

Inflation Monitor

September 2015



State Bank of Pakistan

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Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at 1.3 percent on year-on-year basis in September 2015 compared to 1.8 percent in the previous month and 7.7 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at -0.1 percent in September 2015 compared to 0.2 percent in the previous month and 0.4 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at -0.05 percent in September 2015 compared to 0.01 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis remained at level of 2.8 percent in September 2015 as in the previous month compared to 7.1 percent during the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) is recorded at 0.1 percent in September 2015 as in the previous month which was 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 recorded at 3.4 percent in September 2015 compared to 4.1 percent in the previous month. It was 8.0 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis recorded at 0.1 percent in September 2015 as in the previous month. Core NFNE index was 0.7 percent higher in September 2014.
7. WPI inflation on year-on-year basis recorded at -3.5 percent in September 2015 compared to -2.9 percent in the previous month. During September 2014, WPI inflation was recorded at 2.7 percent.

8. WPI inflation on month-on-month basis recorded at -0.4 percent in September 2015 compared to -0.6 percent in the previous and 0.2 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis recorded at -0.8 percent in September 2015 compared to -1.3 percent in the previous month. It was 6.9 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at 0.4 percent in September 2015 compared to -0.4 percent in the previous month and negligible decrease in the corresponding month of last year.

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 2015 are described below:

- Core RSC inflation on year-on-year basis is recorded at 4.1 percent in September 2015 compared to 4.4 percent in the previous month and 8.2 percent in the corresponding month of last year.
- Core RSC inflation on month-on-month basis is recorded at 0.4 percent in September 2015 compared to 0.2 percent in the previous month and 0.6 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
Sep-14	7.7	0.4	7.2	0.0	8.0	0.6	8.0	0.7	7.1	0.2	8.2	0.6	2.7	0.2	6.9	0.0
Oct-14	5.8	0.2	5.2	-0.2	6.2	0.5	7.8	0.6	6.0	0.4	7.9	0.6	1.3	-0.3	4.3	-0.2
Nov-14	4.0	-0.5	2.1	-0.4	5.4	-0.6	6.9	-0.5	5.3	0.1	7.2	-0.3	0.0	-1.0	-0.1	-1.0
Dec-14	4.3	-1.0	3.4	-2.1	4.9	-0.2	6.7	0.1	5.2	0.0	7.0	0.2	-0.9	-1.9	0.5	-1.3
Jan-15	3.9	0.1	3.0	-0.5	4.5	0.5	6.4	0.7	4.8	0.3	6.7	0.5	-2.4	-1.0	0.4	-0.9
Feb-15	3.2	-0.9	2.1	-1.8	4.0	-0.3	6.2	0.0	4.2	-0.2	6.4	0.0	-3.4	-1.1	-0.7	-1.4
Mar-15	2.5	0.2	0.5	0.5	3.9	0.0	5.9	0.0	3.8	0.0	6.2	0.1	-3.7	0.0	-2.4	0.0
Apr-15	2.1	1.3	0.0	1.4	3.7	1.3	5.4	1.4	3.1	0.6	5.6	1.1	-2.9	0.9	-1.6	0.7
May-15	3.2	0.8	3.0	1.8	3.3	0.0	4.9	0.0	3.9	0.1	5.1	0.2	-1.8	1.1	0.8	1.5
Jun-15	3.2	0.6	3.2	1.2	3.2	0.2	4.6	0.1	3.8	0.2	4.8	0.7	-2.0	1.2	0.9	1.3
Jul-15	1.9	0.5	0.6	0.1	2.9	0.8	4.1	0.6	2.8	0.5	4.4	0.6	-2.9	-0.4	-0.5	0.4
Aug-15	1.8	0.2	0.4	0.3	2.8	0.1	4.1	0.1	2.8	0.1	4.4	0.2	-2.9	-0.6	-1.3	-0.4
Sep-15	1.3	-0.1	-0.1	-0.4	2.4	0.1	3.4	0.1	2.8	0.1	4.1	0.4	-3.5	-0.4	-0.8	0.4
* NFNE is Non-food non-energy ** Relatively Stable Component of CPI *** SPI for all income groups combined																

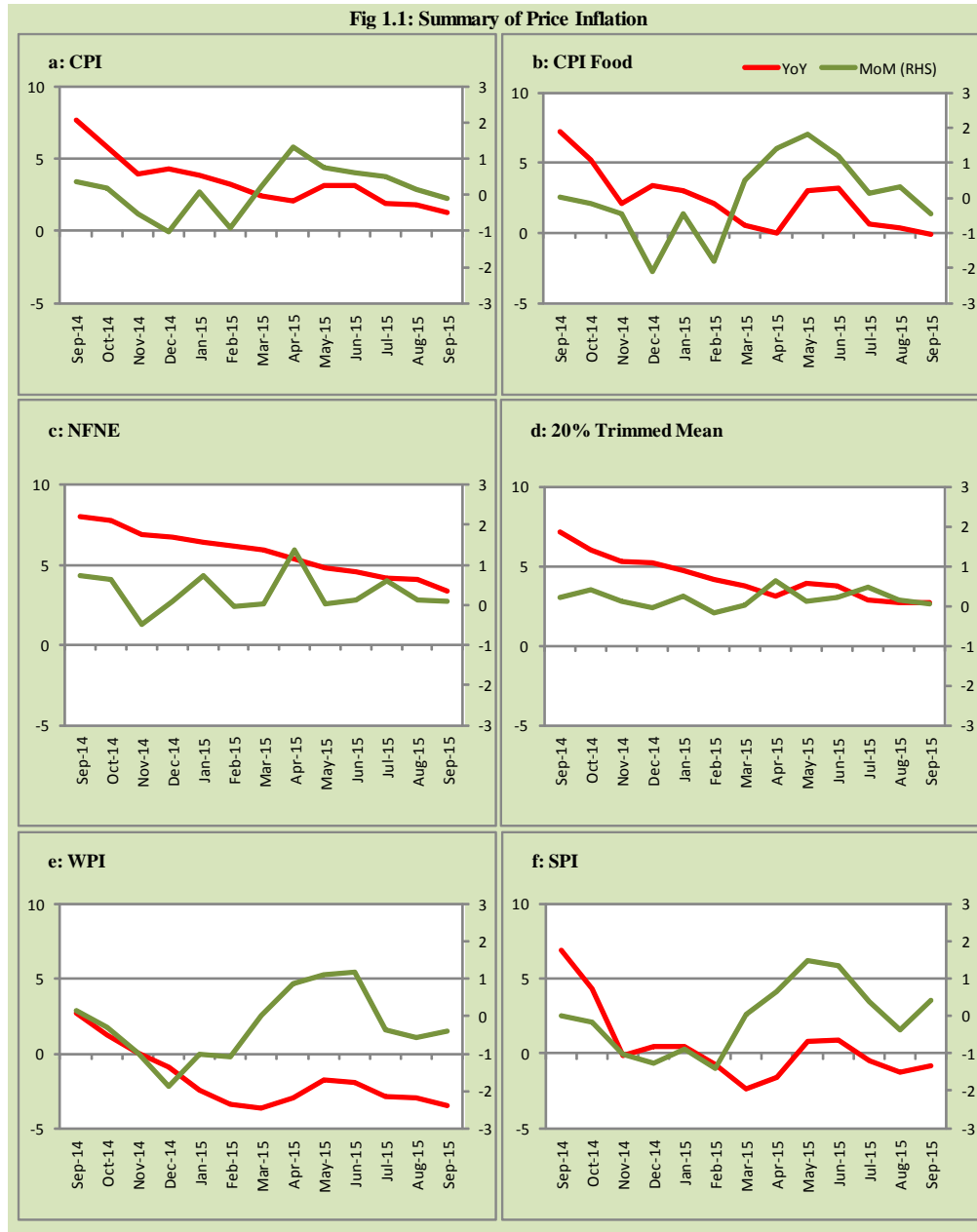
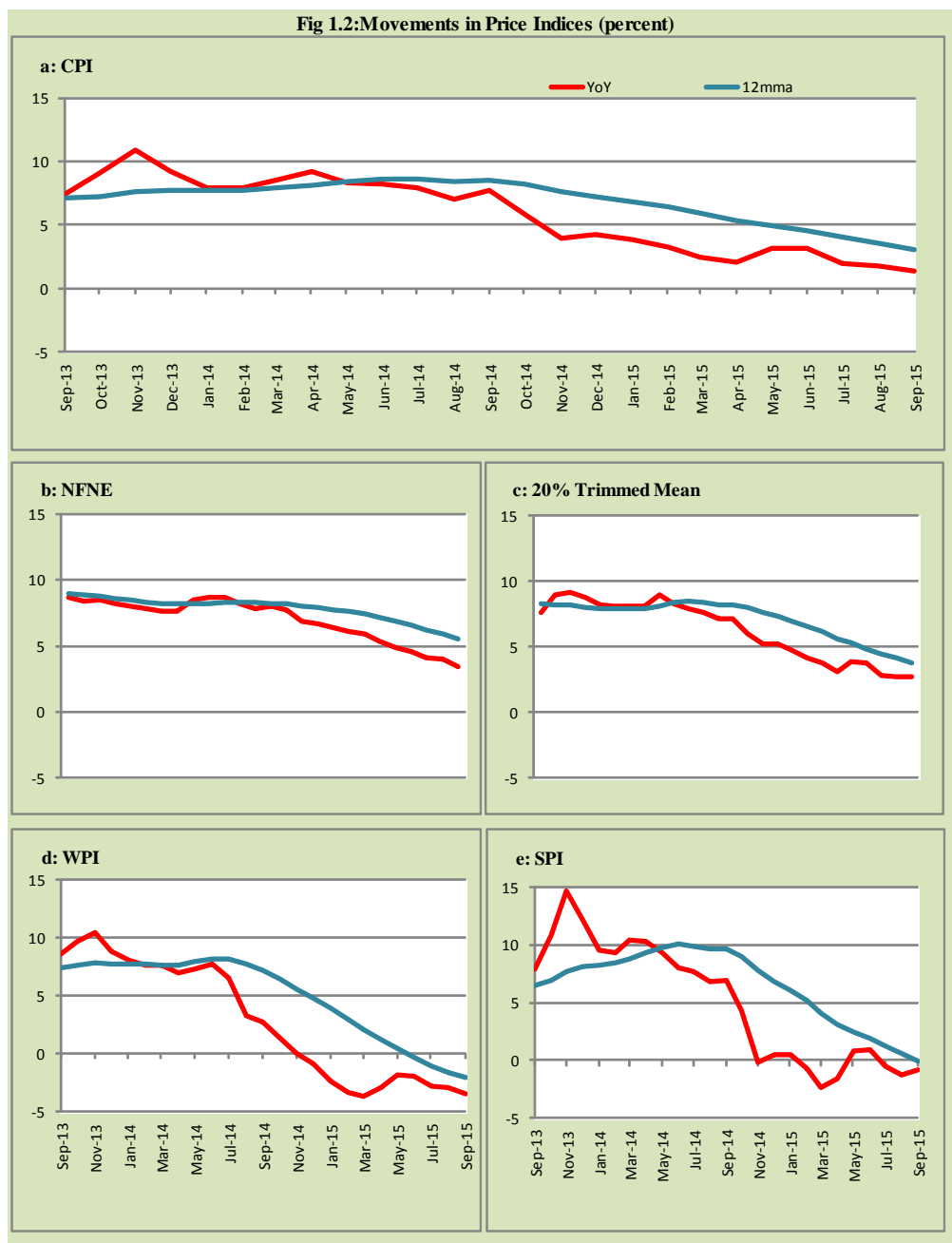


Fig 1.2: Movements in Price Indices (percent)



