transport Services	2.70	9.64	6.55	1.84
7	Cotton Cloth	1.73	7.26	14.05	2.06
8	Gas	1.58	-42.09	7.05	0.79
9	Footwear	1.55	16.22	18.44	2.18
10	Personal Care	1.49	10.33	6.78	0.97
Total		45.39			35.06
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 9.4 percent in November, 2013.					

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

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Chillies Powd.National 200 Gm, Pulse Gram, Besan Av. Qlty., Gram Whole Black Av Qlty., Gram Whole Yellow Av.Qlty	Cumin seed White National, Chicken Farm Broiler (Live), Squash-Mitchelles, Malta/Mosambi, Honey Langanese 500 Gm., Radish	Rice Basmati Broken Av. Qlty, Coconut Dry Av.Qlty., Coriander Seed (Loose), Cinnamon Loose Av. Qlty, Fish-Rahu Medium Size	Tomatoes, Potatoes, Cauliflower, Chillies Green, Onion, Brinjal, Ginger, Carrot, Ice Cream Walls, Bottlegourd, Spinach, Wheat, Wheat Flour Fine/Superior, Wheat Flour Avg. Qlty, Turnip
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	Shoe Repair Half Sole, Pullover Ladies Oxford/Bon	Azarband Cotton Avg. Qlty, Foot Wear Local (Female), School Uni. Pant, Shirt Boys, Pant Cloth Wash & Wear Av.Qlty, School Uniform Kameez Shalwar Boys	Gents Shoe, Art 1109 Servis, Gents Shoes Paul Bata, Sports Shoes, Secondhand Winter Jacket, Child Shoe Power Lite Bata, Shirting Av.Qlty., Tailoring Suit (Female), Georgette Av.Qlty, Shoe Polish Charges Avg. Gents Sandal Bata, Shirt Boy 24"/26" Length
Housing, Water, Elect, Gas & other Fuels	Elect. Charges Upto 50 Units, Elect. Charges 01 - 100 Units	Iron Bar (M.S. Bar) 1/2", Bajree	Carpenter Wage Rate, Electrician Wage Rate(P/Day), House Rent For Q-I, House Rent For Q-II, House Rent For Q-III, House Rent For Q-IV	Elect. Charges 301 - 1000 Units, Elect. Charges 101 - 300 Units, Electrician Wage Rate (P/Pnt), Elect. Charges Overall/ Combined, Elect. Charges Above 1000 Units, Timber Shesham Log, Mason (Raj) Wage Rate, Cement (Local)
Furnishing & Household Equip. Maintenance etc	Air conditioner 1.5 Ton PEL	Dry Cell 1.5 Volt (Local), Tissue Paper Perfumed 100, Toilet Paper Roll (R.Petal), Sewing Machine (Singer), Carpet Plain Av. Qlty	Table Shesham Wood, Non Stick Cooking Pan, Cot Iron (With Niwar)Av.Qlty, Dari Cotton (6X2 1/2), Blanket (90" X 54")	Match Box (Small), Boot Polish Cherry/Kiwi 50 MI, Washing Powder (Wheel/ Bonus), Cleanser Powder Vim 1000 Gms, Finis 500 MI, Robin Blue (35 Gms), Tea Set Pak. China Wear 21 Pcs, Water Set Jug+6 Glasses
Health	Flagyl Tab. 200 Mg., Polyfax Eye Ointment, Calcium Syrup Sandoz, Burnol Cream 30 Gm, Amoxil Capsule 250 Mg.	Thermometer China, Dettol (Medium), ECG Charges, Sugar Test (Random/Fasting), Urine Test (Dr) Charges, Cac. 1000 Tab, Glycerin Small	Cotton Bandage 2" - 4", Blood Test (Cp) Charges, Ear Drops (Cardisorpine)	Galxos-D (450 Gm), Jouhar Joshanda, Sancos Syrup (50 MI), Saniplast (1 Putty), Doctor (MBBS) Clinic Fee, X-Ray (Chest) Charges, Phenergan Syrup 120 MI.
Transport	Train Fare A/C Slp. 101-500, Train Fare A/C Slp > 500K, Train Fare A/C Slp. 1-100, Train Fare Eco. 1-100 Km.	Full Tonga Charges, Car Toyota 1300 CC, Motorcycle Honda Cd-70, Bus Fare Max (Within City), Car Tax For 800 CC To 1300 CC	Petrol Super, Car Service Charges, Tyre Car With Tube General, Auto Rickshaw Fare, Suzuki Fare Min.Within City, Motor Cycle Service Charges	CNG, Bus Fare Outside City (Non A/C), Minibus Fare Min.Within City, Bus Fare Outside City (A/C), Cycle Overhauling Charges
Communication	Postal Envelope Domestic, Mobile Cell Charges	Postal Envelope For Saudi Arabia, Mobile Set Nokia/Sony/Ericsson Av.Qlty	Telephone Charges Local Call, Telephone Charges Outside City, Internet Charges, Telephone Set Av. Qlty	U.M.S. Reg Charges Min., T.C.S. Ch. Min.Within Zone, Fax Charges (Local), Postal Registration Charges
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	Maths Book Ist. Year (T.B. Board), Pencil Goldfish/Deer, Fountain Pen Hero/Wings/China, Ball Pen (Local), Video Cassette Blank. Tdk/Sony	Urdu Book Ist Year/ Inter, Exercise Book Lined 80/10, Paper Fool Scape (27"X17"), Personnel Computer (Branded)	Maths Book Calss V (T.B.Board), Urdu Book Class V (T.B.Board), 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 MI Bottle, Pakistan Studies Book BA/B.Sc, Eng. Book Ist. Yr Complete Set
Education	Coaching Charges For Class XI/ XII Commerce Group	Coaching Fee For Class IX/ X, Pvt School Fee Eng. Med (Class-V), MBA Tuition Fee, Pvt School Fee Eng. Med (Class-X), Govt. Engg. Coll. Fee Ist Year, I.T. Tuition Fees	Pvt School Fee Eng. Med (Class-V), MBA Tuition Fee, Pvt School Fee Eng. Med (Class-I)	Govt. University Fee MSc/ MA, Govt. College Fee Ist. Year, Pvt Eng. College Fee (Ist Year), Pvt Med. College Fee MBBS(Ist Year), Govt. College Fee 4Th. Year
Restaurant & Hotels			Chicken Biryani Full/Double	Cooked Beef (Av. Hotel), Tea Prepared (Ordinary), Bread Tandoori St. Size, Cooked Mutton (Av. Hotel), Cooked Dal (Av. Hotel)
Miscellaneous	Toothpaste Med Size Colgate 70Gms, Silver Tezabi 24 Ct, Gold Tezabi 24 Ct	Toilet Soap Safeguard Bath Size, Blade 7-O-Clock Steel (5), Gel Medium Size, Talc Powder Viceroy/ Black Cat	Toothbrush Shield, Lipstick S. Miss/Medora, Hair Removing Cream (EU-Cream)	Perfume Med. Size Medora/Broche, Toilet Soap Lux 95 Gms, Purse Ladies (Leather) Av. Qlty, Shaving Charges, Artificial Jewellery Set, Suitcase Rexin (24"X16"X6")

