

Inflation Monitor

July 2015



State Bank of Pakistan

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Review

Inflation in Brief

1. Headline CPI inflation (2007-08=100) is recorded at 1.8 percent on year-on-year basis in July 2015 compared to 3.2 percent in the previous month and 7.9 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis is recorded at 0.4 percent in July 2015 compared to 0.6 percent in the previous month and 1.7 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at -0.6 percent in July 2015 compared to 0.7 percent in the previous month.
3. Core inflation (trimmed) on year-on-year basis decreased to 2.8 percent in July 2015 compared to 3.8 percent in the previous month and 7.6 percent during the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) recorded at 0.5 percent in July 2015 compared to 0.2 percent in the previous and 0.8 percent in the corresponding month of last year.
5. Non-food, non-energy inflation measured by CPI Core (NFNE) on year-on-year basis decreased to 4.1 percent in July 2015 as compared to 4.6 percent in the previous month. It was 8.3 percent in the corresponding month of last year.
6. Core NFNE inflation on month-on-month basis increased to 0.6 percent in July 2015 compared to 0.1 percent in the previous month. Core NFNE index was 1.1 percent higher in July 2014.
7. WPI inflation on year-on-year basis decreased to -2.9 percent in July 2015 when compared to -2.0 percent a month earlier. During July 2014, WPI inflation was recorded at 6.6 percent.

8. WPI inflation on month-on-month basis recorded at -0.4 percent in July 2015 compared to 1.2 percent in the previous and 0.5 percent in the corresponding month of last year.
9. SPI inflation on year-on-year basis decreased to -0.5 percent in July 2015 compared to 0.9 percent in the previous month. It was 7.6 percent in the corresponding month of last year.
10. SPI inflation on month-on-month basis recorded at 0.4 percent in July 2015 compared to 1.3 percent in the previous and 1.8 percent 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 July 2015 are described below:

- Core RSC inflation on year-on-year basis is recorded at 4.4 percent in July 2015 compared to 4.8 percent in the previous month and 8.4 percent in the corresponding month of last year.
- Core RSC inflation on month-on-month basis is recorded at 0.6 percent in July 2015 compared to 0.7 percent in the previous month and 1.0 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
Jul-14	7.9	1.7	7.0	2.7	8.5	1.0	8.3	1.1	7.6	0.8	8.4	1.0	6.6	0.5	7.6	1.8
Aug-14	7.0	0.3	5.6	0.6	8.1	0.2	7.8	0.2	7.1	0.2	8.0	0.2	3.3	-0.5	6.8	0.4
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	1.8	0.4	0.6	0.1	2.7	0.5	4.1	0.6	2.8	0.5	4.4	0.6	-2.9	-0.4	-0.5	0.4
* NFNE is Non-food non-energy ** Relatively Stable Component of CPI *** SPI for all income groups combined																