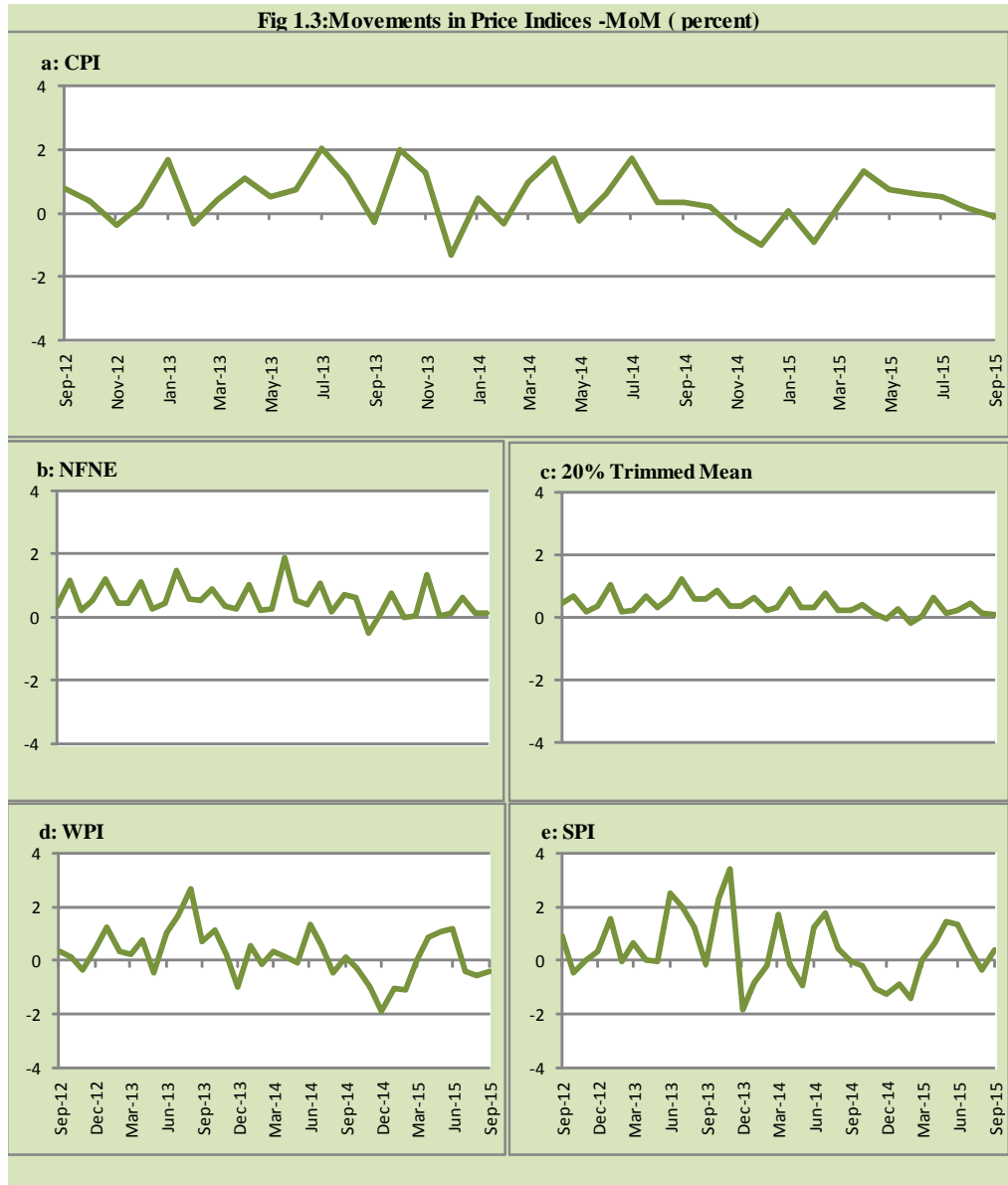
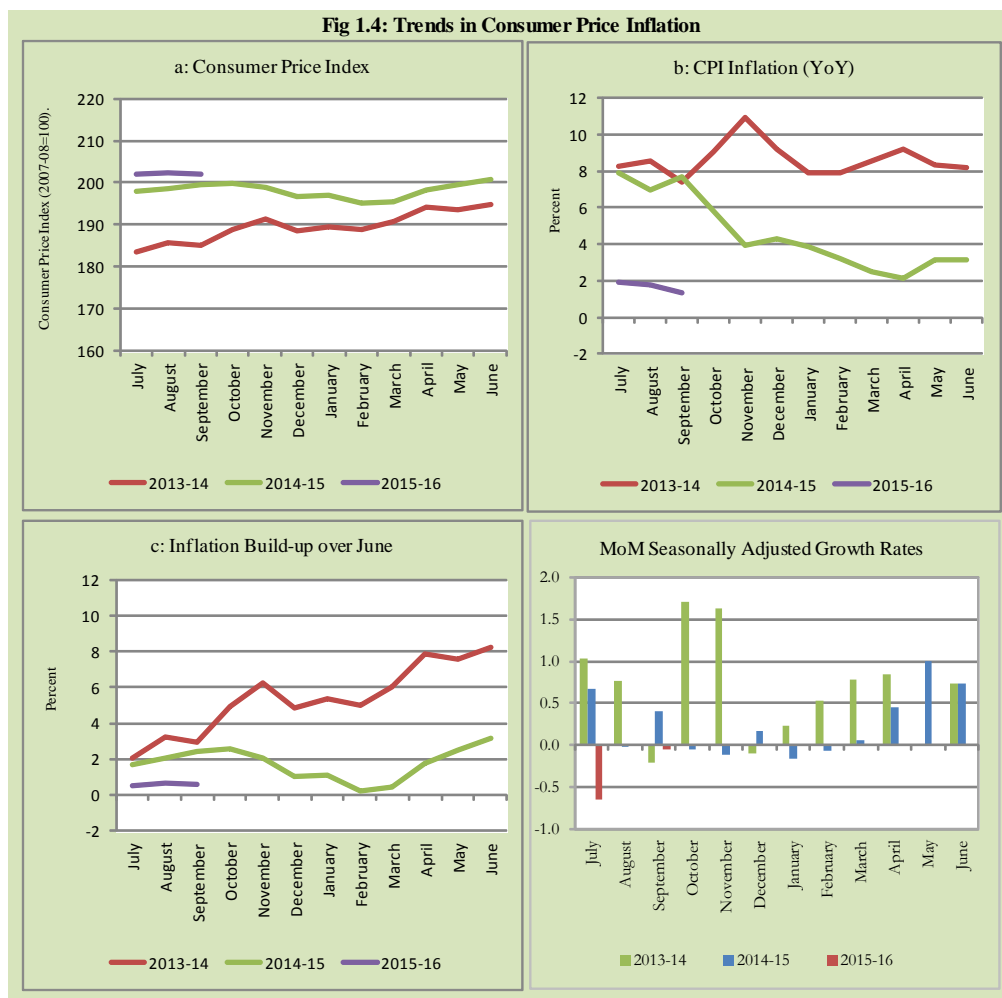


Fig 1.4: Trends in Consumer Price Inflation



2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed mixed trend during September 2015. Among these five cities, the lowest inflation was observed in Quetta at -0.7 percent while the highest inflation was observed in Karachi at 3.4 percent (Table A6 of annexure-A).

Table 2.1 City-wise Inflation of Selected Cities (percent)						
	Sep-14		Aug-15		Sep-15	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	0.4	7.7	0.2	1.8	-0.1	1.3
Islamabad	0.5	15.4	0.6	3.3	-0.1	2.7
Karachi	0.2	8.5	0.7	3.8	-0.2	3.4
Lahore	0.4	10.2	0.5	1.6	0.0	1.2
Peshawar	-0.2	7.6	1.2	3.1	-0.1	3.2
Quetta	-0.4	5.2	-1.2	0.1	-1.1	-0.7

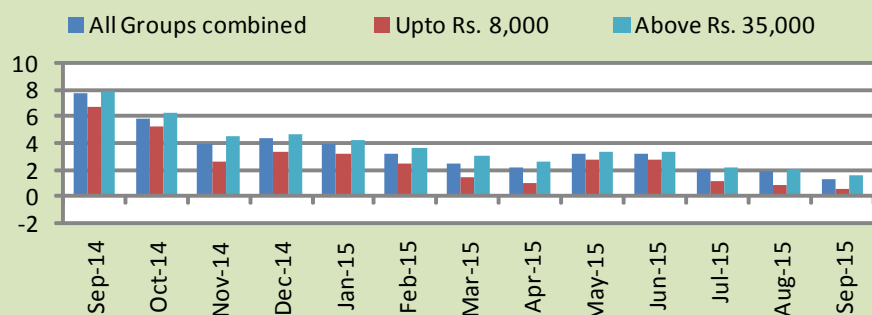
3. Income Group wise Inflation

Income group- wise data shows that income group above Rs. 35,000 witnessed higher inflation than the overall inflation in CPI basket during September 2015 except in non-food group. The lowest income group (Up to Rs. 8, 000) has the lowest inflation in general and food groups among the income groups during the month of September 2015 (Table A7 of annexure-A).

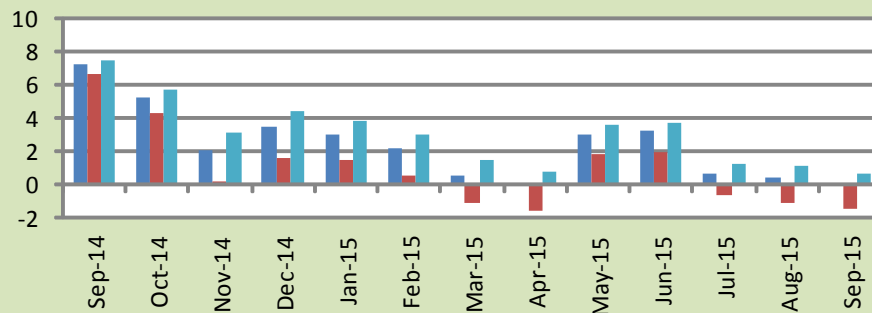
Table 3.1 Income Group- wise Inflation (YoY)									
Income Groups	General			Food			Non-food		
	Sep-14	Aug-15	Sep-15	Sep-14	Aug-15	Sep-15	Sep-14	Aug-15	Sep-15
All Groups Combined	7.7	1.8	1.3	7.2	0.4	-0.1	8.0	2.8	2.4
Up to Rs. 8,000	6.6	0.9	0.6	6.6	-1.1	-1.4	6.6	3.4	3.2
Rs. 8,001- 12,000	6.6	1.1	1.1	6.8	-0.6	-1.0	6.4	3.0	3.5
Rs. 12,001- 18,000	7.8	1.4	0.8	7.0	-0.1	-0.6	8.5	3.0	2.1
Rs. 18,001- 35,000	7.9	1.6	1.5	7.3	0.4	-0.1	8.5	2.7	2.9
Above Rs. 35,000	7.8	2.0	1.6	7.4	1.1	0.6	8.1	2.5	2.1

Fig 3.1: Income Group- wise Inflation

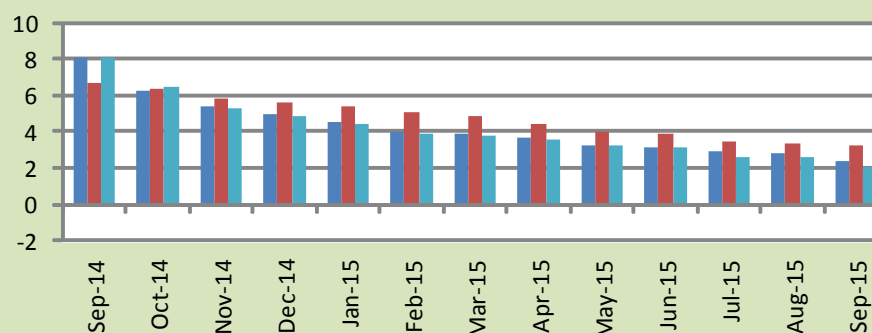
a: CPI Overall Inflation (YoY)



b: CPI Food Inflation (YoY)



c: CPI Non-Food Inflation (YoY)



4. Weighted Contribution

The weighted contribution of food group in the overall inflation decreased to -3.59 percent during September 2015 from 8.48 percent in August 2015. It was 39.62 percent in September 2014.

The weighted contribution of non-food group increased to 103.59 percent in September 2015 from 91.52 percent in August 2015.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)						
Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
Sep-14	39.62	9.25	28.86	5.35	7.05	9.87
Oct-14	37.95	11.43	24.68	5.10	8.79	12.05
Nov-14	22.63	16.74	37.56	-6.13	12.74	16.45
Dec-14	33.26	16.16	34.82	-10.53	11.70	14.59
Jan-15	32.11	16.52	38.34	-15.65	12.84	15.84
Feb-15	26.97	18.93	45.83	-25.78	15.39	18.66
Mar-15	8.95	23.54	58.95	-31.96	19.90	20.62
Apr-15	-0.64	26.66	59.33	-33.22	23.40	24.46
May-15	39.65	15.58	39.67	-21.47	13.19	13.38
Jun-15	41.77	14.28	39.36	-19.53	11.71	12.40
Jul-15	12.95	19.89	65.96	-36.87	18.22	19.84
Aug-15	8.48	21.50	71.76	-41.96	19.75	20.47
Sep-15	-3.59	27.85	104.73	-80.48	25.82	25.67

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change

	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
General	46.2	30.9	33.7	25.4	23.0	18.2	14.9	25.8	23.1	31.1	36.7	33.4	30.0
Food & Non-Alcoholic Beverages	43.0	38.3	35.7	2.7	18.6	-3.6	1.8	0.0	32.7	18.6	36.8	35.4	20.2
Alcoholic Beverages & Tobacco	0.0	33.3	33.3	-33.3	-33.3	33.3	-16.7	16.7	100.0	100.0	66.7	33.3	33.3
Clothing & Footwear	71.2	32.2	67.8	55.9	49.2	23.7	35.6	49.2	30.5	50.8	55.9	57.6	49.2
Housing, Water, Elect, Gas & other Fuels	33.3	30.6	25.0	11.1	27.8	0.0	11.1	38.9	13.9	30.6	47.2	38.9	50.0
Furnishing & Household Equip. Maintenance etc	76.8	43.5	65.2	56.5	56.5	59.4	33.3	52.2	42.0	73.9	71.0	50.7	56.5
Health	20.5	12.8	17.9	25.6	23.1	20.5	10.3	5.1	7.7	17.9	12.8	10.3	10.3
Transport	44.2	4.7	-7.0	4.7	-39.5	-16.3	-4.7	-2.3	4.7	11.6	9.3	0.0	4.7
Communication	25.0	8.3	16.7	33.3	8.3	33.3	0.0	25.0	0.0	8.3	16.7	8.3	8.3
Recreation & Culture	20.5	12.8	10.3	15.4	7.7	10.3	10.3	30.8	2.6	0.0	7.7	10.3	12.8
Education	18.8	18.8	0.0	0.0	0.0	0.0	6.3	37.5	0.0	0.0	0.0	12.5	0.0
Restaurant & Hotels	83.3	66.7	0.0	100.0	33.3	66.7	50.0	50.0	50.0	50.0	33.3	33.3	66.7
Miscellaneous	48.6	60.0	37.1	42.9	40.0	57.1	31.4	45.7	17.1	34.3	37.1	57.1	42.9
NFNE	49.7	29.6	34.3	34.3	26.9	25.7	19.8	33.7	18.6	33.7	37.0	33.4	33.7