Table A5: City- wise CPI Inflation by Income Groups, November 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	1.5	12.1	2.5	14.2	0.1	9.5	1.3	12.1	2.4	14.1	0.1	9.9
2 Islamabad	1.1	15.9	1.8	14.9	0.1	17.1	1.1	15.5	1.9	14.7	0.1	16.4
3 Lahore	1.2	10.6	2.1	13.7	-0.1	5.9	1.1	10.5	1.9	14.1	-0.1	6.2
4 Gujranwala	1.9	10.3	3.1	12.4	0.1	7.5	1.7	10.1	3.0	12.0	0.2	7.8
5 Sialkot	1.1	10.2	2.0	11.0	-0.1	9.0	1.0	9.7	1.8	10.3	0.0	9.1
6 Faisalabad	0.9	14.2	1.5	15.9	0.0	11.9	0.7	13.5	1.2	15.0	0.0	11.6
7 Multan	1.3	11.5	2.1	14.6	0.2	7.7	1.2	11.1	2.0	14.1	0.2	7.9
8 Sargodha	3.9	15.9	6.2	20.6	1.3	10.7	3.6	15.0	6.0	19.7	1.2	10.5
9 Bahawalpur	1.6	11.8	1.9	13.9	1.3	9.5	1.2	10.7	1.4	12.2	0.9	9.2
10 Karachi	1.7	9.7	2.9	13.4	0.1	4.8	1.7	9.2	3.0	12.4	0.1	5.4
11 Hyderabad	2.2	10.8	3.6	14.5	0.2	5.6	2.1	10.2	3.6	13.8	0.2	5.9
12 Sukkur	3.3	11.9	5.4	14.2	0.6	9.0	2.9	11.2	5.0	13.4	0.6	8.9
13 Larkana	1.4	15.6	2.3	16.8	0.3	14.3	1.0	15.3	1.6	16.8	0.3	13.8
14 Peshawar	3.1	15.2	4.8	16.5	1.1	13.8	2.6	14.2	4.3	15.4	0.9	13.0
15 Bannu	2.5	11.1	4.1	14.6	0.4	6.9	2.2	10.6	3.9	14.2	0.3	7.0
16 Quetta	2.5	11.7	4.1	13.8	0.3	8.9	2.1	10.6	3.8	12.6	0.1	8.4
17 Khuzdar	2.3	7.7	3.7	10.3	0.6	4.7	2.1	7.6	3.5	9.9	0.6	5.3
	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	1.3	12.3	2.3	14.1	0.3	10.5	1.1	11.9	2.1	13.8	0.3	10.4
2 Islamabad	1.0	16.6	1.7	14.4	0.4	18.9	1.0	18.2	1.9	14.4	0.3	21.7
3 Lahore	1.0	10.3	1.7	13.7	0.1	6.5	0.8	10.2	1.5	13.5	0.1	7.1
4 Gujranwala	1.6	9.6	2.7	11.2	0.5	7.8	1.4	9.3	2.5	10.7	0.4	8.0
5 Sialkot	1.0	10.1	1.7	10.9	0.2	9.2	0.8	9.9	1.5	10.3	0.3	9.6
6 Faisalabad	0.6	13.3	1.1	14.4	0.1	12.2	0.4	12.5	0.9	13.8	0.0	11.4
7 Multan	1.1	11.1	1.8	13.8	0.4	8.5	0.8	10.8	1.4	13.4	0.2	8.7
8 Sargodha	3.5	14.7	5.9	19.4	1.3	10.5	3.1	13.9	5.8	19.0	1.1	10.1
9 Bahawalpur	1.0	10.5	1.2	11.8	0.7	9.3	0.6	9.2	0.9	10.7	0.4	8.0
10 Karachi	1.7	9.0	3.0	12.0	0.3	5.9	1.5	8.8	2.9	11.6	0.1	6.3
11 Hyderabad	2.2	10.0	3.7	13.6	0.5	6.1	1.9	9.7	3.7	13.2	0.3	6.6
12 Sukkur	2.7	10.6	4.7	12.5	0.8	8.7	2.2	9.6	4.1	10.9	0.6	8.5
13 Larkana	0.9	15.5	1.5	16.8	0.4	14.3	0.6	15.1	1.1	16.7	0.3	13.9
14 Peshawar	2.5	14.2	4.2	15.3	0.8	13.1	2.0	13.7	3.9	14.5	0.5	13.1
15 Bannu	2.2	11.0	3.9	14.5	0.5	7.7	2.1	10.7	4.0	14.0	0.4	7.9
16 Quetta	1.7	10.0	3.3	11.2	0.1	8.7	1.4	9.6	2.9	10.2	0.1	9.0
17 Khuzdar	2.0	7.2	3.4	9.4	0.6	5.1	2.0	7.2	3.7	9.2	0.6	5.6
	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	0.7	11.3	1.6	13.0	0.3	10.4	0.9	11.5	1.9	13.4	0.2	10.1
2 Islamabad	0.5	15.9	1.1	13.1	0.1	17.5	0.5	16.0	1.3	13.3	0.0	18.1
3 Lahore	0.8	9.6	0.9	13.3	0.7	7.6	0.8	9.9	1.3	13.5	0.4	7.0
4 Gujranwala	1.0	8.4	2.2	10.1	0.4	7.5	1.4	9.3	2.6	11.0	0.5	8.0
5 Sialkot	0.6	9.5	1.3	9.9	0.3	9.3	0.8	9.7	1.5	10.3	0.3	9.3
6 Faisalabad	0.3	11.7	0.6	12.6	0.1	11.2	0.5	12.7	1.0	14.1	0.1	11.7
7 Multan	0.5	9.4	0.8	12.1	0.3	8.1	0.8	10.3	1.4	13.2	0.3	8.3
8 Sargodha	2.7	12.9	5.5	18.6	1.4	10.3	3.2	14.2	5.8	19.3	1.5	11.0
9 Bahawalpur	0.2	8.5	-0.1	10.0	0.3	7.9	0.8	9.8	1.0	11.6	0.6	8.7
10 Karachi	1.0	8.3	2.8	10.9	0.1	6.9	1.2	8.5	2.9	11.4	0.0	6.3
11 Hyderabad	1.4	8.3	3.4	12.1	0.4	6.3	1.9	9.4	3.6	13.2	0.5	6.6
12 Sukkur	1.6	8.3	3.3	9.4	0.7	7.8	2.3	10.0	4.3	11.8	1.0	8.8
13 Larkana	0.3	13.7	0.5	15.4	0.2	12.9	0.8	15.1	1.4	16.6	0.4	14.1
14 Peshawar	1.2	13.9	3.4	14.0	0.2	13.9	1.9	14.1	4.0	15.0	0.5	13.4
15 Bannu	1.1	7.4	2.5	11.6	0.3	5.4	2.0	10.3	3.8	13.9	0.7	7.8
16 Quetta	1.0	8.9	2.3	9.3	0.3	8.7	1.5	9.7	3.0	10.8	0.4	9.0
17 Khuzdar	0.9	4.3	2.4	6.6	0.2	3.2	2.0	7.3	3.4	9.4	1.0	5.9