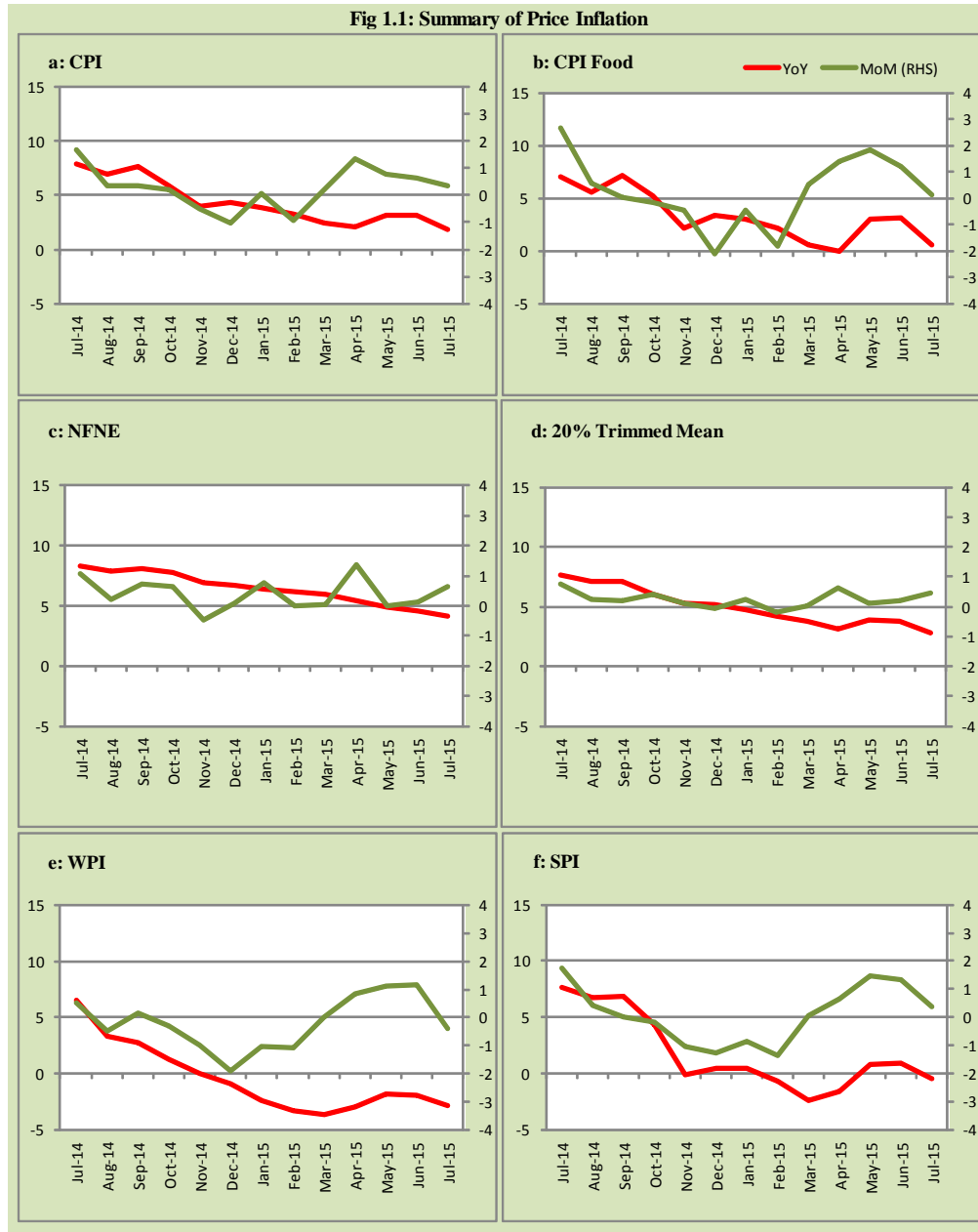