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-14		Aug-15		Sep-15	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	-0.51	0.19	-7.14	-0.66	-7.40	-0.08
2	Wheat Flour Bag	10 Kg	0.90	0.27	-6.65	-0.76	-6.60	0.32
3	Rice Basmati Sup. Qlty.	Kg	4.81	0.36	-11.63	-1.50	-13.40	-1.66
4	Pulse Masoor (Washed)	Kg	14.25	0.47	8.61	0.12	8.81	0.66
5	Pulse Moong (Washed)	Kg	19.70	-2.73	3.69	-2.66	5.67	-0.87
6	Pulse Mash (Washed)	Kg	19.04	2.24	17.39	1.04	19.66	4.22
7	Pulse Gram	Kg	1.12	-0.03	46.78	6.54	48.98	1.47
8	Vegetable Ghee (Loose)	Kg	0.24	-1.47	-12.26	-0.63	-12.65	-1.92
9	Sugar Refined	Kg	12.26	6.33	13.68	0.38	5.26	-1.54
10	Milk Fresh (Unboiled)	Ltr	6.69	0.47	4.59	0.33	4.57	0.45
11	Tea- Tapal Danedar	200 Gm	-22.36	2.44	26.73	9.10	30.85	5.77
12	Beef With Bone Av. Qlty.	Kg	6.93	0.70	4.12	0.76	4.27	0.83
13	Mutton Av. Qlty.	Kg	5.63	0.59	5.85	0.99	6.53	1.24
14	Chicken Farm Broiler (Live)	Kg	3.90	-11.40	-6.14	-16.71	-12.07	-17.00
15	Eggs Farm	Doz	6.72	1.21	-7.38	12.46	-11.63	-3.44
16	Potatoes	Kg	99.71	-2.35	-62.31	3.65	-60.03	3.56
17	Onion	Kg	-9.42	2.19	-1.55	-3.09	20.62	25.19
18	Tomatoes	Kg	3.96	33.88	16.69	33.09	-22.99	-11.65
19	Ginger	Kg	56.42	-3.48	-23.31	-11.06	-20.23	0.40
20	Garlic	Kg	2.92	-0.41	13.30	1.96	23.83	8.84

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Sep-14		Aug-15		Sep-15	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-9.0	-3.9	-40.9	-9.5	-39.0	-0.8
Food	-6.1	-5.2	-16.4	-3.2	-15.6	-4.3
Metals	-9.1	-4.0	-29.1	-3.3	-25.3	1.2
Energy	-11.3	-3.9	-51.6	-13.9	-49.6	0.1
Agricultural Raw Material	1.5	-0.4	-18.7	-5.7	-18.3	0.1
Cotton	-18.5	-0.8	-2.9	-0.7	-6.3	-4.3

Source: IMF

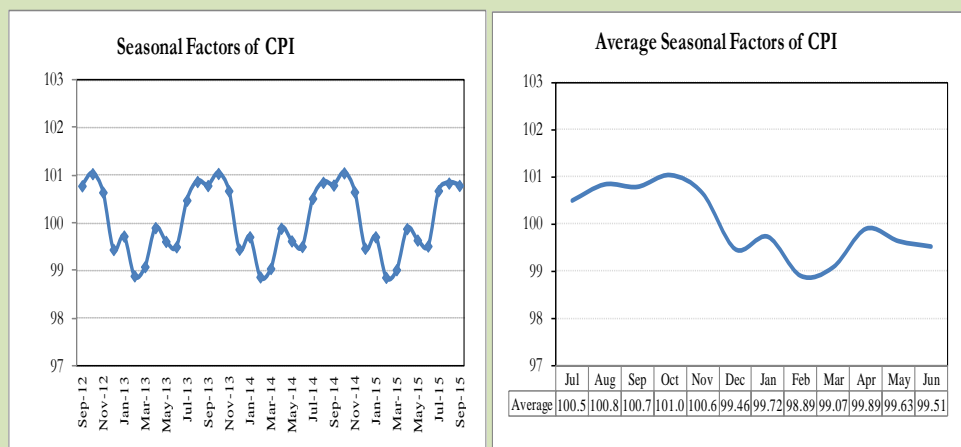
8. Seasonal Adjustment in CPI

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 September 2015 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

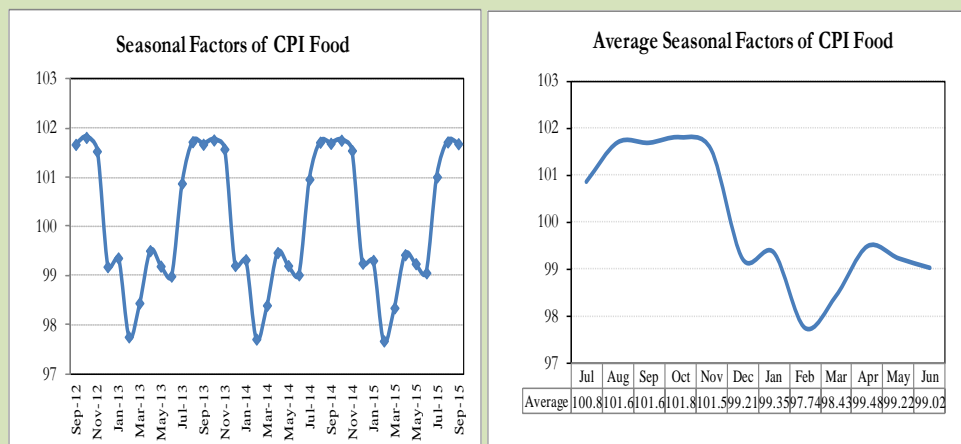
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November & April and downward seasonality in the remaining months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

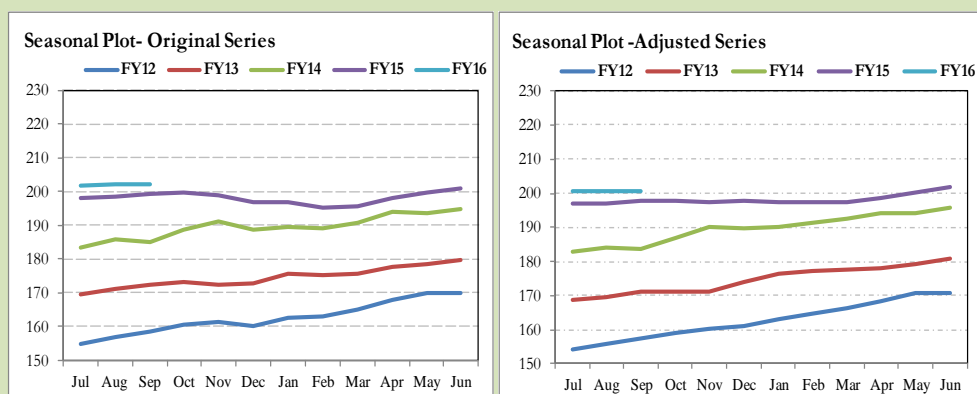
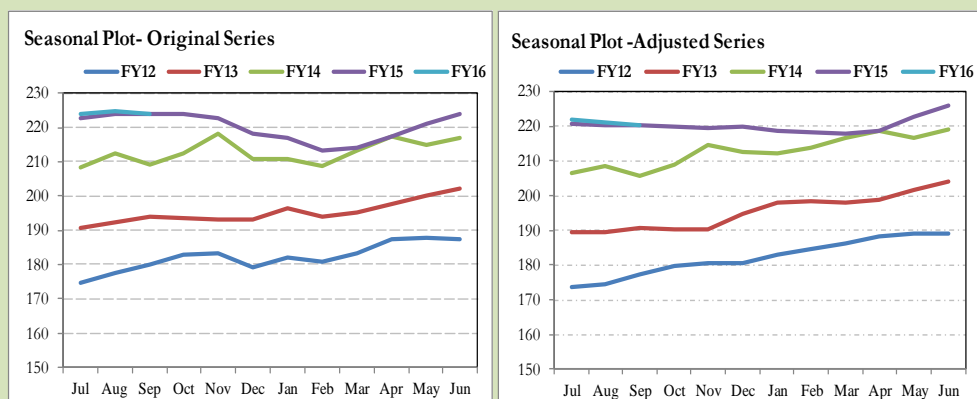


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for September 2015 stood at 200.45 against 202.04 in original series showing a decrease of 1.59 on account of adjustment of upward seasonality in September 2015.

Seasonally adjusted CPI food group for September 2015 stood at 220.16 against 223.87 in original series showing a decrease of 3.71 on account of adjustment of upward seasonality in September 2015.

Month-on-month change of seasonally adjusted CPI series stood at -0.05% reflecting decrease during September 2015 over August 2015 and a decrease of 0.10% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at -0.41% reflecting decrease during September 2015 over August 2015 and a decrease of 0.44% 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 2015 (corresponding to the seasonally adjusted month-on-month rate) is -0.65 percent.

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

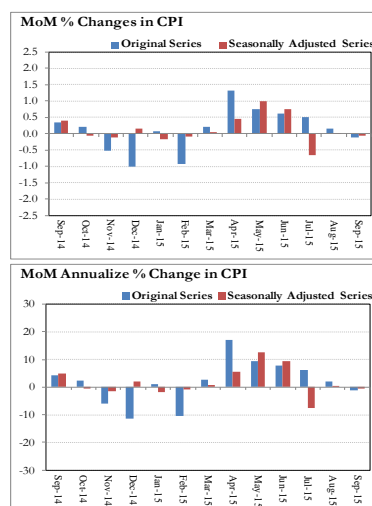
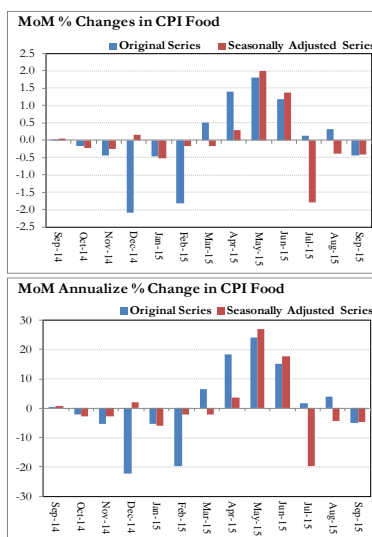


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weight	MoM change			YoY change		
		Sep-14	Aug-15	Sep-15	Sep-14	Aug-15	Sep-15
I. Food Group	37.5	0.0	0.3	-0.4	7.2	0.4	-0.1
Food & Non-Alcoholic Beverages	34.8	0.0	0.3	-0.5	6.5	-0.6	-1.1
Alcoholic Beverages & Tobacco	1.4	0.0	0.0	0.0	22.4	16.2	16.3
Restaurant & Hotels	1.2	0.9	0.2	0.4	9.2	4.3	3.8
II. Non-Food Group	62.5	0.6	0.1	0.1	8.0	2.8	2.4
Clothing & Footwear	7.6	0.4	0.3	0.2	9.0	4.8	4.6
Housing, Water, Elect, Gas & other Fuels	29.4	0.0	0.0	0.4	8.8	5.0	5.5
Furnishing & Household Equip. Maintenance etc	4.2	0.8	0.3	0.3	8.5	4.3	3.7
Health	2.2	0.6	0.1	0.3	6.2	3.2	2.9
Transport	7.2	3.2	-0.3	-1.4	5.4	-10.4	-14.4
Communication	3.2	0.0	0.0	0.0	0.1	0.4	0.4
Recreation & Culture	2.0	0.2	0.0	0.2	4.1	2.1	2.1
Education	3.9	0.3	0.0	0.0	15.3	9.3	9.0
Miscellaneous	2.8	0.3	0.3	0.3	6.1	2.4	2.4
Headline	100.0	0.4	0.2	-0.1	7.7	1.8	1.3

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-14	Sep-15	Sep-14	Sep-15	Sep-14	Sep-15	Sep-14	Sep-15	Sep-14	Sep-15
I. Food Group	-0.1	127	128	17	36	37	43	32	26	41	23
Food & Non-Alcoholic Beverages	-1.1	115	116	17	36	36	39	27	22	35	19
Alcoholic Beverages & Tobacco	16.3	6	6	0	0	0	0	2	2	4	4
Restaurant & Hotels	3.8	6	6	0	0	1	4	3	2	2	0
II. Non-Food Group	2.4	348	348	79	107	79	145	107	81	83	15
Clothing & Footwear	4.6	59	59	8	8	3	25	23	24	25	2
Housing, Water, Elect, Gas & other Fuels	5.0	36	36	9	6	2	11	18	17	7	2
Furnishing & Household Equip. Maintenance etc	3.7	69	69	1	4	15	43	29	21	24	1
Health	2.9	39	39	19	21	7	13	7	4	6	1
Transport	-14.4	43	43	16	35	18	6	6	1	3	1
Communication	0.4	12	12	7	6	3	5	2	0	0	1
Recreation & Culture	2.1	39	39	13	16	17	16	6	6	3	1
Education	9.0	16	16	1	6	3	5	4	0	8	5
Miscellaneous	2.4	35	35	5	5	11	21	12	8	7	1
Overall	1.3	475	476	96	143	116	188	139	107	124	38

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

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in September 2015					
Top 15 Contributors		Weights	YoY Change		Weighted Contribution
Items/ Contributors			Sep-14	Sep-15	
Ranked by Weighted Contribution					
1	House Rent	21.81	7.81	5.66	74.78
2	Milk Fresh	6.68	6.92	4.55	28.24
3	Education	3.94	15.28	9.01	25.82
4	Cigarette	1.39	22.60	16.38	23.09
5	Electricity	4.40	15.82	4.69	17.76
6	Tea	0.84	-17.61	25.01	16.65
7	Meat	2.43	6.49	5.03	11.23
8	Onion	0.52	-9.42	20.61	10.50
9	Gas	1.58	0.00	9.92	8.52
10	Pulse Gram	0.24	1.12	48.98	7.33
11	Tailoring	0.88	11.21	7.78	6.74
12	Cotton Cloth	1.73	14.63	4.04	5.47
13	Ready Made Garment	0.97	11.13	6.39	5.01
14	Fresh Vegetable	1.71	8.75	3.08	5.00
15	Sugar	1.04	12.26	5.27	4.55
Total		50.17			250.70
Bottom 15 Contributors					
1	Potatoes	0.46	99.71	-60.03	-49.48
2	Motor Fuel	3.03	-0.48	-22.27	-48.36
3	Transport Services	2.70	11.14	-14.23	-33.53
4	Wheat Flour	4.16	1.18	-6.22	-21.80
5	Cooking Oil	1.75	0.60	-14.85	-15.98
6	Rice	1.58	2.31	-12.94	-15.19
7	Vegetable Ghee	2.07	0.65	-11.82	-14.54
8	Chicken	1.36	3.90	-12.07	-11.13
9	Tomatoes	0.43	3.96	-22.99	-8.51
10	Egg	0.46	6.73	-11.63	-4.30
11	Wheat	0.35	-0.50	-7.40	-2.04
12	Fish	0.30	5.19	-1.12	-0.27
13	Motor Vehicle Accessories	0.24	4.56	-1.07	-0.23
14	Wheat Product	0.10	8.90	-2.71	-0.22
15	Mustard Oil	0.10	0.88	-3.35	-0.19
Total		19.09			-225.78