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

	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Mianwali	18.0	19.1	17.2	Vehari	10.8	13.5	8.9
Dera Mrd.Jamali	16.4	20.8	13.2	D.G. Khan	10.6	12.3	9.5
Islamabad	16.0	13.3	18.1	Loralai & Cantt	10.4	12.9	8.7
Mingora	15.7	15.0	16.2	Multan	10.3	13.2	8.3
Mardan	15.4	16.1	14.9	Bannu	10.3	13.9	7.8
Larkana	15.1	16.6	14.1	Sukkur	10.0	11.8	8.8
Sargodha	14.2	19.3	11.0	Lahore	9.9	13.5	7.0
Peshawar	14.1	15.0	13.4	Bahawalpur	9.8	11.6	8.7
Turbat	14.0	15.1	13.3	Sialkot	9.7	10.3	9.3
Rahim Yar Khan	13.9	17.4	11.5	Quetta	9.7	10.8	9.0
Mithi	13.8	12.3	14.8	Bahawalnagar	9.5	13.9	6.7
Jhang	13.6	14.6	12.9	Abbotabad	9.5	12.0	7.8
Jehlum	13.4	18.2	10.1	Hyderabad	9.4	13.2	6.6
D.I. Khan	13.2	16.7	10.7	Gujranwala	9.3	11.0	8.0
Faisalabad	12.7	14.1	11.7	Dadu	9.2	11.9	7.2
Attock	12.5	19.3	7.8	Mir Pur Khas	8.5	10.5	7.1
Wazirabad	12.3	14.6	10.7	Karachi	8.5	11.4	6.3
Gawadar	11.9	15.3	9.7	Khuzdar	7.3	9.4	5.9
Rawalpindi	11.5	13.4	10.1				
Sahiwal	11.2	12.0	10.7				
Muzaffargarh	11.1	12.6	10.1				
Nawabshah	11.0	13.0	9.6				

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		
	Nov-12	Oct-13	Nov-13	Nov-12	Oct-13	Nov-13
<u>Up to Rs. 8000</u>						
General	-0.2	1.4	2.1	6.6	9.6	12.1
Food	-0.6	1.9	3.3	4.4	10.4	14.9
Non-food	0.3	0.8	0.4	9.5	8.4	8.5
<u>Rs. 8001- 12000</u>						
General	-0.2	1.3	1.8	7.8	9.1	11.2
Food	-0.5	1.8	3.1	4.8	10.1	14.1
Non-food	0.2	0.8	0.3	11.4	8.0	8.1
<u>Rs. 12001- 18000</u>						
General	-0.2	2.3	1.6	7.7	9.9	11.9
Food	-0.4	1.8	2.9	5.1	9.9	13.6
Non-food	0.1	2.9	0.3	10.5	10.0	10.2
<u>Rs. 18001- 35000</u>						
General	-0.2	2.4	1.4	6.4	9.8	11.5
Food	-0.3	1.7	2.7	5.4	9.8	13.1
Non-food	0.0	3.0	0.3	7.4	9.9	10.2
<u>Above Rs. 35000</u>						
General	-0.6	1.9	0.9	6.2	8.4	10.1
Food	-0.1	1.6	2.2	5.8	9.5	12.1
Non-food	-0.9	2.0	0.3	6.5	7.9	9.1
<u>All income groups</u>						
General	-0.4	2.0	1.3	6.9	9.1	10.9
Food	-0.3	1.7	2.6	5.3	9.8	13.0
Non-food	-0.4	2.2	0.3	8.1	8.6	9.4

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices	Percentage change	
			Nov-13	YoY	MoM
1	Wheat	10Kg.	382.9	30.3	5.6
2	Wheat Flour Bag	10Kg.	420.9	24.3	2.3
3	Rice Basmati Broken	Kg.	75.1	9.7	0.8
4	Rice Irri-6	Kg.	53.5	8.7	-0.5
5	Bread Plain Med. Size (340-400 Gm.)	Each	39.0	16.8	1.4
6	Beef	Kg.	282.1	5.4	0.2
7	Mutton	Kg.	553.8	8.3	0.1
8	Chicken Live (Farm)	Kg.	135.0	4.3	-3.7
9	Milk Fresh	Litr	68.8	6.1	0.4
10	Curd	Kg.	80.9	7.5	0.3
11	Milk Powdered Nido	500G	298.5	2.9	0.2
12	Egg Hen (Farm)	Doz.	113.2	1.0	15.5
13	Mustard Oil	Kg.	183.2	-1.5	0.3
14	Cooking Oil (Tin)	2.5Ltr	537.7	1.2	0.1
15	Veg. Ghee (Tin)	2.5Kg.	510.7	-2.1	0.1
16	Veg. Ghee Loose	Kg.	160.7	0.0	1.7
17	Bananas	Doz.	53.5	-2.3	-4.4
18	Masoor Pulse Washed	Kg.	116.3	19.7	3.0
19	Moong Pulse Washed	Kg.	128.4	13.5	3.1
20	Mash Pulse Washed	Kg.	130.9	-2.2	1.0
21	Gram Pulse Washed	Kg.	71.2	-31.6	0.4
22	Potatoes	Kg.	59.9	95.4	33.2
23	Onions	Kg.	58.9	69.2	12.5
24	Tomatoes	Kg.	115.8	163.0	69.5
25	Sugar	Kg.	58.9	8.9	5.7
26	Gur	Kg.	86.8	16.6	-2.7
27	Salt Powdered Loose (Lahori)	Kg.	9.2	7.0	0.0
28	Red Chillies Powder Loose	Kg.	216.3	-18.8	-0.3
29	Garlic	Kg.	135.1	13.2	4.4
30	Tea (Yellow Label)	200Gm.	169.4	20.7	-0.7
31	Cooked Beef Plate	Each	77.0	13.5	1.0
32	Cooked Dal Plate	Each	45.2	14.0	0.2
33	Tea Prepared (Sada)	Cup	16.7	10.0	2.0
34	Cigarettes K-2 (20'S)	20'S	37.7	17.2	0.2
35	Long Cloth (Coarse Latha)	Mtr.	172.2	19.1	0.1
36	Shirting	Mtr.	142.7	20.1	0.8
37	Lawn	Mtr.	189.8	18.6	0.0
38	Georgette (Voil Printed)	Mtr.	110.6	11.7	0.2
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	126.8	6.4	0.0
45	Firewood	40Kg	530.6	9.3	1.9
46	Energy Savor 14 Watts	Each	161.8	8.9	0.2
47	Washing Soap (200-250 Gm.)	Cake	23.3	11.9	1.0
48	Match Box	Each	1.4	29.4	2.2
49	Petrol	Litr	114.1	10.8	-0.8
50	Diesel	Litr	118.0	4.4	-0.5
51	L.P.G.(11 Kg Cylinder.)	Each	1584.5	2.7	3.2
52	Tele. Local Call	Call	3.9	9.7	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	36.0	12.5	0.0
Maximum				163.0	69.5
Median				9.7	0.2
Minimum				-31.6	-4.4