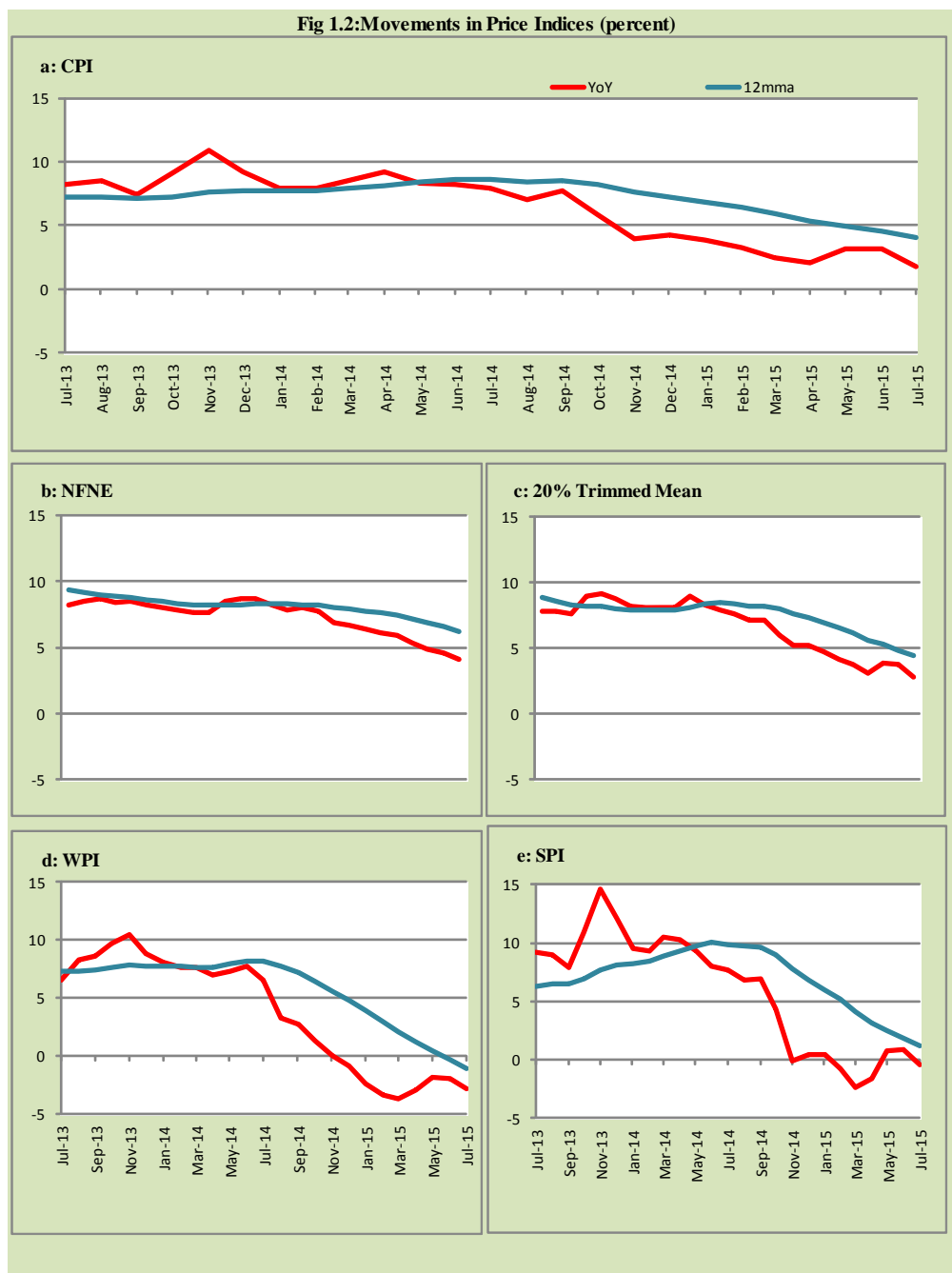