Table A3.1: Top and Bottom 15 Contributors to CPI Inflation (MoM) in September 2015

<u>Top 15 Contributors</u>		<u>MoM Change</u>		Weighted Contribution	
Items/ Contributors	Weights	Aug-15	Sep-15		
Ranked by Weighted Contribution					
1	Onion	0.52	-3.09	25.18	155.32
2	Gas	1.58	0.00	9.92	107.07
3	Tea	0.84	7.21	4.08	41.05
4	Fresh Vegetable	1.71	17.87	1.95	40.24
5	Milk Fresh	6.68	0.32	0.43	34.99
6	Meat	2.43	0.83	0.97	28.47
7	Potatoes	0.46	3.65	3.56	14.25
8	Pulse Mash (Washed)	0.21	1.04	4.21	10.78
9	Beverages	1.20	0.02	0.78	9.59
10	Household Servant	1.04	0.00	0.79	9.24
11	Cotton Cloth	1.73	0.39	0.43	7.57
12	Ready Made Food	1.23	0.22	0.41	6.03
13	Wheat Flour	4.16	-0.44	0.13	5.55
14	Personal Care	1.49	0.51	0.34	5.05
15	Doctor (MBBS) Clinic Fee	0.59	0.00	0.65	4.47
Total		25.88			479.67
<u>Bottom 15 Contributors</u>					
1	Chicken	1.36	-16.71	-17.00	-208.86
2	Fresh Fruits	1.86	-8.82	-8.44	-179.92
3	Motor Fuel	3.03	-0.99	-3.76	-83.02
4	Tomatoes	0.43	33.09	-11.65	-47.29
5	Cooking Oil	1.75	-0.37	-2.59	-30.65
6	Rice	1.58	-0.09	-1.99	-26.14
7	Vegetable Ghee	2.07	-0.31	-1.53	-21.21
8	Sugar	1.04	0.38	-1.54	-17.91
9	Egg	0.46	12.46	-3.44	-14.64
10	Pulse Moong	0.23	-2.66	-0.87	-2.88
11	Motor Vehicle	0.66	0.07	-0.23	-1.17
12	Dry Fruits	0.25	-0.92	-0.36	-1.10
13	Washing Soap & Detergent	0.79	0.70	-0.12	-0.98
14	Beans	0.03	0.68	-0.98	-0.29
15	Wheat	0.35	-0.67	-0.08	-0.26
Total		15.91			-636.33

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in September 2015					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-14	Sep-15	
A. Ranked by Percentage Change					
1	Pulse Gram	0.24	1.12	48.98	7.33
2	Besan	0.15	-1.04	40.50	3.93
3	Tea	0.84	-17.61	25.01	16.65
4	Onion	0.52	-9.42	20.61	10.50
5	Pulse Mash (Washed)	0.21	19.04	19.66	3.48
6	Cigarette	1.39	22.60	16.38	23.09
7	Gram Whole	0.16	1.43	15.76	1.73
8	Woolen Readymade Garments	0.40	12.11	10.18	3.34
9	Sewing Needle & Dry Cell	0.15	8.23	10.05	1.04
10	Gas	1.58	0.00	9.92	8.52
11	Pulse Masoor	0.27	14.33	9.18	1.71
12	Education	3.94	15.28	9.01	25.82
13	Gur	0.02	-3.15	8.73	0.19
14	Tailoring	0.88	11.21	7.78	6.74
15	Construction Wage Rate	0.33	7.73	7.69	1.97
Total		11.08			116.05
B. Ranked by Weights					
1	House Rent	21.81	7.81	5.66	74.78
2	Milk Fresh	6.68	6.92	4.55	28.24
3	Electricity	4.40	15.82	4.69	17.76
4	Wheat Flour	4.16	1.18	-6.22	-21.80
5	Education	3.94	15.28	9.01	25.82
6	Communication & Apparatus	3.15	0.14	0.19	0.29
7	Motor Fuel	3.03	-0.48	-22.27	-48.36
8	Transport Services	2.70	11.14	-14.23	-33.53
9	Meat	2.43	6.49	5.03	11.23
10	Vegetable Ghee	2.07	0.65	-11.82	-14.54
11	Fresh Fruits	1.86	12.05	1.68	2.57
12	Cooking Oil	1.75	0.60	-14.85	-15.98
13	Cotton Cloth	1.73	14.63	4.04	5.47
14	Fresh Vegetable	1.71	8.75	3.08	5.00
15	Rice	1.58	2.31	-12.94	-15.19
Total		63.03			21.77
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 1.3 percent in September, 2015.					

Table A3.3: Top Ten Contributors to CPI Food Inflation (YoY) in September 2015

Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-14	Sep-15	
A. Ranked by Weighted Contribution					
1	Milk Fresh	6.68	6.92	4.55	28.24
2	Cigarette	1.39	22.60	16.38	23.09
3	Tea	0.84	-17.61	25.01	16.65
4	Meat	2.43	6.49	5.03	11.23
5	Onion	0.52	-9.42	20.61	10.50
6	Pulse Gram	0.24	1.12	48.98	7.33
7	Fresh Vegetable	1.71	8.75	3.08	5.00
8	Sugar	1.04	12.26	5.27	4.55
9	Ready Made Food	1.23	9.17	3.84	4.32
10	Besan	0.15	-1.04	40.50	3.93
Total		16.23			114.84
B. Ranked by Percentage Change					
1	Pulse Gram	0.24	1.12	48.98	7.33
2	Besan	0.15	-1.04	40.50	3.93
3	Tea	0.84	-17.61	25.01	16.65
4	Onion	0.52	-9.42	20.61	10.50
5	Pulse Mash (Washed)	0.21	19.04	19.66	3.48
6	Cigarette	1.39	22.60	16.38	23.09
7	Gram Whole	0.16	1.43	15.76	1.73
8	Pulse Masoor	0.27	14.33	9.18	1.71
9	Gur	0.02	-3.15	8.73	0.19
10	Betel Leaves & Nuts	0.02	6.61	7.43	0.13
Total		3.83			68.75
C. Ranked by Weights					
1	Milk Fresh	6.68	6.92	4.55	28.24
2	Wheat Flour	4.16	1.18	-6.22	-21.80
3	Meat	2.43	6.49	5.03	11.23
4	Vegetable Ghee	2.07	0.65	-11.82	-14.54
5	Fresh Fruits	1.86	12.05	1.68	2.57
6	Cooking Oil	1.75	0.60	-14.85	-15.98
7	Fresh Vegetable	1.71	8.75	3.08	5.00
8	Rice	1.58	2.31	-12.94	-15.19
9	Cigarette	1.39	22.60	16.38	23.09
10	Chicken	1.36	3.90	-12.07	-11.13
Total		25.01			-8.51
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 -0.1 percent in September, 2015.					

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in September 2015					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Sep-14	Sep-15	
A. Ranked by Weighted Contribution					
1	House Rent	21.81	7.81	5.66	74.78
2	Education	3.94	15.28	9.01	25.82
3	Electricity	4.40	15.82	4.69	17.76
4	Gas	1.58	0.00	9.92	8.52
5	Tailoring	0.88	11.21	7.78	6.74
6	Cotton Cloth	1.73	14.63	4.04	5.47
7	Ready Made Garment	0.97	11.13	6.39	5.01
8	Household Servant	1.04	11.68	4.83	4.31
9	Woolen Readymade Garments	0.40	12.11	10.18	3.34
10	Personal Care	1.49	8.06	2.75	3.17
Total		38.25			154.93
B. Ranked by Percentage Change					
1	Woolen Readymade Garments	0.40	12.11	10.18	3.34
2	Sewing Needle & Dry Cell	0.15	8.23	10.05	1.04
3	Gas	1.58	0.00	9.92	8.52
4	Education	3.94	15.28	9.01	25.82
5	Tailoring	0.88	11.21	7.78	6.74
6	Construction Wage Rate	0.33	7.73	7.69	1.97
7	Ready Made Garment	0.97	11.13	6.39	5.01
8	Postal Services	0.07	0.17	6.32	0.34
9	House Rent	21.81	7.81	5.66	74.78
10	Hosiery	0.51	11.02	5.40	2.32
Total		30.65			129.88
C. Ranked by Weights					
1	House Rent	21.81	7.81	5.66	74.78
2	Electricity	4.40	15.82	4.69	17.76
3	Education	3.94	15.28	9.01	25.82
4	Communication & Apparatus	3.15	0.14	0.19	0.29
5	Motor Fuel	3.03	-0.48	-22.27	-48.36
6	Transport Services	2.70	11.14	-14.23	-33.53
7	Cotton Cloth	1.73	14.63	4.04	5.47
8	Gas	1.58	0.00	9.92	8.52
9	Footwear	1.55	-3.07	0.56	0.54
10	Personal Care	1.49	8.06	2.75	3.17
Total		45.39			54.46
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 2.4 percent in September, 2015.					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: September 2015

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	Potatoes, Tomatoes, Ginger, Cooking Oil (Pakwan), Cooking Oil (Dalda), Rice Basmati Broken Av.Qlty	Milo 200 Gm., Raisins Av.Qlty., Fruit Juice Tetra Pack, Milk Fresh (Unboiled), Jam Ahmed/Mitchells, Squash-Mitchells	Cardamom Large Loose Av.Qlty, Tomato Ketchup Ahmed/Mitchells, Karaila, Pomegranate (Annar), Pulse Masoor (Washed)	Mango Kalmi, Pulse Gram, Besan Av. Qlty., Tea Lipton Yellow Label 200 Gm, Gram Whole Black Av Qlty., Tapal Danedar Tea 200 Gm, Chillies Green, Garlic, Arvi, Onion, Pulse Mash (Washed), Cucumber (Kheera)
Alcoholic Beverages & Tobacco			Betel Nuts, Betel Leaves	Cigarettes Capstan 20,S, Cigarettes Morven Gold 20,S, Cigarettes K-20,S, Cigarettes Gold Leaf 20,S
Clothing & Footwear	Gents Shoe, Art 1109 Servis, Child Shoe Power Lite Bata, Gents Shoes Paul Bata, Sports Shoes, Gents Spoung Chappal Bata	School Uni. Kameez, Shal.Girls, Foot Wear Local (Female), Shirting Av.Qlty, Shoe Repair Half Sole, Brassier Sup. Qlty, Pullover Ladies Oxford/Bon	Frock W/Wear Girls, Tailoring Awami-Suit (Male), Tailoring Suit (Female), Vest/Shameez (Women) Av.Qlty, Awami-Suit W&W (Gents)Av.Qlty	Secondhand Sweater For Men, Gloves Av.Qlty
Housing, Water, Elect, Gas & other Fuels	Kerosene Oil, Iron Bar (M.S. Bar) 1/2", Elect. Charges 101 - 300 Units, Cement (Local)	Elect. Charges Overall/ Combined, Timber Shesham Log, Firewood Whole, Gas Chrg Up To 100 Cub Mmbtu	Gas Chrg Overall/ Combined, Unskilled Labour Wage Rat, Plumber Wage Rate, Electrician Wage Rate (P/Day)	Gas Chrg All Over 500 Mmbtu, Gas Chrg Over 300 - 500 Mmbtu
Furnishing & Household Equip. Maintenance etc	Surf Excel 400 Gms Poly Bag, Electric Blub Energy Saver 14 Watt, Washing Powder (Wheel/ Bonus)	Phenyl Typhoon/Finis/Carr 3 Ltr, Household Servant Female (Part Time), Table Shesham Wood, Dining Table 6 Chairs	Robin Blue (35 Gms), Thermos Starvac 1 Ltr, Boot Polish Cherry/Kiwi 50 ML, Towel(3'X2') Av. Qlty, Harpic	Match Box (Small)
Health	Flagyl Tab. 200 Mg., Betnovate-N Ointment 5 Gm, Calcium Syrup Sandoz, Burnol Cream 30 Gm, Lederplex Syrup	Glycerin Small Bottle, Doctor (MBBS) Clinic Fee, Sugar Test (Random/Fasting), O.R.S. (Nimcol), ECG Charges, Thermometer China	Gripe-Water Woodward's, X-Ray (Chest) Charges, Blood Test (Cp) Charges, Urine Test (Dr) Charges	Jouhar Joshanda
Transport	Petrol Super, Gas Cylinder S. Size (L.P.G), High Speed Diesel HSD, Suzuki Fare Min. Within City	Car Service Charges, Motor Cycle Service Charges, Cycle Overhauling Charges, Platform Ticket, Bicycle With Tyres & Tube	Tyre Puncture Charges	Air Fare Economy Class
Communication	Postal Envelope Domestic, Mobile Cell Charges, Telephone Charges Local Call	Internet Charges, Telephone Set Av. Qlty, Fax Charges (Local), Mobile Set Nokia/Sony/Ericsson Av.Qlty		T.C.S. Ch. Min. Within Zone
Recreation & Culture	Urdu Book Class IX/X (T.B.Board), English Book Class IX or X, Radio With C.Player National, V.C.P. Panasonic/LG/National, English Book BA/B.Sc	Urdu Book Class V (T.B.Board), Fountain Pen Hero/Wings/China, Urdu Book 1st Year/ Inter, Photostat Paper 70 Gm, Exercise Book Lined 80/10	Cinema Non-A/C High Class, Maths Book Class IX or X, Maths Book Cals V (T.B.Board), English Book Class VI, Ball Pen (Local), Pencil Goldfish/Deer	Cinema A/C High Class
Education	Govt. Med. College Fee MBBS 1st Year, Govt. Engg. Coll. Fee 1st Year	Pvt Eng.College Fee (1st Year), Pvt Med. College Fee MBBS (1st Year)		Pvt School Fee Eng. Med (Class-X), Pvt School Fee Eng. Med (Class-VI), Pvt School Fee Eng. Med (Class-V), Pvt School Fee Eng. Med (Class-I), MBA Tuition Fee
Restaurant & Hotels		Chicken Biryani Full/Double, Cooked Beef (Av. Hotel), Cooked Mutton (Av. Hotel)	Cooked Dal (Av. Hotel), Tea Prepared (Ordinary)	
Miscellaneous	Toilet Soap Lux 95 Gms, Silver Tezabi 24 Ct, Gold Tezabi 24 Ct, Toilet Soap Safeguard Bath Size	Hair Color (Kala Kola), Gel Medium Size, Talc Powder Viceroy/ Black Cat, Hair Color Bigen	Purse Ladies (Leather) Av. Qlty, Perfume Med. Size Medora/Broche, Artificial Jewellery Set	Shaving Charges