Table A9: Distribution of Price Changes (YoY) - WPI Items: November 2013				
Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Agriculture Forestry & Fishery Products	Pulses, Other Oil Seeds, Eggs, Cotton Seeds, Sugar Crops	Milk from Bovine Animals, Poultry	Rice, Unmanufactured Tobacco, Hides and Fur Skins- Raw	Edible Roots/Potatoes, Vegetables, Stimulant and Spice Crops, Fresh Fruits, Fish Live Fresh or Chilled, Sorghum/Jowar, Wheat, Fibre Crops, Millet/Bajra, Fuel Wood in Logs, Dry Fruits, 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, Processed Liquid Milk, Chocolate	Fruit Juices, Silk and Rayon Fabrics, Vegetable Oil Refined, Oil Cakes, Woolen Carpets, Vegetables & Fruit Juices, Nylon Yarn, Synthetic Carpets, Sugar Confectionary, Dried Fruits & Nuts, Vegetable Ghee	Blankets, Beverages, Footwear, Other Fabrics, Mineral Water, Cotton Fabrics, Quilts, Hosiery Products, Blended Yarn, Cotton Yarn, Dairy Products N.E.C, Meat of Animals	Other Leather N.E.C, Leather without Hairs, Wheat Flour, Ice Cream, Tobacco Products, Coffee and Tea, Towels, Bed Sheets, Woven Fabrics, Ready Made Garments, Sugar Refined, Milk and Cream in Solid Form
Other Transportable Goods except Metal Products, Machinery and Equipments	Hard Board, Fertilizers, Medicines, Insecticides, Coke	Plastic Products, Auto Tyres, Dying Materials	Printing Paper, Ceramics and Sanitary, Glass Sheets, Cement, Matches, Furnace Oil, Kerosene Oil, Soaps & Detergent, Bed Foams, Mobil Oil, Diesel Oil, Paints & Varnishes	Pesticides, Bricks Blocks and Tiles, Timber, Other Glass Articles, Motor Sprit, Chemicals
Metal Product Machinery & Equipment	Pig Iron, Engines and Motors, Vacuum Pumps, Concrete Mixer	Air Conditioners, Chuff Cutter, Bicycles, Motor Cycles, Radio and Television	Motor Vehicles, Electrical Wires, Steel Bars & Sheets, Steel Products	Cultivators, Tractors, Lathe Machines, Pipe Fittings, Refrige,Wash& Sew Mach,Iron,Fan, Lighting Equipments

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

Items and specification	Weights	Index		
		Nov-12	Oct-13	Nov-13
General	100.00	172.42	188.82	191.21
Food & Non-Alcoholic Beverages.	34.83	192.84	211.99	217.89
1 Wheat	0.35	173.21	212.47	220.58
2 Wheat Flour	4.16	180.13	221.49	227.82
3 Wheat Product	0.10	173.21	203.19	210.03
4 Besan	0.15	235.75	171.16	169.37
5 Rice	1.58	171.92	192.27	192.63
6 Cereals	0.16	203.04	227.50	228.10
7 Bakery & Confectionary	1.16	173.99	193.77	195.75
8 Nimco	0.46	197.49	213.57	217.02
9 Meat	2.43	218.77	228.63	228.77
10 Chicken	1.36	155.34	172.68	162.43
11 Fish	0.30	193.18	208.46	210.55
12 Milk Fresh	6.68	217.36	230.76	231.57
13 Milk Product	0.63	209.90	225.47	226.42
14 Milk Powder	0.11	184.27	197.75	198.67
15 Egg	0.46	229.32	198.88	220.88
16 Mustard Oil	0.10	160.75	157.41	158.69
17 Cooking Oil	1.75	162.59	161.21	161.02
18 Vegetable Ghee	2.07	160.51	156.04	157.09
19 Dry Fruits	0.25	204.95	221.30	225.01
20 Fresh Fruits	1.86	182.54	195.24	181.97
21 Pulse Masoor	0.27	142.64	159.87	161.86
22 Pulse Moong	0.23	215.42	232.81	238.17
23 Pulse Mash (Washed)	0.21	192.99	187.13	188.64
24 Pulse Gram	0.24	233.27	163.71	162.33
25 Gram Whole	0.16	227.39	174.43	175.32
26 Beans	0.03	214.27	234.82	235.84
27 Potatoes	0.44	196.64	295.14	426.51
28 Onion	0.51	209.68	322.63	362.39
29 Tomatoes	0.41	130.48	234.89	412.96
30 Fresh Vegetable	1.77	201.04	253.79	264.46
31 Sugar	1.04	195.25	200.64	215.52
32 Gur	0.02	226.61	276.11	278.99
33 Honey	0.04	252.31	260.63	262.05
34 Sweet Meet	0.25	205.11	218.95	221.10
35 Beverages	1.20	168.53	188.18	189.74
36 Jam, Tomato Ketchup & Pickle	0.25	178.86	188.91	189.16
37 Condiments	0.27	212.58	220.82	222.38
38 Spices	0.54	257.64	214.81	214.54
39 Tea	0.84	216.87	253.90	253.04
Alcoholic Beverages, Tobacco	1.41	190.69	218.25	218.24
40 Cigarette	1.39	190.81	218.68	218.68
41 Betel Leaves & Nuts	0.02	183.14	192.62	191.56
Clothing & Footwear	7.57	172.18	194.51	196.25
42 Cotton Cloth	1.73	159.62	181.33	182.05
43 Woolen Cloth	0.88	192.14	211.03	215.22
44 Ready Made Garment	0.97	172.85	192.61	194.06
45 Woolen Readymade Garments	0.40	177.50	196.12	200.23
46 Hosiery	0.51	183.58	201.09	203.32
47 Dopatta	0.44	188.47	210.56	212.53
48 Cleaning & Laundering	0.21	192.87	213.08	216.66