Fig 1.2: Movements in Price Indices (percent)



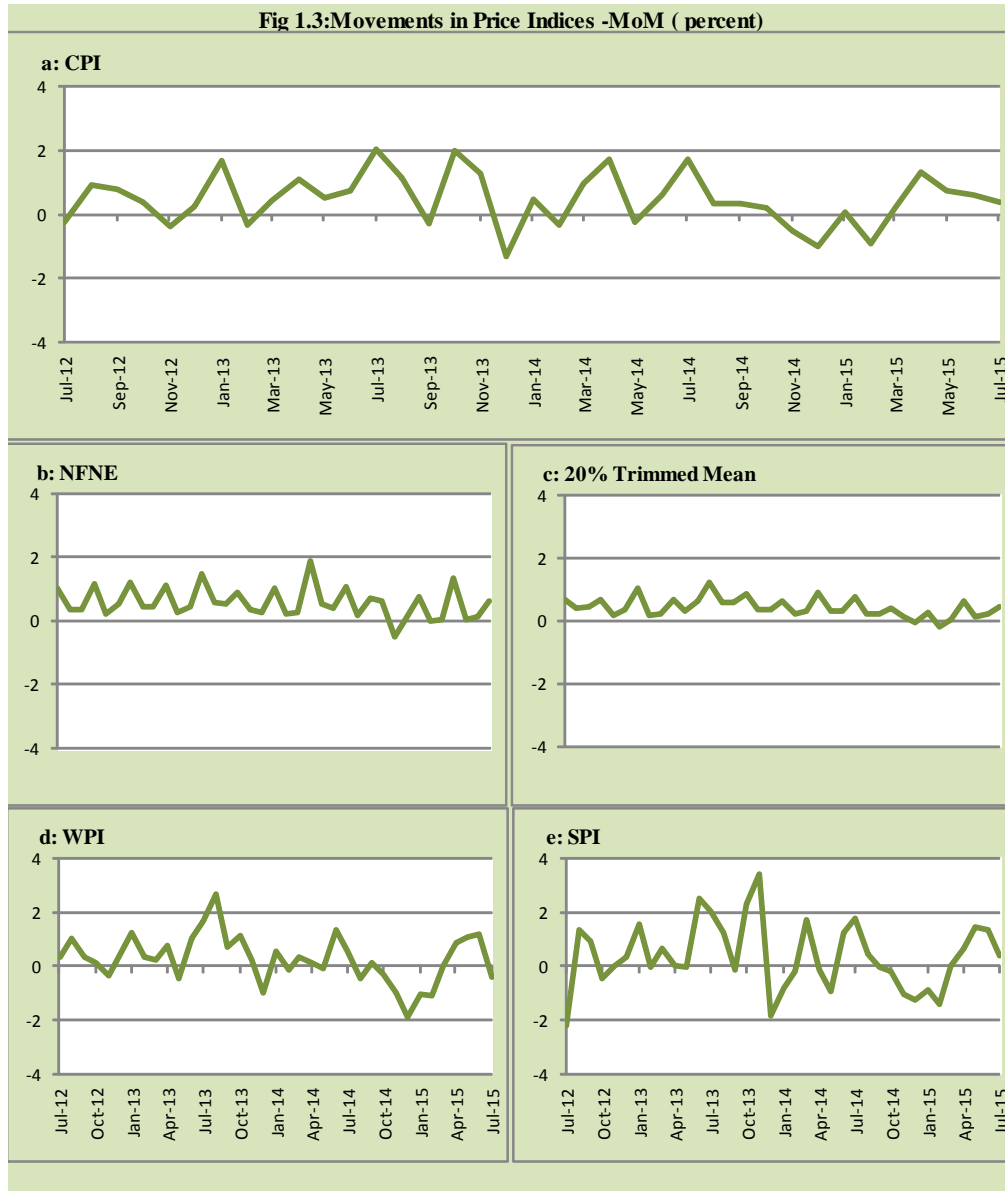
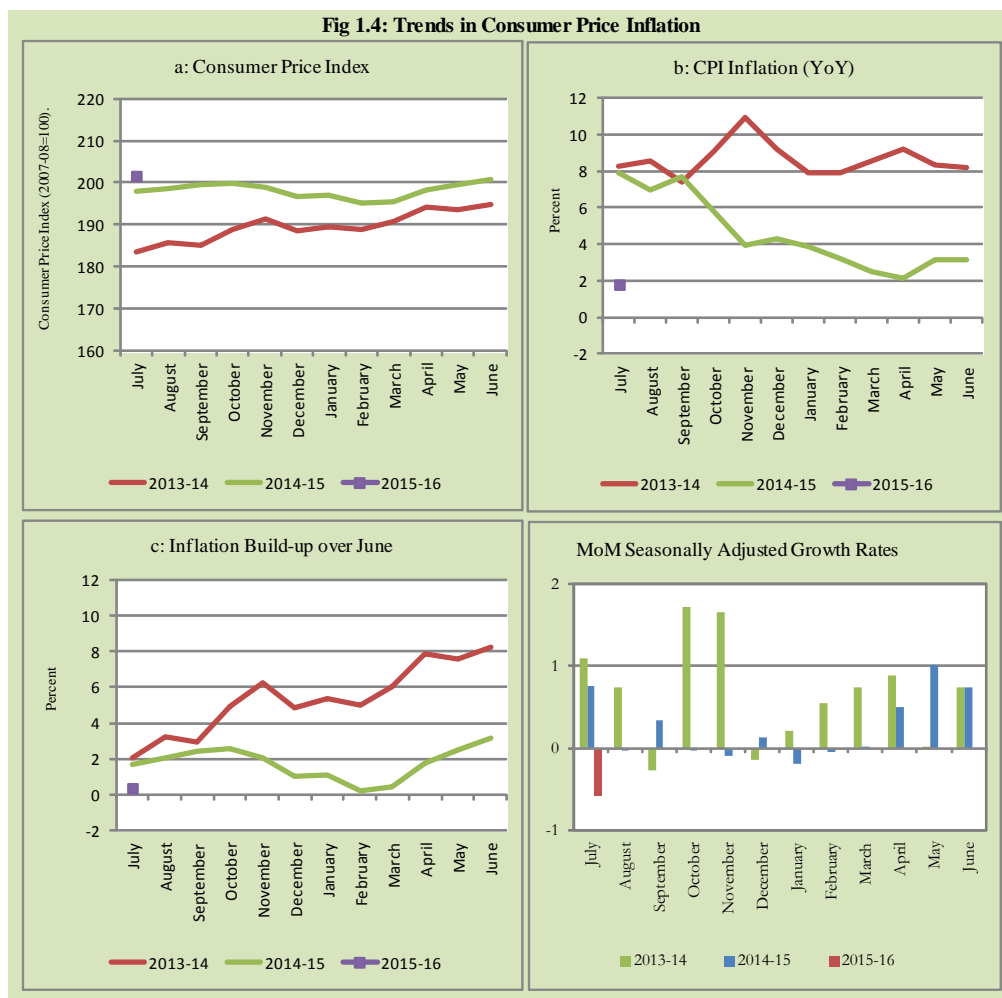