Table A5: City- wise CPI Inflation by Income Groups, September 2015

	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	0.5	2.3	0.8	-0.3	0.1	5.7	0.6	3.0	0.7	-0.1	0.4	6.6
2 Islamabad	0.6	1.8	1.1	1.0	0.0	2.8	0.3	1.9	0.4	1.1	0.3	2.9
3 Lahore	-0.1	0.6	-0.3	-1.6	0.2	3.9	-0.1	0.7	-0.5	-1.5	0.5	3.7
4 Gujranwala	-0.1	-0.2	-0.2	-3.5	0.1	4.3	-0.2	-0.4	-0.6	-3.7	0.4	3.7
5 Sialkot	-0.5	0.5	-1.0	-1.1	0.2	2.7	-0.5	0.4	-1.3	-1.2	0.5	2.4
6 Faisalabad	0.4	0.2	0.7	-1.7	0.1	2.8	0.3	0.4	0.3	-1.2	0.4	2.3
7 Multan	0.1	0.7	0.1	-0.9	0.1	2.7	0.3	1.0	0.1	-0.3	0.4	2.4
8 Sargodha	0.9	3.1	1.6	-0.2	0.2	7.0	0.9	3.7	1.4	0.1	0.4	7.2
9 Bahawalpur	0.3	0.8	0.5	-1.1	0.1	3.1	0.3	1.0	0.3	-0.5	0.3	2.4
10 Karachi	-0.2	2.2	-0.9	-1.0	0.7	6.8	-0.1	2.4	-1.1	-0.8	0.9	6.3
11 Hyderabad	0.1	1.4	0.1	0.2	0.1	3.1	0.1	1.9	-0.3	0.5	0.5	3.6
12 Sukkur	-0.4	0.1	-0.7	-2.4	0.0	3.5	-0.1	1.1	-0.5	-1.7	0.3	4.1
13 Larkana	-1.2	-1.8	-2.2	-4.3	0.0	1.0	-1.0	-1.0	-2.1	-3.2	0.1	1.3
14 Peshawar	-0.2	2.8	-0.8	2.3	0.4	3.4	-0.1	3.5	-0.8	3.1	0.7	3.9
15 Bannu	-0.3	-0.1	-0.7	-2.3	0.2	2.7	-0.1	0.0	-0.6	-2.6	0.5	2.7
16 Quetta	-1.6	-2.0	-2.8	-5.6	0.1	2.9	-1.2	-1.2	-2.6	-4.7	0.4	2.9
17 Khuzdar	0.3	-3.1	0.1	-6.3	0.5	1.1	0.3	-3.6	0.1	-6.0	0.5	-0.9
	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	0.3	2.9	0.5	0.0	0.2	5.7	0.1	3.2	0.1	0.8	0.2	5.2
2 Islamabad	-0.1	1.7	-0.3	1.3	0.2	2.0	0.0	1.9	-0.3	1.7	0.2	2.1
3 Lahore	-0.2	0.7	-0.5	-0.9	0.2	2.5	-0.2	0.8	-0.6	-0.5	0.3	2.2
4 Gujranwala	-0.5	-0.5	-0.9	-3.2	0.0	2.4	-0.6	-0.5	-1.4	-3.0	0.1	1.9
5 Sialkot	-0.6	-0.1	-1.3	-1.5	0.1	1.4	-0.5	0.4	-1.3	-0.7	0.2	1.5
6 Faisalabad	0.1	0.5	0.1	-0.8	0.1	1.8	0.0	0.5	-0.1	-0.2	0.1	1.2
7 Multan	0.1	0.9	0.1	0.1	0.1	1.8	0.1	1.2	-0.1	0.6	0.2	1.7
8 Sargodha	0.6	3.5	1.1	0.2	0.2	6.6	0.5	3.6	0.9	0.7	0.2	5.8
9 Bahawalpur	0.1	1.1	0.1	0.1	0.1	2.0	0.0	1.1	-0.2	0.5	0.1	1.6
10 Karachi	-0.3	2.6	-1.2	-0.3	0.7	5.8	-0.3	2.7	-1.4	-0.1	0.8	5.3
11 Hyderabad	-0.3	1.6	-0.7	0.8	0.2	2.6	-0.3	1.7	-0.9	1.2	0.3	2.2
12 Sukkur	-0.3	1.2	-0.6	-1.3	0.0	3.7	-0.3	1.7	-0.7	-0.4	0.1	3.5
13 Larkana	-1.0	-0.7	-1.9	-2.5	-0.1	1.1	-0.8	0.1	-1.9	-1.6	0.1	1.5
14 Peshawar	-0.2	3.5	-1.0	3.2	0.6	3.7	-0.1	3.6	-1.0	4.0	0.7	3.3
15 Bannu	-0.2	-0.1	-0.6	-2.7	0.2	2.4	-0.2	0.5	-0.9	-2.6	0.3	3.1
16 Quetta	-1.2	-1.2	-2.6	-4.0	0.2	1.9	-1.1	-0.7	-2.7	-3.3	0.3	1.7
17 Khuzdar	0.2	-3.5	0.1	-5.0	0.2	-1.9	0.3	-2.5	0.3	-4.2	0.3	-1.1
	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	0.0	4.1	-0.5	1.2	0.2	5.6	0.1	3.7	-0.2	0.8	0.2	5.8
2 Islamabad	-0.1	2.9	-0.8	2.4	0.3	3.1	-0.1	2.7	-0.7	2.2	0.4	3.2
3 Lahore	0.0	1.5	-0.5	0.0	0.3	2.4	0.0	1.2	-0.5	-0.5	0.4	2.6
4 Gujranwala	-0.7	0.3	-1.9	-2.7	-0.1	1.9	-0.5	-0.1	-1.2	-3.0	0.1	2.1
5 Sialkot	-0.5	0.7	-1.4	0.0	0.0	1.1	-0.5	0.5	-1.3	-0.7	0.2	1.4
6 Faisalabad	-0.2	0.7	-0.5	0.1	0.0	1.0	0.1	0.6	0.0	-0.6	0.2	1.5
7 Multan	0.0	1.4	-0.2	1.7	0.1	1.3	0.1	1.2	0.0	0.7	0.2	1.7
8 Sargodha	0.9	4.2	0.8	0.6	0.9	5.8	0.8	3.7	1.1	0.4	0.6	5.9
9 Bahawalpur	0.0	1.6	-0.4	1.2	0.2	1.8	0.2	1.3	0.1	0.2	0.2	2.0
10 Karachi	-0.2	3.9	-1.6	0.3	0.6	5.8	-0.2	3.4	-1.5	-0.1	0.8	6.0
11 Hyderabad	-0.4	1.7	-1.4	1.7	0.1	1.7	-0.2	1.7	-0.8	1.1	0.3	2.2
12 Sukkur	-0.2	2.2	-0.6	0.2	0.0	3.3	-0.2	1.5	-0.6	-0.9	0.1	3.2
13 Larkana	-0.8	0.6	-2.1	-1.0	-0.1	1.3	-0.9	-0.5	-2.0	-2.5	-0.1	0.9
14 Peshawar	-0.1	2.9	-1.2	4.4	0.5	2.2	-0.1	3.2	-1.0	3.6	0.6	2.9
15 Bannu	-0.1	-0.1	-0.9	-2.0	0.3	0.9	-0.1	0.2	-0.7	-2.4	0.3	2.0
16 Quetta	-1.0	-0.1	-2.8	-2.6	-0.1	1.2	-1.1	-0.7	-2.7	-3.6	0.1	1.5
17 Khuzdar	-0.1	-1.6	-0.2	-2.1	0.0	-1.3	0.3	-3.0	0.1	-5.1	0.4	-1.4

Table A6: City- wise CPI Inflation (YoY) September, 2015

City	High inflation cities			City	Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Nawabshah	4.0	1.6	5.4	Multan	1.2	0.7	1.7
Rawalpindi	3.7	0.8	5.8	Mianwali	1.2	-2.7	3.9
Sargodha	3.7	0.4	5.9	Muzaffargarh	1.2	0.4	1.8
Karachi	3.4	-0.1	6.0	Jhang	1.2	0.8	1.5
Mardan	3.4	1.7	4.3	Lahore	1.2	-0.5	2.6
Mingora	3.3	1.1	4.8	Vehari	1.2	3.7	-0.7
Peshawar	3.2	3.6	2.9	Bahawalnagar	1.0	0.9	1.1
Mithi	3.1	3.5	2.7	Jhelum	0.8	-0.6	1.9
Islamabad	2.7	2.2	3.2	Sahiwal	0.8	-3.6	3.6
Mir Pur Khas	2.6	3.2	2.2	Abbotabad	0.7	-0.1	1.3
D.G. Khan	2.1	1.3	2.6	Faisalabad	0.6	-0.6	1.5
D. I. Khan	1.9	3.0	1.1	Sialkot	0.5	-0.7	1.4
Hyderabad	1.7	1.1	2.2	Bannu	0.2	-2.4	2.0
Wazirabad	1.7	1.1	2.2	Rahim Yar Khan	0.0	-3.4	2.4
Attock	1.6	-2.9	4.9	Gujranwala	-0.1	-3.0	2.1
Sukkur	1.5	-0.9	3.2	Loralai & Cantt	-0.1	-1.8	1.0
Bahawalpur	1.3	0.2	2.0	Dera Mrd.Jamali	-0.2	-2.9	1.8
				Larkana	-0.5	-2.5	0.9
				Dadu	-0.6	-2.1	0.5
				Quetta	-0.7	-3.6	1.5
				Turbat	-0.7	-2.4	0.3
				Gwadar	-2.9	-5.1	-1.4
				Khuzdar	-3.0	-5.1	-1.4

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-14	Aug-15	Sep-15	Sep-14	Aug-15	Sep-15
<u>Up to Rs. 8000</u>						
General	0.3	0.5	0.0	6.6	0.9	0.6
Food	0.2	0.8	-0.2	6.6	-1.1	-1.4
Non-food	0.4	0.1	0.2	6.6	3.4	3.2
<u>Rs. 8001- 12000</u>						
General	0.2	0.3	0.2	6.6	1.1	1.1
Food	0.1	0.6	-0.3	6.8	-0.6	-1.0
Non-food	0.3	0.1	0.8	6.4	3.0	3.5
<u>Rs. 12001- 18000</u>						
General	0.2	0.3	-0.4	7.8	1.4	0.8
Food	0.1	0.5	-0.4	7.0	-0.1	-0.6
Non-food	0.4	0.2	-0.5	8.5	3.0	2.1
<u>Rs. 18001- 35000</u>						
General	0.2	0.3	0.1	7.9	1.6	1.5
Food	0.0	0.3	-0.5	7.3	0.4	-0.1
Non-food	0.4	0.3	0.6	8.5	2.7	2.9
<u>Above Rs. 35000</u>						
General	0.5	0.1	0.0	7.8	2.0	1.6
Food	0.0	0.1	-0.5	7.4	1.1	0.6
Non-food	0.7	0.2	0.3	8.1	2.5	2.1
<u>All income groups</u>						
General	0.4	0.2	-0.1	7.7	1.8	1.3
Food	0.0	0.3	-0.4	7.2	0.4	-0.1
Non-food	0.6	0.1	0.1	8.0	2.8	2.4

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices Sep-15	Percentage change	
				YoY	MoM
1	Wheat	10Kg.	325.9	-7.0	0.7
2	Wheat Flour Bag	10Kg.	375.2	-7.2	0.5
3	Rice Basmati Broken	Kg.	68.4	-7.9	-0.8
4	Rice Irri-6	Kg.	49.0	-9.3	-1.5
5	Bread Plain Med. Size (340-400 Gm.)	Each	40.8	0.2	0.0
6	Beef	Kg.	315.3	4.6	1.2
7	Mutton	Kg.	619.9	5.2	0.8
8	Chicken Live (Farm)	Kg.	132.4	-4.1	-13.4
9	Milk Fresh	Litr	77.7	2.8	0.4
10	Curd	Kg.	91.3	2.3	0.3
11	Milk Powdered Nido	500G	356.5	2.2	0.0
12	Egg Hen (Farm)	Doz.	94.0	-11.2	-4.5
13	Mustard Oil	Kg.	179.7	-3.0	0.3
14	Cooking Oil (Tin)	2.5Ltr	461.8	-14.4	-0.5
15	Veg. Ghee (Tin)	2.5Kg.	454.9	-11.1	-0.4
16	Veg. Ghee Loose	Kg.	139.2	-11.8	-0.5
17	Bananas	Doz.	70.0	-10.6	-13.0
18	Masoor Pulse Washed	Kg.	143.3	11.2	0.5
19	Moong Pulse Washed	Kg.	158.7	5.7	-1.5
20	Mash Pulse Washed	Kg.	194.1	23.5	4.3
21	Gram Pulse Washed	Kg.	114.5	55.4	1.6
22	Potatoes	Kg.	29.0	-56.1	2.8
23	Onions	Kg.	53.0	27.7	23.0
24	Tomatoes	Kg.	56.7	-14.2	-8.3
25	Sugar	Kg.	64.8	7.0	-0.9
26	Gur	Kg.	94.9	12.5	1.8
27	Salt Powdered Loose (Lahori)	Kg.	10.4	4.3	0.0
28	Red Chilies Powder Loose	Kg.	276.3	8.8	1.0
29	Garlic	Kg.	169.2	26.4	10.8
30	Tea (Yellow Label)	200Gm.	176.8	40.5	3.4
31	Cooked Beef Plate	Each	84.8	3.3	0.6
32	Cooked Dal Plate	Each	50.3	5.7	1.5
33	Tea Prepared (Sada)	Cup	18.9	1.9	0.0
34	Cigarettes K-2 (20'S)	20'S	54.8	21.2	0.1
35	Long Cloth (Coarse Latha)	Mtr.	202.6	1.6	0.1
36	Shirting	Mtr.	161.9	3.3	0.5
37	Lawn	Mtr.	243.0	1.6	0.0
38	Georgette (Voil Printed)	Mtr.	123.1	0.0	0.0
39	Sandal Gents Bata	Pair	699.0	0.0	0.0
40	Chappal Spong. Bata (Gents)	Pair	179.0	0.0	0.0
41	Sandal Ladies Bata	Pair	499.0	0.0	0.0
42	Electric Charges 1-50	Unit	2.0	0.0	0.0
43	Gas Charges upto 3.3719	Mmbtu	128.7	3.6	3.6
44	Kerosene	Litr	83.7	-28.8	-3.3
45	Firewood	40Kg	583.1	5.2	0.6
46	Energy Savor 14 Watts	Each	166.6	0.8	0.1
47	Washing Soap (200-250 Gm.)	Cake	24.6	1.0	1.0
48	Match Box	Each	1.9	17.6	0.0
49	Petrol	Litr	74.6	-31.0	-3.9
50	Diesel	Litr	82.9	-24.6	-3.5
51	L.P.G.(11 Kg Cylinder.)	Each	1048.8	-27.5	3.9
52	Tele. Local Call	Call	3.9	0.0	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	36.7	1.8	0.3
Maximum				55.4	23.0
Median				1.6	0.1
Minimum				-56.1	-13.4