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities				
Items and specification	Weights	Index		
		Nov-12	Oct-13	Nov-13
49 Tailoring	0.88	205.03	233.15	235.52
50 Footwear	1.55	143.18	169.38	169.58
Housing,Water,Elect,Gas & Other Fuel	29.41	150.01	164.17	164.33
51 House Rent	21.81	139.61	150.59	150.59
52 Construction Input Item	0.56	202.11	218.32	221.73
53 Construction Wage Rate	0.33	171.19	188.80	191.07
54 Water Supply	0.50	133.23	145.80	147.52
55 Electricity	4.40	196.37	227.44	227.44
56 Gas	1.58	134.34	143.81	143.81
57 Kerosene Oil	0.01	275.18	293.68	296.65
58 Fire Wood Whole	0.23	233.33	250.91	256.78
Furnished H.Hold Equip.& Maint. Etc	4.21	178.63	192.39	194.16
59 Furniture	0.33	168.01	182.22	183.52
60 Household Textile	0.65	175.00	188.19	190.35
61 Household Equipment	0.59	157.13	164.21	165.35
62 Utensils	0.32	176.06	190.82	195.29
63 Plastic Products	0.25	175.06	187.78	189.62
64 Washing Soap & Detergent	0.79	194.15	211.38	212.44
65 Sewing Needle & Dry Cell	0.15	151.54	170.32	172.30
66 Household Servant	1.04	189.23	203.63	205.48
67 Marriage Hall Charges	0.08	193.11	206.52	206.52
Health	2.19	156.08	165.15	165.73
68 Drug Medicine	1.27	138.28	142.10	142.19
69 Medical Equipment	0.01	196.91	208.73	209.63
70 Doctor (MBBS) Clinic Fee	0.59	193.76	214.87	216.61
71 Medical Test	0.32	156.00	163.57	163.95
Transport	7.20	180.75	197.06	197.04
72 Motor Vehicle	0.66	152.84	160.39	160.81
73 Motor Vehicle Accessories	0.24	206.89	220.01	221.31
74 Motor Fuel	3.03	172.69	195.25	194.85
75 Mechanical Service	0.46	182.81	196.39	197.52
76 Motor Vehicle Tax	0.11	152.02	153.74	153.74
77 Transport Services	2.70	195.09	207.87	207.87
Communication	3.22	123.75	129.68	129.71
78 Postal Services	0.07	173.27	215.89	215.89
79 Communication & Apparatus	3.15	122.71	127.87	127.90
Recreation & Culture	2.02	166.19	182.19	182.66
80 Recreation & Culture	0.86	122.25	125.46	126.38
81 Text Books	0.57	230.22	267.10	267.10
82 News Papers	0.19	155.91	170.49	170.49
83 Stationery	0.40	174.73	189.24	189.69
Education	3.94	154.78	167.91	167.91
84 Education	3.94	154.78	167.91	167.91
Restaurants And Hotels	1.23	201.11	223.77	225.76
85 Ready Made Food	1.23	201.11	223.77	225.76
Miscellaneous Goods And Services	2.76	200.34	208.36	209.61
86 Personal Care	1.49	179.17	190.82	191.32
87 Cosmetics	0.39	149.54	174.26	174.38
88 Blades	0.03	172.39	180.16	180.83
89 Personal Equipments	0.84	262.07	256.05	259.16

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

Items and Specifications	Index		
	Nov-12	Oct-13	Nov-13
General	192.16	211.70	212.22
Agriculture Forestry & Fishery	189.19	220.96	220.76
1 Wheat	181.31	222.41	231.90
2 Maize	161.45	182.03	178.94
3 Rice	163.85	174.66	176.47
4 Sorghum/Jowar	188.66	263.80	263.55
5 Millet/Bajra	156.89	185.50	179.40
6 Vegetables	223.38	333.60	367.68
7 Fresh Fruits	130.42	221.48	194.51
8 Dry Fruits	175.06	192.11	197.11
9 Cotton Seeds	170.85	168.29	168.77
10 Other Oil Seeds	183.21	175.89	178.95
11 Edible Roots/ Potatoes	188.12	308.49	472.04
12 Stimulant And Spice Crops	178.82	261.90	275.65
13 Pulses	211.21	175.64	178.53
14 Sugar Crops	267.92	267.92	267.92
15 Fibre Crops	177.87	225.78	212.61
16 Unmanufactured Tobacco	169.08	181.07	181.11
17 Poultry	153.87	173.31	159.59
18 Milk From Bovine Animals	213.76	223.35	223.35
19 Eggs	233.24	203.29	230.34
20 Raw Animal Material/Wool	137.58	153.55	153.55
21 Hides And Fur Skins, Raw	138.71	144.43	145.71
22 Fuel Wood In Logs	208.63	232.88	236.04
23 Fishes Live Fresh Or Chilled	176.27	248.24	249.22
Ores/Minerals, Gas & Elect.	207.85	243.64	243.77
24 Coal Not Agglomerated	196.08	223.53	223.53
25 Natural Gas Liquefied	192.37	204.63	204.91
26 Salt & Pure Sodium Chloride	164.54	217.04	217.04
27 Electrical Energy	226.10	287.44	287.44
Food, Beverages, Tobacco, Textiles	187.56	200.96	201.99
28 Meat Of Animals	227.09	239.95	239.95
29 Vegetables & Fruit Juices	187.55	192.05	192.59
30 Dried Fruits & Nuts	221.39	223.95	224.54
31 Fruit Juices	157.66	165.10	165.29
32 Vegetable Oil Refined	154.80	160.07	160.83
33 Vegetable Ghee	139.91	140.53	141.61
34 Oil Cakes	175.06	181.08	181.80
35 Processed Liquid Milk	208.43	205.54	205.54
36 Milk And Cream In Solid Form	171.16	188.09	190.96
37 Ice Cream	167.68	209.79	209.79
38 Dairy Products N.E.C	204.91	217.26	217.26
39 Wheat Flour	166.05	205.40	209.15
40 Other Cereal Flour	203.99	134.55	132.04
41 Sugar Refined	205.06	218.48	229.71
42 Chocolate	99.19	99.19	99.19
43 Sugar Confectionary	100.40	102.28	102.28
44 Coffee And Tea	198.68	230.00	229.47
45 Spices	303.12	191.28	194.28
46 Other Food Products	323.46	308.23	308.23
47 Mineral Water	168.32	181.84	181.84
48 Beverages	137.86	148.83	150.11
49 Tobacco Products	208.80	242.41	242.41
50 Cotton Yarn	207.49	223.38	221.66
51 Nylon Yarn	177.24	183.61	181.73
52 Blended Yarn	188.63	202.06	201.89
53 Woven Fabrics	196.74	218.12	224.64
54 Cotton Fabrics	174.17	187.77	187.77
55 Other Fabrics	165.62	178.98	179.06