Fig 1.4: Trends in Consumer Price Inflation



2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan showed mixed trend during July 2015. Among these five cities, the lowest inflation was observed in Quetta at 1.0 percent while the highest inflation was observed in Islamabad at 3.5 percent (Table A6 of annexure-A).

Table 2.1 City-wise Inflation of Selected Cities (percent)						
	Jul-14		Jun-15		Jul-15	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	1.7	7.9	0.6	3.2	0.4	1.8
Islamabad	1.7	14.7	0.2	4.6	0.6	3.5
Karachi	2.7	9.5	1.5	4.6	1.0	2.9
Lahore	1.6	10.3	0.4	3.2	0.1	1.6
Peshawar	1.4	8.2	0.3	4.5	-0.1	3.0
Quetta	2.2	5.7	1.2	2.6	0.6	1.0

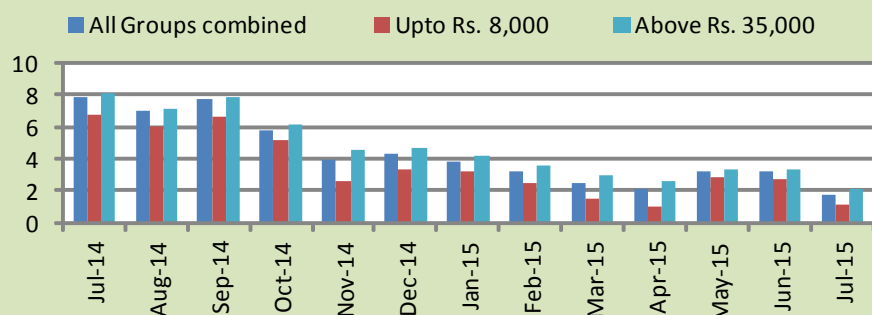
3. Income Group wise Inflation

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

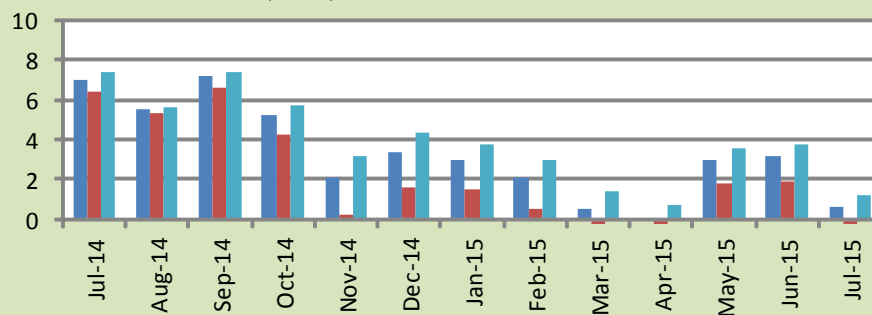
Table 3.1 Income Group- wise Inflation (YoY)									
Income Groups	General			Food			Non-food		
	Jul-14	Jun-15	Jul-15	Jul-14	Jun-15	Jul-15	Jul-14	Jun-15	Jul-15
All Groups Combined	7.9	3.2	1.8	7.0	3.2	0.6	8.5	3.2	2.7
Up to Rs. 8,000	6.7	2.8	1.1	6.4	1.9	-0.6	7.2	3.8	3.5
Rs. 8,001- 12,000	6.8	2.9	1.3	6.6	2.3	-0.2	7.0	3.5	3.1
Rs. 12,001- 18,000	8.0	3.1	1.6	6.8	2.8	0.2	9.1	3.4	2.9
Rs. 18,001- 35,000	8.2	3.1	1.7	7.0	3.3	0.6	9.2	3.0	2.5
Above Rs. 35,000	8.1	3.3	2.1	7.4	3.7	1.2	8.4	3.1	2.6

Fig 3.1: Income Group- wise Inflation

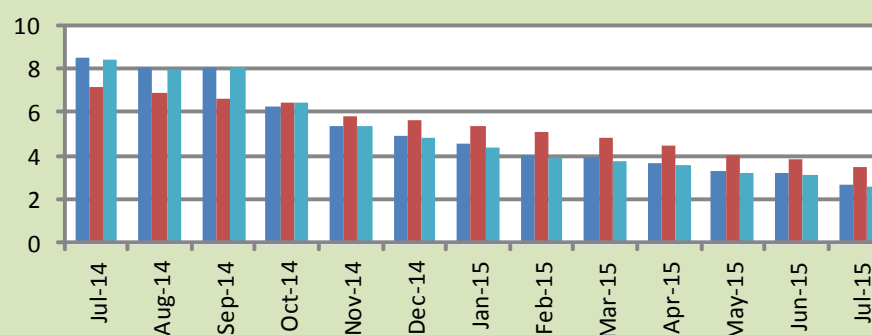
a: CPI Overall Inflation (YoY)



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 14.00 percent during July 2015 from 41.77 percent in June 2015. It was 37.86 percent in July 2014.

The weighted contribution of non-food group increased to 86.00 percent in July 2015 from 58.23 percent in June 2015.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)						
Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
Jul-14	37.86	9.99	28.62	4.75	7.38	11.40
Aug-14	34.01	10.38	31.84	4.47	7.72	11.58
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	14.00	21.50	63.20	-39.86	19.70	21.46

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change

	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15
General	42.8	41.2	46.2	30.9	33.7	25.4	23.0	18.2	14.9	25.8	23.1	31.1	36.7
Food & Non-Alcoholic Beverages	43.0	39.8	43.0	38.3	35.7	2.7	18.6	-3.6	1.8	0.0	32.7	18.6	36.8
Alcoholic Beverages & Tobacco	66.7	50.0	0.0	33.3	33.3	-33.3	-33.3	33.3	-16.7	16.7	100.0	100.0	66.7
Clothing & Footwear	64.4	50.8	71.2	32.2	67.8	55.9	49.2	23.7	35.6	49.2	30.5	50.8	55.9
Housing, Water, Elect, Gas & other Fuels	36.1	33.3	33.3	30.6	25.0	11.1	27.8	0.0	11.1	38.9	13.9	30.6	47.2
Furnishing & Household Equip. Maintenance etc	69.6	75.4	76.8	43.5	65.2	56.5	56.5	59.4	33.3	52.2	42.0	73.9	71.0
Health	23.1	12.8	20.5	12.8	17.9	25.6	23.1	20.5	10.3	5.1	7.7	17.9	12.8
Transport	23.3	23.3	44.2	4.7	-7.0	4.7	-39.5	-16.3	-4.7	-2.3	4.7	11.6	9.3
Communication	16.7	16.7	25.0	8.3	16.7	33.3	8.3	33.3	0.0	25.0	0.0	8.3	16.7
Recreation & Culture	0.0	17.9	20.5	12.8	10.3	15.4	7.7	10.3	10.3	30.8	2.6	0.0	7.7
Education	37.5	25.0	18.8	18.8	0.0	0.0	0.0	0.0	6.3	37.5	0.0	0.0	0.0
Restaurant & Hotels	50.0	66.7	83.3	66.7	0.0	100.0	33.3	66.7	50.0	50.0	50.0	50.0	33.3
Miscellaneous	60.0	60.0	48.6	60.0	37.1	42.9	40.0	57.1	31.4	45.7	17.1	34.3	37.1
NFNE	43.5	42.0	49.7	29.6	34.3	34.3	26.9	25.7	19.8	33.7	18.6	33.7	37.0