Table A9: Distribution of Price Changes (YoY) - WPI Items: September 2015				
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	Edible Roots/Potatoes, Stimulant and Spice Crops, Other Oil Seeds, Fibre Crops, Rice, Poultry, Eggs, Wheat	Vegetables, Milk from Bovine Animals, Fresh Fruits, Maize	Unmanufactured Tobacco, Sorghum/Jowar, Dry Fruits, Fuel Wood in Logs, Hides and Fur Skins-Raw, Sugar Crops, Raw Animal Material/Wool	Fish Live Fresh or Chilled, Pulses, Cotton Seeds, Millet/Bajra
Ores & Minerals, Electricity Gas & Water		Natural Gas Liquefied, Electrical Energy, Salt & Pure Sodium Chloride	Coal not Agglomerated	
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Vegetable Ghee, Cotton Yarn, Nylon Yarn, Vegetable Oil Refined, Oil Cakes, Blended Yarn, Wheat Flour, Other Leather N.E.C, Spices, Milk and Cream in Solid Form, Other Food Products, Footwear, Woolen Carpets, Ice Cream, Synthetic Carpets	Dried Fruits & Nuts, Leather Without Hairs, Dairy Products N.E.C, Fruit Juices, Vegetables & Fruit Juices, Meat of Animals, Cotton Fabrics, Chocolate, Beverages, Mineral Water	Towels, Other Fabrics, Sugar Refined, Silk and Rayon Fabrics, Processed Liquid Milk, Bed Sheets, Hosiery Products, Ready Made Garments, Blankets	Other Cereal Flour, Coffee and Tea, Tobacco Products, Woven Fabrics, Sugar Confectionary, Quilts
Other Transportable Goods except Metal Products, Machinery and Equipments	Furnace Oil, Kerosene Oil, Diesel Oil, Motor Sprit, Insecticides, Hard Board, Chemicals, Printing Paper, Mobil Oil, Cement, Coke	Bed Foams, Bricks Blocks and Tiles, Soaps & Detergent, Auto Tyres, Dying Materials, Fertilizers, Medicines	Ceramics and Sanitary, Paints & Varnishes	Pesticides, Matches, Other Glass Articles, Plastic Products, Glass Sheets, Timber
Metal Product Machinery & Equipment	Steel Bars & Sheets, Cultivators, Motor Cycles, Pig Iron, Engines and Motors, Vacuum Pumps, Concrete Mixer, Radio and Television, Lathe Machines, Chuff Cutter, Tractors	Electrical Wires, Air Conditioners, Bicycles, Lighting Equipments, Refrige,Wash& Sew Mach,Iron,Fan, Steel Products, Motor Vehicles, Pipe Fittings		

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

Items and specification	Weights	Index		
		Sep-14	Aug-15	Sep-15
General	100.00	199.40	202.25	202.04
Food & Non-Alcoholic Beverages.	34.83	221.77	220.51	219.41
1 Wheat	0.35	209.37	194.04	193.88
2 Wheat Flour	4.16	222.34	208.24	208.52
3 Wheat Product	0.10	218.67	212.75	212.74
4 Besan	0.15	170.88	236.90	240.09
5 Rice	1.58	195.91	174.03	170.56
6 Cereals	0.16	238.08	243.87	244.01
7 Bakery & Confectionary	1.16	206.01	209.48	209.68
8 Nimco	0.46	235.78	240.88	241.24
9 Meat	2.43	242.68	252.42	254.88
10 Chicken	1.36	179.10	189.75	157.49
11 Fish	0.30	215.15	211.30	212.73
12 Milk Fresh	6.68	245.51	255.57	256.67
13 Milk Product	0.63	241.27	247.22	248.48
14 Milk Powder	0.11	224.30	227.17	226.90
15 Egg	0.46	214.36	196.17	189.42
16 Mustard Oil	0.10	159.12	153.77	153.79
17 Cooking Oil	1.75	161.97	141.58	137.91
18 Vegetable Ghee	2.07	156.72	140.34	138.19
19 Dry Fruits	0.25	237.15	250.52	249.61
20 Fresh Fruits	1.86	216.18	240.08	219.82
21 Pulse Masoor	0.27	181.03	195.95	197.64
22 Pulse Moong	0.23	279.56	298.00	295.41
23 Pulse Mash (Washed)	0.21	222.97	256.02	266.81
24 Pulse Gram	0.24	167.35	245.70	249.32
25 Gram Whole	0.16	179.24	205.35	207.48
26 Beans	0.03	242.22	234.52	232.23
27 Potatoes	0.46	473.29	182.67	189.18
28 Onion	0.52	256.60	247.23	309.49
29 Tomatoes	0.43	226.41	197.35	174.35
30 Fresh Vegetable	1.71	250.69	253.47	258.41
31 Sugar	1.04	218.34	233.44	229.84
32 Gur	0.02	267.14	285.83	290.46
33 Honey	0.04	299.51	304.35	304.38
34 Sweet Meet	0.25	229.84	237.20	238.02
35 Beverages	1.20	209.36	215.71	217.39
36 Jam, Tomato Ketchup & Pickle	0.25	198.62	210.53	211.13
37 Condiments	0.27	250.05	258.10	258.47
38 Spices	0.54	230.32	238.09	238.44
39 Tea	0.84	209.82	252.00	262.29
Alcoholic Beverages, Tobacco	1.41	266.59	309.90	309.97
40 Cigarette	1.39	267.63	311.47	311.47
41 Betel Leaves & Nuts	0.02	203.45	214.46	218.57
Clothing & Footwear	7.57	210.97	220.27	220.68
42 Cotton Cloth	1.73	206.89	214.33	215.25
43 Woolen Cloth	0.88	228.99	236.10	236.31
44 Ready Made Garment	0.97	212.38	225.84	225.96
45 Woolen Readymade Garments	0.40	218.60	240.86	240.86
46 Hosiery	0.51	222.19	233.85	234.19
47 Dopatta	0.44	226.62	233.88	234.33
48 Cleaning & Laundering	0.21	233.42	239.56	242.25

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities				
Items and specification	Weights	Index		
		Sep-14	Aug-15	Sep-15
49 Tailoring	0.88	258.78	278.68	278.92
50 Footwear	1.55	164.05	164.95	164.97
Housing,Water,Elect,Gas & Other Fuel	29.41	171.70	180.31	181.10
51 House Rent	21.81	159.82	168.87	168.87
52 Construction Input Item	0.56	236.34	240.99	241.38
53 Construction Wage Rate	0.33	202.74	216.01	218.33
54 Water Supply	0.50	149.92	149.92	149.92
55 Electricity	4.40	227.44	238.10	238.10
56 Gas	1.58	143.81	143.81	158.08
57 Kerosene Oil	0.01	278.65	216.11	207.65
58 Fire Wood Whole	0.23	265.66	275.90	275.90
Furnished H.Hold Equip.& Maint. Etc	4.21	207.21	214.22	214.88
59 Furniture	0.33	198.64	206.08	206.58
60 Household Textile	0.65	202.95	211.55	212.12
61 Household Equipment	0.59	171.62	175.47	175.57
62 Utensils	0.32	208.66	216.86	217.57
63 Plastic Products	0.25	197.49	203.54	204.10
64 Washing Soap & Detergent	0.79	221.85	224.99	224.73
65 Sewing Needle & Dry Cell	0.15	182.30	200.00	200.63
66 Household Servant	1.04	225.81	234.86	236.72
67 Marriage Hall Charges	0.08	226.93	232.28	232.49
Health	2.19	174.47	179.01	179.51
68 Drug Medicine	1.27	146.53	148.93	149.01
69 Medical Equipment	0.01	221.31	226.26	226.26
70 Doctor (MBBS) Clinic Fee	0.59	235.89	242.85	244.44
71 Medical Test	0.32	170.57	179.13	179.27
Transport	7.20	205.10	178.02	175.60
72 Motor Vehicle	0.66	163.72	163.39	163.02
73 Motor Vehicle Accessories	0.24	229.28	226.83	226.83
74 Motor Fuel	3.03	189.43	153.01	147.25
75 Mechanical Service	0.46	207.03	216.92	217.59
76 Motor Vehicle Tax	0.11	210.18	210.18	210.18
77 Transport Services	2.70	230.09	197.35	197.35
Communication	3.22	129.85	130.36	130.36
78 Postal Services	0.07	216.26	229.93	229.93
79 Communication & Apparatus	3.15	128.03	128.27	128.27
Recreation & Culture	2.02	189.34	193.03	193.41
80 Recreation & Culture	0.86	127.81	128.25	128.25
81 Text Books	0.57	280.89	290.62	290.62
82 News Papers	0.19	175.42	175.42	175.42
83 Stationery	0.40	198.41	202.25	204.23
Education	3.94	191.93	209.23	209.22
84 Education	3.94	191.93	209.23	209.22
Restaurants And Hotels	1.23	242.00	250.26	251.29
85 Ready Made Food	1.23	242.00	250.26	251.29
Miscellaneous Goods And Services	2.76	219.39	223.88	224.64
86 Personal Care	1.49	203.47	208.36	209.07
87 Cosmetics	0.39	183.51	191.82	192.70
88 Blades	0.03	184.82	188.25	190.75
89 Personal Equipments	0.84	265.25	267.34	268.09

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

Items and Specifications	Index		
	Sep-14	Aug-15	Sep-15
General	215.06	208.42	207.60
Agriculture Forestry & Fishery	225.48	225.90	223.92
1 Wheat	214.19	198.78	202.23
2 Maize	195.66	197.89	197.73
3 Rice	181.27	157.78	154.60
4 Sorghum/Jowar	307.35	340.07	334.15
5 Millet/Bajra	173.72	207.85	204.45
6 Vegetables	322.71	315.25	330.75
7 Fresh Fruits	244.99	279.94	249.04
8 Dry Fruits	218.98	238.67	236.68
9 Cotton Seeds	192.17	230.46	228.37
10 Other Oil Seeds	190.46	162.61	159.36
11 Edible Roots/ Potatoes	504.54	150.28	172.56
12 Stimulant And Spice Crops	404.43	325.37	318.19
13 Pulses	193.89	235.92	234.67
14 Sugar Crops	267.92	286.29	286.29
15 Fibre Crops	182.68	152.62	154.16
16 Unmanufactured Tobacco	207.00	226.94	227.46
17 Poultry	180.11	199.19	160.74
18 Milk From Bovine Animals	248.75	252.90	253.18
19 Eggs	217.31	206.09	194.92
20 Raw Animal Material/Wool	162.90	173.66	173.66
21 Hides And Fur Skins, Raw	145.38	156.45	156.45
22 Fuel Wood In Logs	243.47	261.39	262.48
23 Fishes Live Fresh Or Chilled	244.41	339.60	338.86
Ores/Minerals, Gas & Elect.	242.99	244.06	249.12
24 Coal Not Agglomerated	223.53	223.53	235.29
25 Natural Gas Liquefied	202.94	199.75	208.83
26 Salt & Pure Sodium Chloride	248.50	252.31	252.31
27 Electrical Energy	287.44	293.09	293.09
Food, Beverages, Tobacco, Textiles	207.86	210.52	210.64
28 Meat Of Animals	256.74	263.70	265.13
29 Vegetables & Fruit Juices	194.12	200.95	200.95
30 Dried Fruits & Nuts	219.98	229.85	230.91
31 Fruit Juices	171.34	177.53	177.53
32 Vegetable Oil Refined	162.58	152.52	149.26
33 Vegetable Ghee	139.10	120.70	119.21
34 Oil Cakes	208.10	199.15	193.65
35 Processed Liquid Milk	234.27	248.71	248.71
36 Milk And Cream In Solid Form	219.41	219.44	216.31
37 Ice Cream	219.91	219.91	219.91
38 Dairy Products N.E.C	235.94	244.55	244.55
39 Wheat Flour	200.80	191.08	192.14
40 Other Cereal Flour	137.97	214.97	214.96
41 Sugar Refined	231.31	249.46	246.52
42 Chocolate	99.19	99.19	101.06
43 Sugar Confectionary	102.28	118.04	118.83
44 Coffee And Tea	183.60	233.14	240.86
45 Spices	191.60	188.81	188.73
46 Other Food Products	296.10	292.02	292.02
47 Mineral Water	185.63	188.22	188.35
48 Beverages	169.40	171.95	171.95
49 Tobacco Products	290.52	356.45	356.45
50 Cotton Yarn	192.90	167.45	167.64
51 Nylon Yarn	164.84	150.22	147.08
52 Blended Yarn	193.92	185.58	184.15
53 Woven Fabrics	226.82	258.39	265.37
54 Cotton Fabrics	196.81	201.65	201.65
55 Other Fabrics	203.01	214.27	217.95