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities				
		Index		
Items and Specifications		Nov-12	Oct-13	Nov-13
56 Silk And Rayon Fabrics		154.01	160.48	161.09
57 Towels		203.06	231.87	233.85
58 Blankets		178.52	189.62	196.10
59 Bed Sheets		197.94	223.74	227.19
60 Quilts		149.37	160.74	160.74
61 Woolen Carpets		106.55	106.55	109.52
62 Synthetic Carpets		113.15	114.41	115.69
63 Hosiery Products		175.07	185.37	187.81
64 Ready Made Garments		135.15	153.12	153.12
65 Leather With Out Hairs		109.83	140.50	144.55
66 Other Leather N.E.C		122.57	263.79	276.28
67 Footwear's		128.50	139.49	139.49
Other Transportable Goods		206.43	216.28	216.87
68 Timber		148.23	163.35	166.37
69 Printing Paper		152.93	167.02	167.02
70 Hard Board		239.58	214.58	214.58
71 Coke		163.45	163.45	163.45
72 Motor Sprit		172.08	191.35	190.50
73 Diesel Oil		265.58	279.68	279.46
74 Kerosene Oil		269.61	288.36	288.01
75 Furnace Oil		172.69	182.48	184.52
76 Mobil Oil		182.64	193.09	193.09
77 Chemicals		153.56	165.70	169.65
78 Dying Materials		104.26	104.26	106.46
79 Fertilizers		266.79	264.71	263.88
80 Pesticides		197.49	222.93	224.99
81 Insecticides		131.43	131.09	131.04
82 Paints & Varnishes		237.48	249.49	249.49
83 Medicines		139.50	138.77	138.77
84 Soaps & Detergent		168.45	178.79	178.85
85 Auto Tyres		180.73	185.57	185.73
86 Plastic Products		191.35	199.24	200.86
87 Glass Sheets		190.93	205.47	206.90
88 Other Glass Articles		191.72	206.09	213.87
89 Ceramics And Sanitary		157.32	170.85	171.02
90 Bricks Blocks And Tiles		172.40	192.69	194.89
91 Cement		187.15	200.39	200.84
92 Bed Foams		140.67	147.67	149.33
93 Matches		133.50	143.20	143.20
Metal Product Machinery & Equip		159.04	166.77	168.01
94 Pig Iron		128.97	128.97	128.97
95 Steel Bars & Sheets		133.72	141.14	140.55
96 Pipe Fittings		141.47	160.63	166.34
97 Steel Products		161.94	168.46	170.08
98 Engines And Motors		109.07	109.07	109.07
99 Vacuum Pumps		115.39	115.39	115.39
100 Air Conditioners		172.67	181.12	181.12
101 Cultivators		189.23	200.36	226.90
102 Chuff Cutter		138.54	144.94	144.94
103 Tractors		161.96	169.82	193.29
104 Lathe Machines		147.68	155.90	174.96
105 Concrete Mixer		138.83	138.83	138.83
106 Refrige,Wash& Sew Mach, Iron,Fan		165.38	181.62	186.98
107 Electrical Wires		159.57	168.13	169.09
108 Lighting Equipments		148.10	162.52	163.43
109 Radio And Television		126.46	126.49	126.49
110 Motor Vehicles		167.70	174.21	181.77
111 Motor Cycles		125.19	124.80	125.41
112 Bicycles		177.87	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	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
	Oct	188.82	212.61	174.56	211.70	213.26	210.71	207.69
	Nov	191.21	218.16	175.06	212.22	215.77	209.97	214.76

*: all groups combined

Table A13: International Commodity Prices/ Indices				
	Aug-13	Sep-13	Oct-13	Nov-13
Energy				
Crude Oil (US\$ per barrel) *	108.1	108.8	105.5	102.6
IMF Energy Index (2005 = 100)	196.8	198.1	193.3	189.1
WB Energy Index (2010 = 100) @	130.9	131.6	128.3	125.5
Food				
Rice (\$/MT)	503.8	470.0	453.3	448.8
Wheat (\$/MT)	305.5	307.5	325.1	306.8
Sugar (US cent/ pound)	17.2	17.6	18.8	17.7
Palm Oil (\$/MT)	722.8	725.8	762.6	810.3
Soybean Oil (\$/MT)	944.3	935.0	897.7	897.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	92.7	90.1	89.3	84.6
IMF Metal Price Index (2005 = 100)	180.9	177.9	179.0	178.0
Copper (\$/MT)	7,186.3	7,159.3	7,203.0	7,070.7
Aluminum (\$/MT)	1,816.2	1,761.3	1,814.6	1,748.0
Iron Ore (\$ cents/dry MT)	137.1	134.2	132.6	136.3
Tin (\$/MT)	21,638.2	22,735.1	23,101.6	22,826.9
Nickle (\$/MT)	14,308.3	13,801.4	14,117.7	13,684.0
Zinc (\$/MT)	1,896.4	1,846.9	1,884.8	1,866.4
Lead (\$/MT)	2,173.1	2,084.9	2,115.4	2,089.6
Uranium (\$/MT)	35.6	35.8	35.8	35.8
DAP (\$/MT)	438.1	398.1	377.3	351.3
Urea (\$/MT)	303.3	297.8	299.3	312.4
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	188.82
Nov	146.34	161.25	172.42	191.21
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	154.52	169.31	182.95
Aug	139.75	155.85	169.90	184.38
Sep	142.64	157.56	171.46	184.13
Oct	143.85	159.61	171.88	187.51
Nov	145.57	160.38	171.44	190.06
Dec	146.67	160.99	173.79	
Jan	147.84	162.73	175.84	
Feb	148.00	164.38	176.53	
Mar	149.76	165.94	176.87	
Apr	150.94	167.89	177.59	
May	151.78	170.48	179.28	
Jun	153.40	170.72	180.77	

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	212.61
Nov	166.59	183.26	193.03	218.16
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	148.92	174.28	190.00	207.27
Aug	154.52	174.72	189.49	208.90
Sep	161.55	177.46	190.92	205.98
Oct	161.19	180.07	190.65	209.44
Nov	164.10	180.44	189.87	214.47
Dec	164.89	180.57	194.48	
Jan	167.16	182.55	197.26	
Feb	166.58	184.11	197.74	
Mar	169.18	185.81	197.62	
Apr	169.99	188.20	198.51	
May	170.11	189.40	201.90	
Jun	171.75	189.52	204.53	

Table 16: CPI Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.13	100.13	100.15	100.35	100.19
Aug	100.63	100.66	100.70	100.72	100.68
Sep	100.60	100.59	100.57	100.57	100.58
Oct	100.73	100.74	100.71	100.70	100.72
Nov	100.53	100.54	100.57	100.60	100.56
Dec	99.48	99.46	99.44		99.46
Jan	99.89	99.91	99.92		99.91
Feb	99.22	99.20	99.20		99.21
Mar	99.43	99.42	99.41		99.42
Apr	100.03	100.06	100.09		100.06
May	99.71	99.68	99.65		99.68
Jun	99.59	99.57	99.54		99.57

Table 17: CPI Food Monthly & Average Seasonal Factors					
Period	FY11	FY12	FY13	FY14	Average
Jul	100.28	100.30	100.38	100.44	100.35
Aug	101.41	101.49	101.57	101.61	101.52
Sep	101.49	101.52	101.51	101.51	101.51
Oct	101.68	101.67	101.58	101.51	101.61
Nov	101.52	101.56	101.66	101.72	101.62
Dec	99.27	99.25	99.23		99.25
Jan	99.62	99.65	99.66		99.64
Feb	98.19	98.14	98.13		98.15
Mar	98.77	98.74	98.71		98.74
Apr	99.56	99.59	99.61		99.59
May	99.20	99.13	99.06		99.13
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	1.97
Nov	0.99	0.29	-0.39	1.27
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		0.73	-0.82	1.20
Aug	1.67	0.86	0.35	0.78
Sep	2.07	1.10	0.92	-0.14
Oct	0.85	1.30	0.24	1.83
Nov	1.20	0.49	-0.25	1.36
Dec	0.75	0.38	1.37	
Jan	0.80	1.08	1.18	
Feb	0.11	1.02	0.39	
Mar	1.19	0.95	0.19	
Apr	0.79	1.18	0.41	
May	0.55	1.54	0.95	
Jun	1.07	0.14	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	1.68
Nov	1.64	0.10	-0.33	2.61
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		1.47	0.26	1.34
Aug	3.76	0.25	-0.27	0.79
Sep	4.55	1.57	0.76	-1.40
Oct	-0.22	1.47	-0.14	1.68
Nov	1.81	0.21	-0.41	2.40
Dec	0.48	0.07	2.43	
Jan	1.38	1.10	1.43	
Feb	-0.35	0.86	0.25	
Mar	1.56	0.92	-0.06	
Apr	0.48	1.29	0.45	
May	0.07	0.64	1.71	
Jun	0.96	0.06	1.30	