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	Jul-14		Jun-15		Jul-15	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg	4.26	1.38	-3.31	-1.07	-3.83	0.84
2	Wheat Flour Bag	10 Kg	4.56	0.31	-2.43	-1.60	-2.19	0.55
3	Rice Basmati Sup. Qlty.	Kg	6.16	0.43	-9.10	-0.03	-10.13	-0.71
4	Pulse Masoor (Washed)	Kg	14.80	-0.54	8.22	0.68	8.45	-0.32
5	Pulse Moong (Washed)	Kg	27.17	0.16	3.46	-0.93	1.51	-1.73
6	Pulse Mash (Washed)	Kg	11.70	-0.22	21.32	3.49	21.30	-0.23
7	Pulse Gram	Kg	-6.93	-1.16	26.09	7.07	38.10	8.25
8	Vegetable Ghee (Loose)	Kg	1.20	-0.51	-12.38	0.14	-11.84	0.10
9	Sugar Refined	Kg	2.73	3.05	12.99	4.80	15.53	5.37
10	Milk Fresh (Unboiled)	Ltr	7.45	0.43	4.72	1.09	4.36	0.08
11	Tea- Tapal Danedar	200 Gm	-23.38	-0.48	13.26	0.28	15.89	1.83
12	Beef With Bone Av. Qlty.	Kg	5.90	0.56	3.80	0.28	4.58	1.31
13	Mutton Av. Qlty.	Kg	6.14	0.02	4.71	0.42	5.52	0.79
14	Chicken Farm Broiler (Live)	Kg	-1.86	-0.08	20.33	14.91	14.04	-5.30
15	Eggs Farm	Doz	6.13	5.73	2.75	4.28	-1.60	1.26
16	Potatoes	Kg	122.54	16.43	-59.12	31.71	-62.50	6.81
17	Onion	Kg	-7.61	18.17	43.46	-0.55	10.67	-8.83
18	Tomatoes	Kg	-48.10	43.71	79.61	22.58	-11.33	-29.06
19	Ginger	Kg	100.14	-3.90	-18.39	23.17	-18.83	-4.42
20	Garlic	Kg	-5.59	1.50	23.71	-5.10	24.10	1.82

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Jul-14		Jun-15		Jul-15	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	-1.2	-2.1	-33.7	-1.6	-37.1	-7.0
Food	-6.0	-1.9	-19.6	-0.2	-16.6	1.7
Metals	-2.3	4.3	-17.7	-4.6	-27.1	-7.6
Energy	-0.8	-3.2	-42.2	-1.9	-46.3	-10.2
Agricultural Raw Material	2.3	-0.4	-10.9	-0.6	-16.1	-6.3
Cotton	-9.5	-7.8	-20.4	-0.7	-13.7	0.0