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities				
Items and Specifications		Index		
		Sep-14	Aug-15	Sep-15
56	Silk And Rayon Fabrics	175.35	183.23	186.80
57	Towels	246.16	267.20	267.20
58	Blankets	223.55	235.86	235.86
59	Bed Sheets	242.12	256.29	256.29
60	Quilts	177.63	196.84	196.84
61	Woolen Carpets	132.14	132.14	132.14
62	Synthetic Carpets	126.27	126.27	126.27
63	Hosiery Products	208.91	220.66	220.66
64	Ready Made Garments	183.14	193.27	193.27
65	Leather With Out Hairs	212.86	212.68	221.97
66	Other Leather N.E.C	210.44	206.27	206.27
67	Footwear's	134.22	134.22	134.22
Other Transportable Goods		214.53	180.27	176.38
68	Timber	188.95	204.34	208.04
69	Printing Paper	169.34	164.56	164.56
70	Hard Board	229.17	197.92	197.92
71	Coke	163.45	163.45	163.45
72	Motor Sprit	180.02	129.65	124.58
73	Diesel Oil	256.53	177.90	170.11
74	Kerosene Oil	281.74	165.55	152.12
75	Furnace Oil	171.21	90.81	76.67
76	Mobil Oil	201.17	199.10	199.10
77	Chemicals	195.25	187.61	187.25
78	Dying Materials	143.77	146.55	146.55
79	Fertilizers	271.20	271.71	275.23
80	Pesticides	266.71	306.30	306.30
81	Insecticides	178.63	138.59	138.59
82	Paints & Varnishes	279.37	295.36	295.36
83	Medicines	145.03	145.20	145.71
84	Soaps & Detergent	176.33	180.05	180.67
85	Auto Tyres	188.28	191.78	192.83
86	Plastic Products	206.32	228.34	228.35
87	Glass Sheets	209.86	231.30	231.30
88	Other Glass Articles	218.27	243.63	243.63
89	Ceramics And Sanitary	207.26	221.62	227.13
90	Bricks Blocks And Tiles	203.25	209.99	209.99
91	Cement	207.79	206.97	206.87
92	Bed Foams	150.83	156.67	156.67
93	Matches	143.20	162.62	162.62
Metal Product Machinery & Equip		172.76	172.29	171.25
94	Pig Iron	128.97	128.97	128.97
95	Steel Bars & Sheets	151.35	136.92	130.45
96	Pipe Fittings	191.63	192.08	192.08
97	Steel Products	172.77	173.54	173.54
98	Engines And Motors	109.07	109.07	109.07
99	Vacuum Pumps	115.39	115.39	115.39
100	Air Conditioners	195.53	199.53	200.18
101	Cultivators	226.90	219.76	219.76
102	Chuff Cutter	149.20	149.20	149.20
103	Tractors	214.54	214.54	214.54
104	Lathe Machines	208.81	208.81	208.81
105	Concrete Mixer	138.83	138.83	138.83
106	Refrige,Wash& Sew Mach, Iron,Fan	196.04	198.62	198.62
107	Electrical Wires	184.79	192.45	192.45
108	Lighting Equipments	164.95	167.30	167.30
109	Radio And Television	126.49	126.49	126.49
110	Motor Vehicles	182.59	183.03	183.03
111	Motor Cycles	126.92	125.89	125.89
112	Bicycles	182.84	185.63	185.63

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
2013-14		189.58	212.74	175.69	210.48	213.04	208.85	208.66
2014-15		198.16	220.20	184.95	209.85	226.22	199.47	212.61
2013	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
	Dec	188.68	210.89	175.37	210.11	210.28	210.00	210.78
2014	Jan	189.60	210.81	176.89	211.23	209.87	212.10	208.99
	Feb	189.00	208.74	177.17	210.94	208.67	212.38	208.54
	Mar	190.82	213.11	177.46	211.66	212.89	210.88	212.08
	Apr	194.06	217.33	180.11	211.88	216.70	208.82	211.78
	May	193.55	214.75	180.84	211.71	215.95	209.02	209.80
	Jun	194.74	216.98	181.41	214.60	221.06	210.50	212.40
	Jul	198.05	222.80	183.21	215.76	225.52	209.57	216.14
	Aug	198.70	224.05	183.50	214.73	227.26	206.78	217.08
	Sep	199.40	224.12	184.58	215.06	228.41	206.59	217.06
	Oct	199.81	223.74	185.47	214.39	229.02	205.11	216.67
	Nov	198.79	222.74	184.44	212.26	227.29	202.73	214.45
	Dec	196.79	218.08	184.03	208.25	223.48	198.59	211.76
2015	Jan	196.95	217.10	184.87	206.11	223.48	195.09	209.89
	Feb	195.13	213.15	184.33	203.86	222.26	192.19	206.98
	Mar	195.57	214.25	184.37	203.89	222.11	192.33	207.05
	Apr	198.16	217.26	186.71	205.65	225.38	193.13	208.42
	May	199.66	221.22	186.74	207.92	228.09	195.12	211.48
	Jun	200.89	223.84	187.13	210.37	232.39	196.40	214.29
	Jul	201.91	224.14	188.59	209.58	233.68	194.29	215.13
	Aug	202.25	224.86	188.70	208.42	236.00	190.92	214.33
	Sep	202.04	223.87	188.95	207.60	234.37	190.61	215.23

*: all groups combined

Table A13: International Commodity Prices/ Indices				
	Jun-15	Jul-15	Aug-15	Sep-15
Energy				
Crude Oil (US\$ per barrel) *	61.3	54.4	45.7	46.3
IMF Energy Index (2005 = 100)	114.0	102.8	88.5	88.6
WB Energy Index (2010 = 100) @	76.3	68.8	59.5	59.6
Food				
Rice (\$/MT)	370.5	387.7	375.6	358.8
Wheat (\$/MT)	209.9	197.4	179.8	173.1
Sugar (US cent/ pound)	12.1	11.9	10.7	12.1
Palm Oil (\$/MT)	606.4	575.7	484.7	483.5
Soybean Oil (\$/MT)	738.0	695.8	628.7	590.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	72.4	72.3	71.8	68.7
IMF Metal Price Index (2005 = 100)	133.2	123.2	119.2	120.6
Copper (\$/MT)	5,833.0	5,456.8	5,127.3	5,217.3
Aluminum (\$/MT)	1,687.7	1,639.5	1,548.1	1,589.6
Iron Ore (\$ cents/dry MT)	62.3	51.5	55.4	56.4
Tin (\$/MT)	15,064.9	15,071.5	15,163.8	15,453.3
Nickle (\$/MT)	12,825.2	11,413.1	10,386.0	9,937.5
Zinc (\$/MT)	2,082.1	2,000.7	1,807.6	1,720.2
Lead (\$/MT)	1,829.5	1,763.0	1,703.6	1,684.3
Uranium (\$/MT)	36.1	36.0	36.1	36.9
DAP (\$/MT)	473.0	469.0	464.0	460.0
Urea (\$/MT)	292.0	273.0	273.0	259.0
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	FY12	FY13	FY14	FY15	FY16
Jul	154.72	169.57	183.58	198.05	201.91
Aug	156.88	171.09	185.71	198.70	202.25
Sep	158.50	172.44	185.18	199.40	202.04
Oct	160.79	173.10	188.82	199.81	
Nov	161.25	172.42	191.21	198.79	
Dec	160.12	172.82	188.68	196.79	
Jan	162.58	175.70	189.60	196.95	
Feb	163.07	175.11	189.00	195.13	
Mar	164.98	175.82	190.82	195.57	
Apr	168.00	177.74	194.06	198.16	
May	169.93	178.65	193.55	199.66	
Jun	169.99	179.94	194.74	200.89	
Seasonally Adjusted Series					
Jul	154.15	168.85	182.70	197.03	200.54
Aug	155.63	169.66	184.10	197.01	200.56
Sep	157.26	171.10	183.73	197.82	200.45
Oct	159.14	171.32	186.87	197.72	
Nov	160.25	171.31	189.92	197.49	
Dec	160.99	173.78	189.72	197.83	
Jan	163.01	176.18	190.14	197.52	
Feb	164.84	177.07	191.16	197.37	
Mar	166.41	177.44	192.65	197.50	
Apr	168.18	177.91	194.27	198.39	
May	170.55	179.34	194.27	200.37	
Jun	170.80	180.84	195.70	201.86	

Table 15. CPI Food Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY12	FY13	FY14	FY15	FY16
Jul	174.80	190.72	208.19	222.80	224.14
Aug	177.32	192.47	212.27	224.05	224.86
Sep	180.16	193.80	209.09	224.12	223.87
Oct	183.07	193.66	212.61	223.74	
Nov	183.26	193.03	218.16	222.74	
Dec	179.21	192.97	210.89	218.08	
Jan	181.90	196.58	210.81	217.10	
Feb	180.69	194.05	208.74	213.15	
Mar	183.46	195.06	213.11	214.25	
Apr	187.43	197.74	217.33	217.26	
May	187.75	200.00	214.75	221.22	
Jun	187.35	202.11	216.98	223.84	
Seasonally Adjusted Series					
Jul	173.70	189.28	206.38	220.68	221.90
Aug	174.53	189.31	208.67	220.27	221.06
Sep	177.20	190.62	205.65	220.39	220.16
Oct	179.73	190.21	208.93	219.88	
Nov	180.61	190.12	214.78	219.35	
Dec	180.66	194.56	212.57	219.72	
Jan	183.02	197.85	212.24	218.61	
Feb	184.73	198.50	213.63	218.23	
Mar	186.23	198.14	216.58	217.85	
Apr	188.37	198.72	218.49	218.51	
May	189.21	201.62	216.47	222.90	
Jun	189.24	204.17	219.13	225.97	

Table 16: CPI Monthly & Average Seasonal Factors						
Period	FY12	FY13	FY14	FY15	FY16	Average
Jul	100.37	100.43	100.48	100.52	100.68	100.50
Aug	100.80	100.84	100.87	100.86	100.84	100.84
Sep	100.79	100.78	100.79	100.80	100.79	100.79
Oct	101.04	101.04	101.04	101.06		101.04
Nov	100.62	100.65	100.68	100.66		100.65
Dec	99.46	99.45	99.45	99.47		99.46
Jan	99.74	99.73	99.71	99.71		99.72
Feb	98.93	98.89	98.87	98.86		98.89
Mar	99.14	99.09	99.05	99.02		99.07
Apr	99.89	99.91	99.89	99.88		99.89
May	99.63	99.62	99.63	99.64		99.63
Jun	99.52	99.50	99.51	99.52		99.51

Table 17: CPI Food Monthly & Average Seasonal Factors						
Period	FY12	FY13	FY14	FY15	FY16	Average
Jul	100.63	100.76	100.88	100.96	101.01	100.85
Aug	101.60	101.67	101.73	101.72	101.72	101.69
Sep	101.67	101.67	101.67	101.69	101.68	101.68
Oct	101.86	101.81	101.76	101.76		101.80
Nov	101.47	101.53	101.58	101.55		101.53
Dec	99.20	99.18	99.21	99.26		99.21
Jan	99.39	99.36	99.33	99.31		99.35
Feb	97.82	97.76	97.71	97.67		97.74
Mar	98.51	98.45	98.40	98.35		98.43
Apr	99.50	99.51	99.47	99.43		99.48
May	99.23	99.20	99.21	99.25		99.22
Jun	99.00	98.99	99.02	99.06		99.02

Table 18: CPI Month-on-Month % Change Original & Seasonally Adjusted					
Original Series					
Period	FY12	FY13	FY14	FY15	FY16
Jul	1.27	-0.25	2.02	1.70	0.51
Aug	1.40	0.90	1.16	0.33	0.17
Sep	1.03	0.79	-0.29	0.35	-0.10
Oct	1.44	0.38	1.97	0.21	
Nov	0.29	-0.39	1.27	-0.51	
Dec	-0.70	0.23	-1.32	-1.01	
Jan	1.54	1.67	0.49	0.08	
Feb	0.30	-0.34	-0.32	-0.92	
Mar	1.17	0.41	0.96	0.23	
Apr	1.83	1.09	1.70	1.32	
May	1.15	0.51	-0.26	0.76	
Jun	0.04	0.72	0.61	0.62	
Seasonally Adjusted Series					
Jul	0.42	-1.14	1.03	0.68	-0.65
Aug	0.96	0.48	0.77	-0.01	0.01
Sep	1.05	0.85	-0.20	0.41	-0.05
Oct	1.20	0.13	1.71	-0.05	
Nov	0.70	-0.01	1.63	-0.12	
Dec	0.46	1.44	-0.11	0.17	
Jan	1.26	1.38	0.22	-0.16	
Feb	1.12	0.51	0.53	-0.07	
Mar	0.96	0.21	0.78	0.06	
Apr	1.06	0.26	0.84	0.45	
May	1.41	0.80	0.00	1.00	
Jun	0.15	0.84	0.73	0.74	

Table 19: CPI Food Month-on-Month % Change Original & Seasonally Adjusted					
Original Series					
Period	FY12	FY13	FY14	FY15	FY16
Jul	2.90	1.80	3.01	2.68	0.13
Aug	1.44	0.92	1.96	0.56	0.32
Sep	1.60	0.69	-1.50	0.03	-0.44
Oct	1.62	-0.07	1.68	-0.17	
Nov	0.10	-0.33	2.61	-0.45	
Dec	-2.21	-0.03	-3.33	-2.09	
Jan	1.50	1.87	-0.04	-0.45	
Feb	-0.66	-1.29	-0.98	-1.82	
Mar	1.53	0.52	2.10	0.52	
Apr	2.16	1.37	1.98	1.41	
May	0.17	1.15	-1.19	1.82	
Jun	-0.21	1.05	1.04	1.18	
Seasonally Adjusted Series					
Jul	1.24	0.02	1.08	0.70	-1.80
Aug	0.48	0.01	1.11	-0.18	-0.38
Sep	1.53	0.69	-1.45	0.05	-0.41
Oct	1.43	-0.21	1.60	-0.23	
Nov	0.49	-0.05	2.80	-0.24	
Dec	0.03	2.34	-1.03	0.17	
Jan	1.31	1.69	-0.16	-0.51	
Feb	0.93	0.33	0.65	-0.17	
Mar	0.82	-0.18	1.38	-0.17	
Apr	1.15	0.29	0.88	0.30	
May	0.44	1.46	-0.92	2.01	
Jun	0.02	1.26	1.23	1.37	