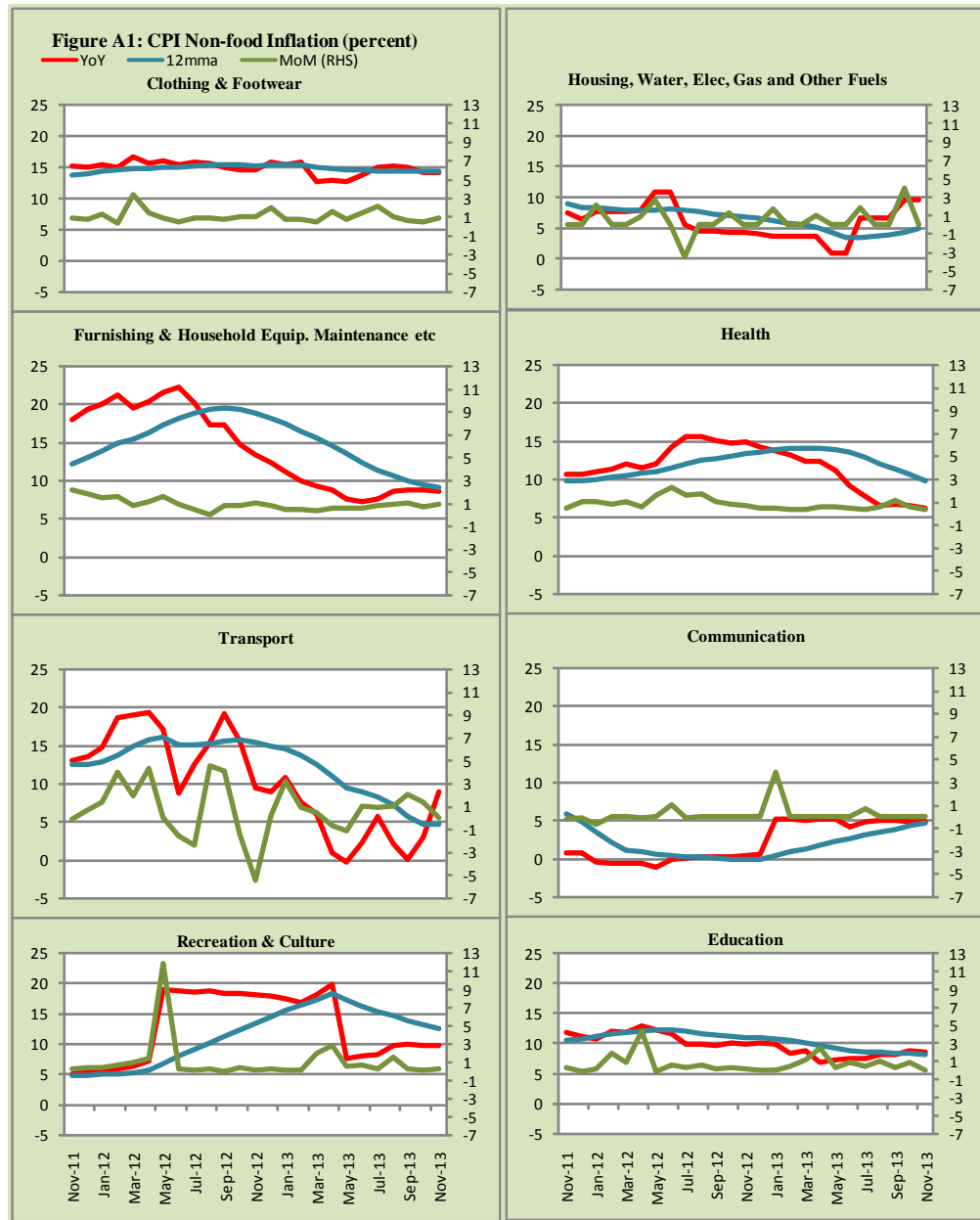


Figure A2: Frequency Distribution of Price Changes of CPI Items, November 2013

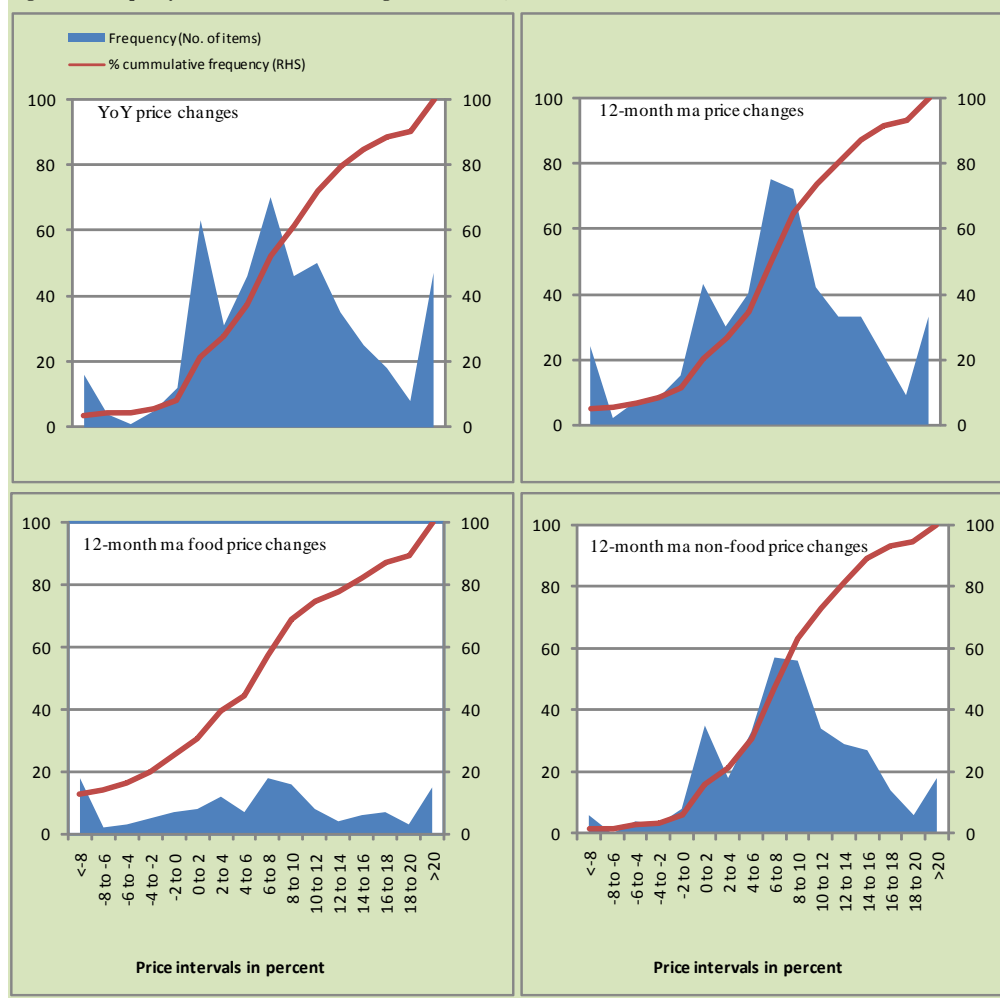


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, November 2013