Source: IMF

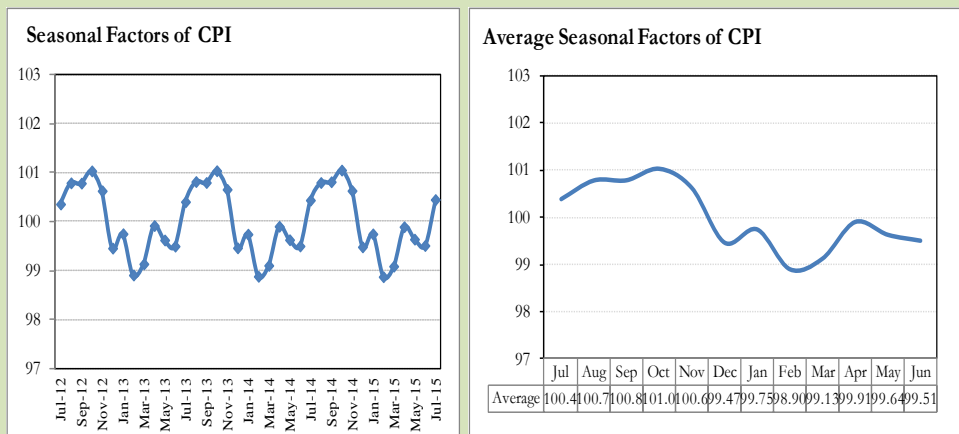
8. Seasonal Adjustment in CPI

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

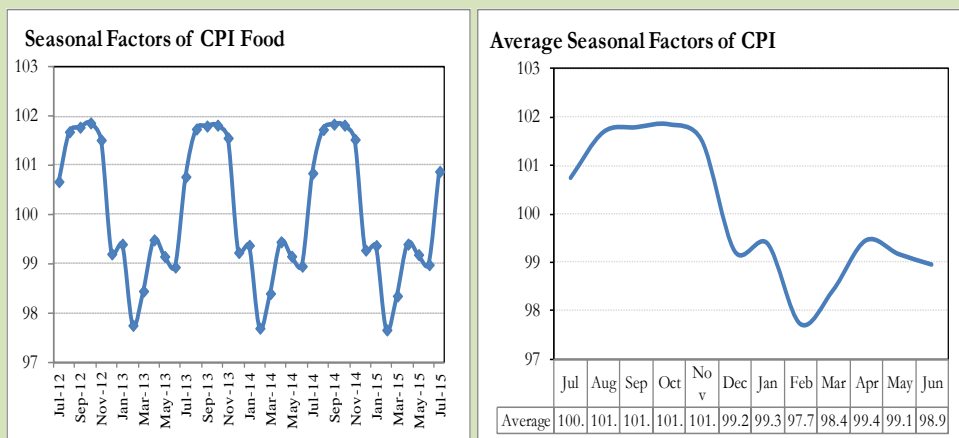
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months from July to November & April and downward seasonality in the remaining months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

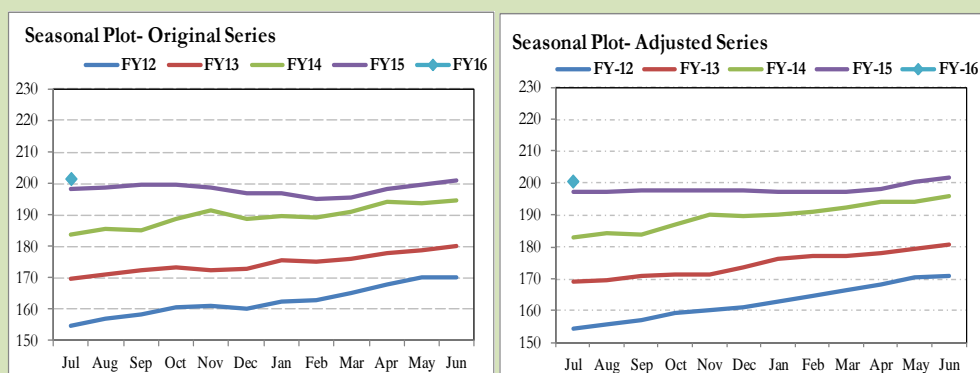
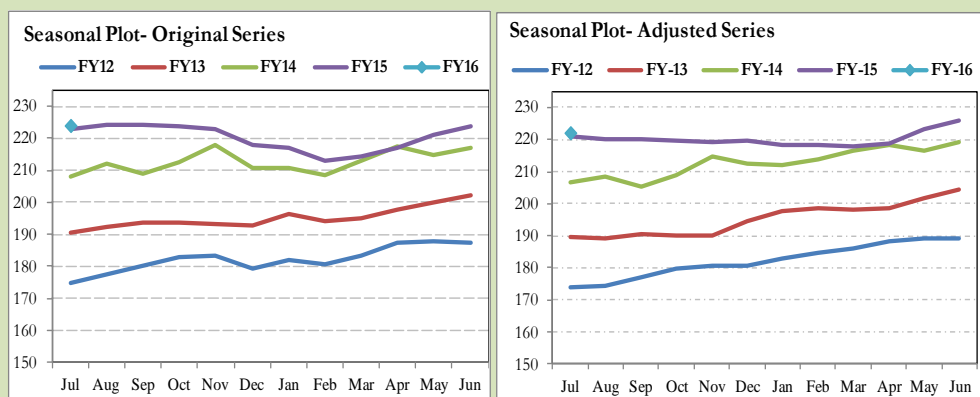


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for July 2015 stood at 200.71 against 201.62 in original series showing a decrease of 0.91 on account of adjustment of upward seasonality in July 2015.

Seasonally adjusted CPI food group for July 2015 stood at 222.19 against 224.14 in original series showing a decrease of 1.95 on account of adjustment of upward seasonality in July 2015.

Month-on-month change of seasonally adjusted CPI series stood at -0.58% reflecting decrease during July 2015 over June 2015 and an increase of 0.36% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at -1.75% reflecting decrease during July 2015 over June 2015 and an increase of 0.13% 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 July 2015 (corresponding to the seasonally adjusted month-on-month rate) is -6.69 percent.