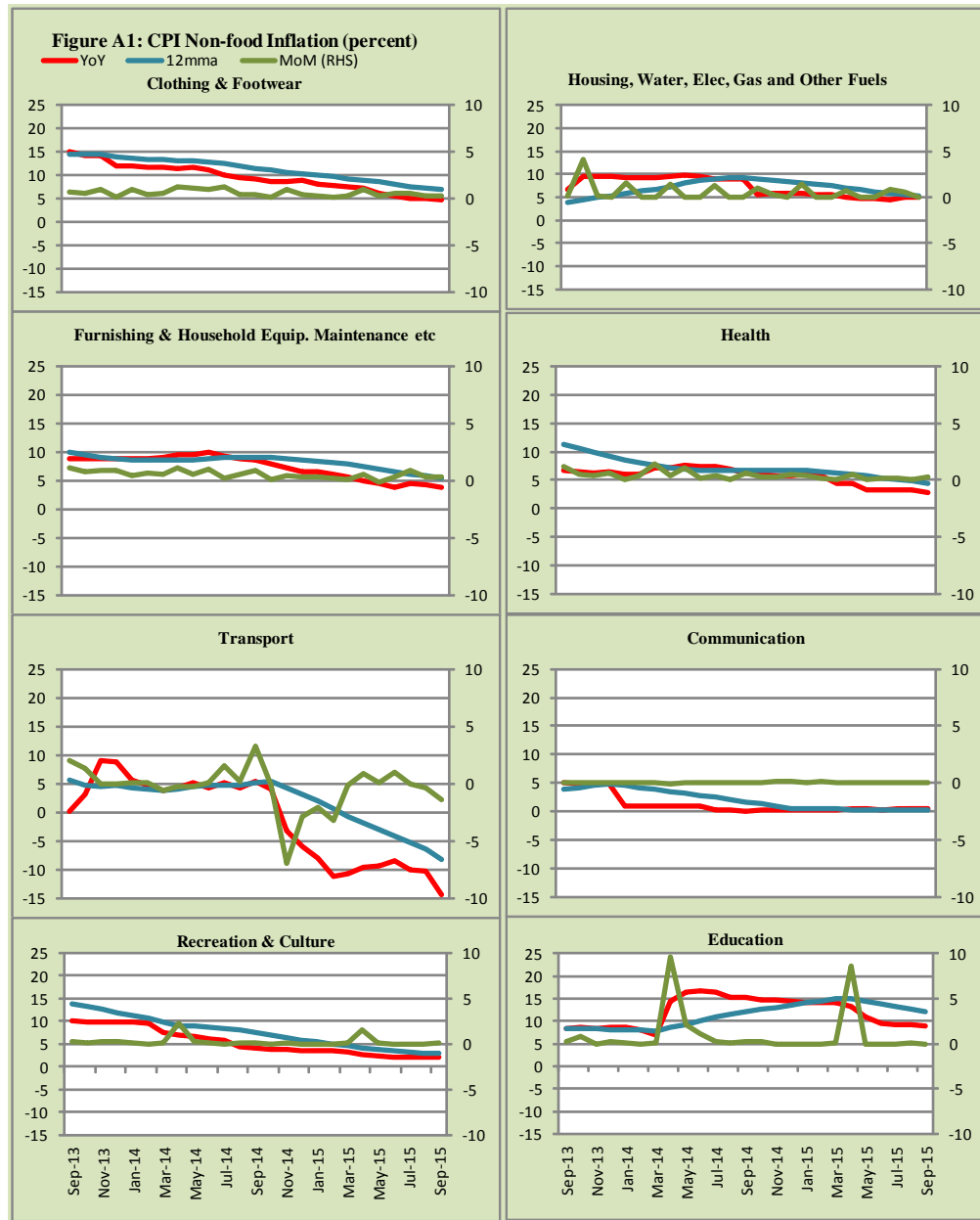


Figure A2: Frequency Distribution of Price Changes of CPI Items, September 2015

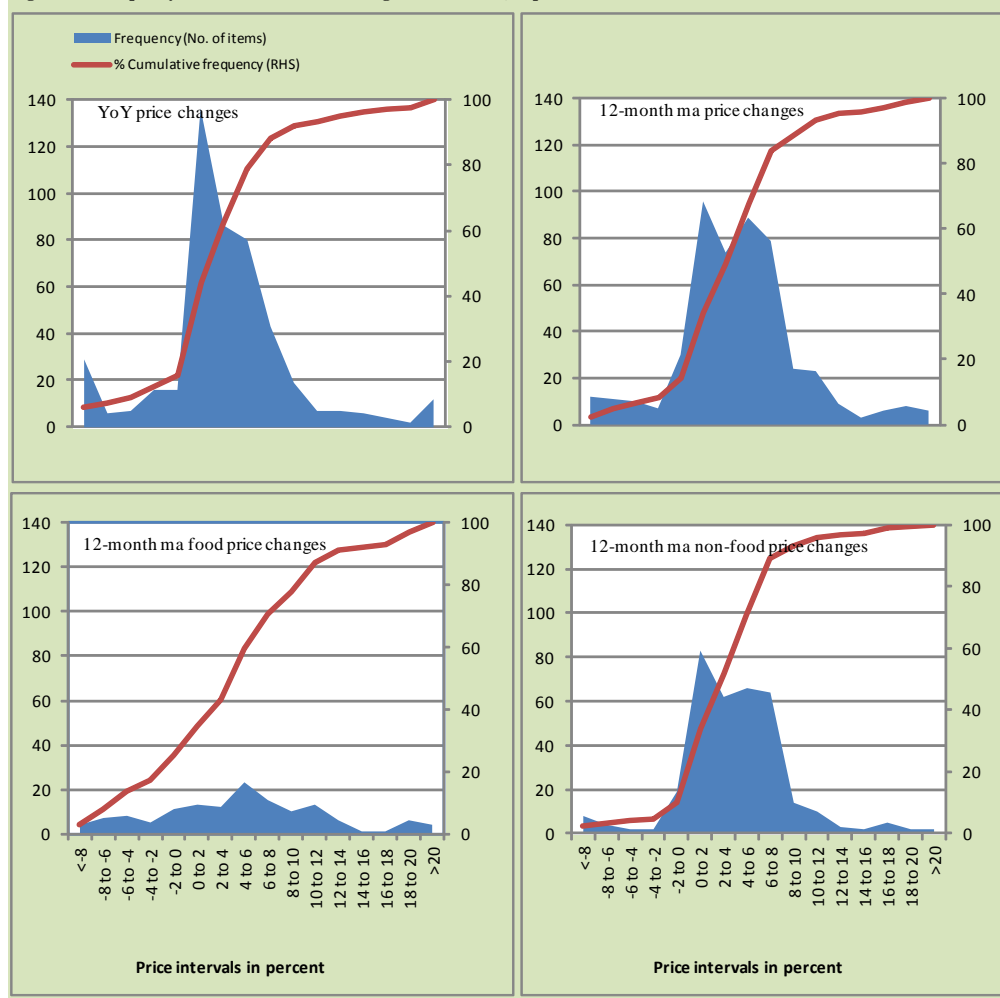


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, September 2015

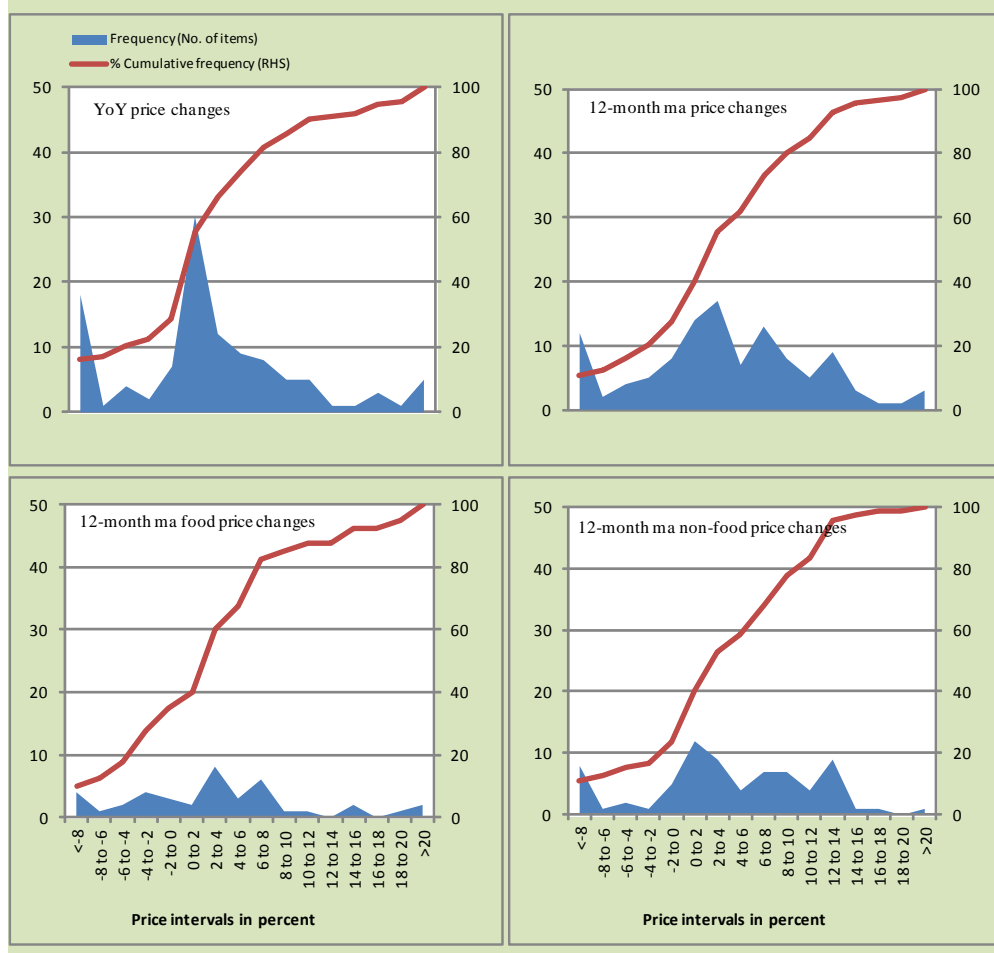
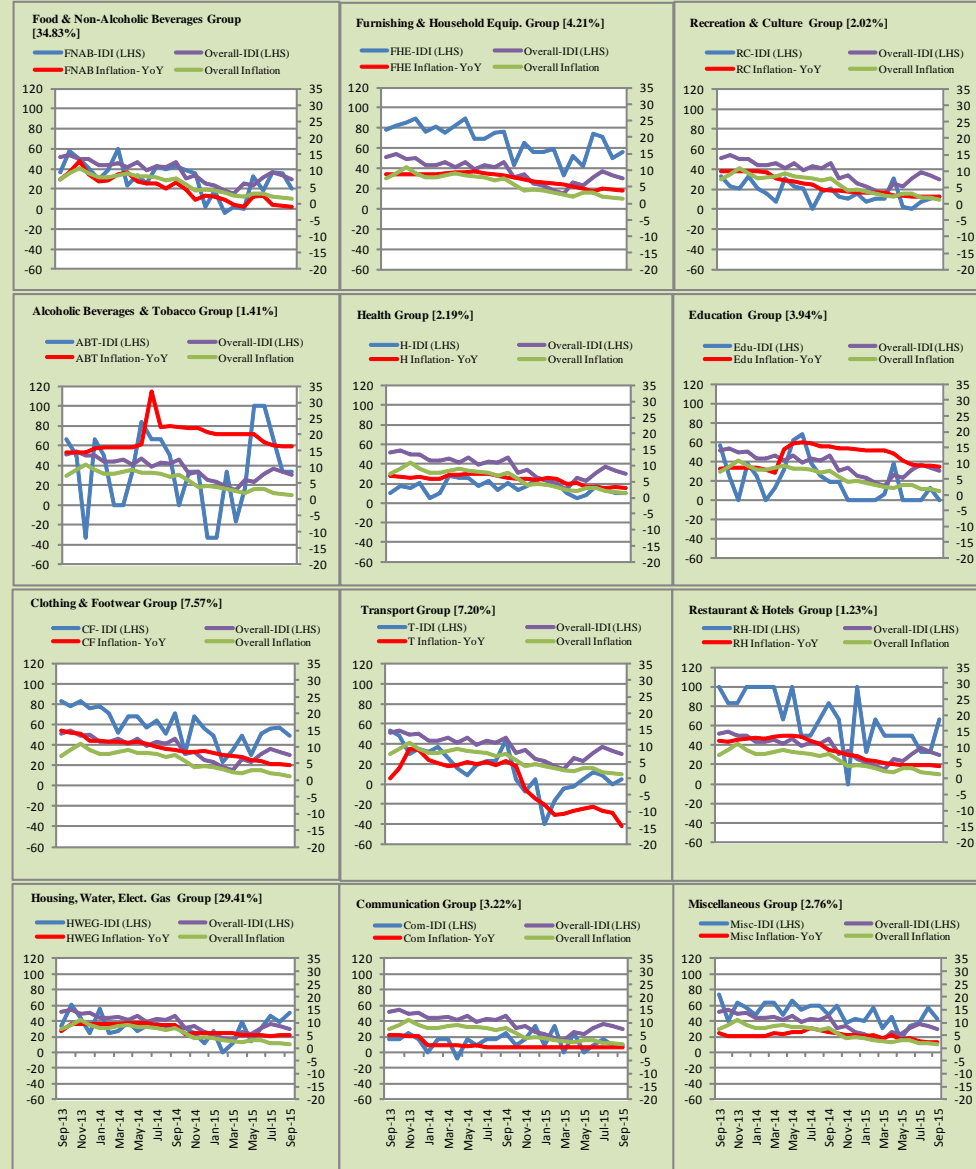


Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



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:
 - 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.