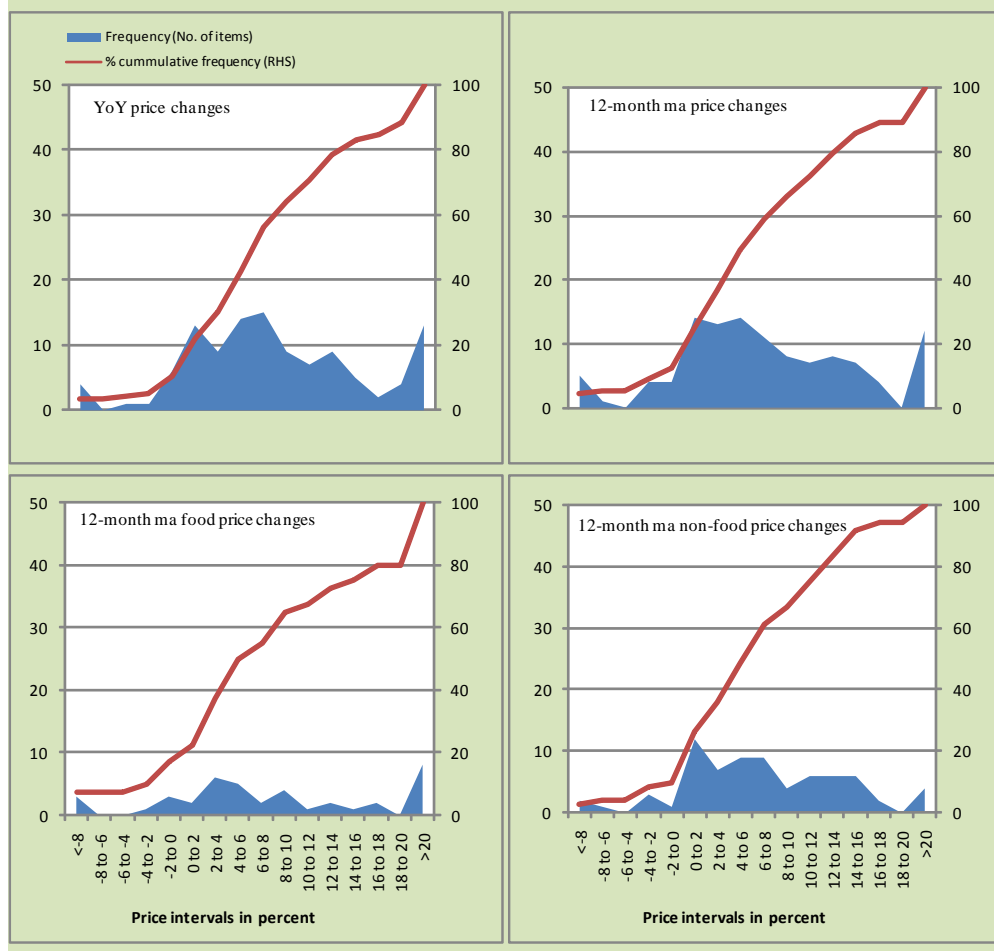
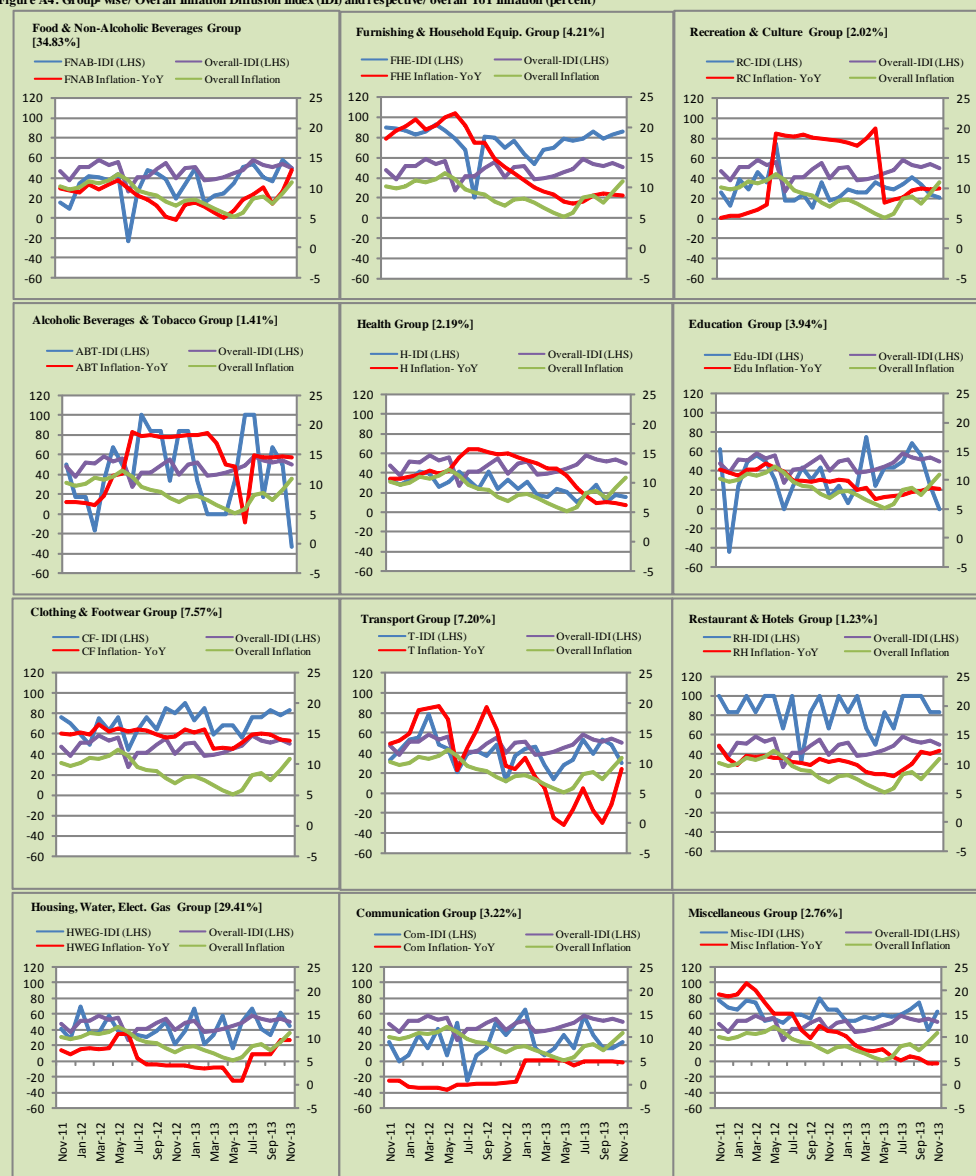


Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



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 three 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.