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

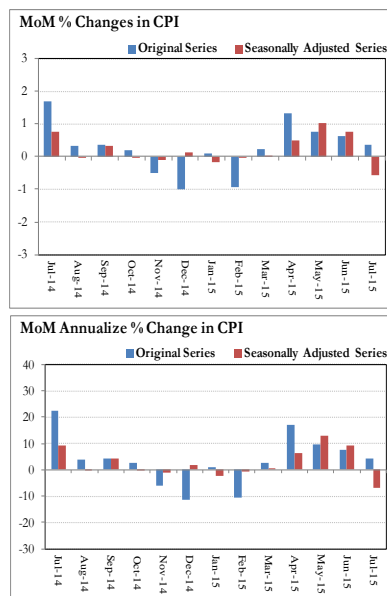
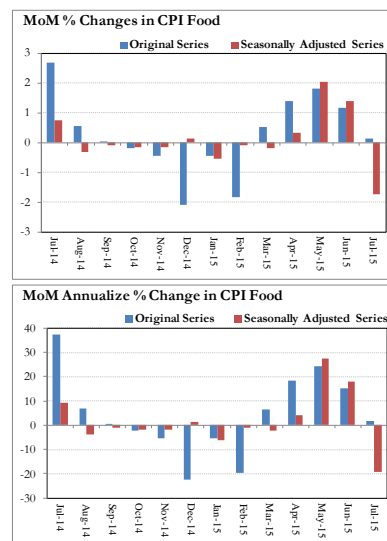


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weight	MoM change			YoY change		
		Jul-14	Jun-15	Jul-15	Jul-14	Jun-15	Jul-15
I. Food Group	37.5	2.7	1.2	0.1	7.0	3.2	0.6
Food & Non-Alcoholic Beverages	34.8	2.8	0.6	0.0	6.2	2.4	-0.3
Alcoholic Beverages & Tobacco	1.4	2.5	13.3	1.7	22.2	17.5	16.6
Restaurant & Hotels	1.2	0.2	0.3	0.2	11.9	4.4	4.4
II. Non-Food Group	62.5	1.0	0.2	0.5	8.5	3.2	2.7
Clothing & Footwear	7.6	1.2	0.5	0.5	10.0	5.6	4.8
Housing, Water, Elect, Gas & other Fuels	29.4	1.2	0.0	0.9	8.9	4.9	4.5
Furnishing & Household Equip. Maintenance etc	4.2	0.2	0.4	0.9	9.2	3.7	4.5
Health	2.2	0.4	0.2	0.2	7.4	3.3	3.2
Transport	7.2	1.6	1.0	0.0	5.1	-8.5	-10.0
Communication	3.2	0.0	0.0	0.0	0.2	0.3	0.4
Recreation & Culture	2.0	0.0	0.0	0.0	5.8	2.2	2.3
Education	3.9	0.2	0.0	0.0	16.5	9.6	9.3
Miscellaneous	2.8	0.9	0.1	-0.1	8.0	3.8	2.8
Headline	100.0	1.7	0.6	0.4	7.9	3.2	1.8

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)	
		Jul-14	Jul-15	Jul-14	Jul-15	Jul-14	Jul-15	Jul-14	Jul-15	Jul-14	Jul-15
I. Food Group	0.6	127	127	23	42	26	37	28	30	50	18
Food & Non-Alcoholic Beverages	-0.3	115	115	23	42	26	34	25	25	41	14
Alcoholic Beverages & Tobacco	16.6	6	6	0	0	0	1	2	1	4	4
Restaurant & Hotels	4.4	6	6	0	0	0	2	1	4	5	0
II. Non-Food Group	2.7	348	348	75	95	64	147	105	91	104	15
Clothing & Footwear	4.8	59	59	8	8	2	25	19	22	30	4
Housing, Water, Elect, Gas & other Fuels	4.5	36	36	8	12	1	13	20	10	7	1
Furnishing & Household Equip. Maintenance etc	4.5	69	69	1	3	15	35	23	30	30	1
Health	3.2	39	39	20	21	7	12	4	4	8	2
Transport	-10.0	43	43	16	23	14	8	8	12	5	0
Communication	0.4	12	12	7	5	3	6	2	0	0	1
Recreation & Culture	2.3	39	39	12	14	7	19	15	6	5	0
Education	9.3	16	16	0	5	4	6	3	1	9	4
Miscellaneous	2.8	35	35	3	4	11	23	11	6	10	2
Overall	1.8	475	475	98	137	90	184	133	121	154	33

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

Table A3: Top and Bottom 15 Contributors to CPI Inflation (YoY) in July 2015					
Top 15 Contributors			YoY Change		Weighted Contribution
Items/ Contributors		Weights	Jul-14	Jul-15	
Ranked by Weighted Contribution					
1	House Rent	21.81	7.81	5.66	55.30
2	Milk Fresh	6.68	7.59	4.41	20.13
3	Education	3.94	16.49	9.32	19.70
4	Cigarette	1.39	22.46	16.71	17.37
5	Chicken	1.36	-1.86	14.04	10.68
6	Sugar	1.04	2.73	15.54	9.15
7	Meat	2.43	5.98	4.90	7.96
8	Tea	0.84	-18.05	13.51	6.56
9	Tailoring	0.88	11.92	9.73	6.11
10	Electricity	4.40	15.82	1.79	5.03
11	Household Servant	1.04	11.34	6.82	4.38
12	Pulse Gram	0.24	-6.93	38.10	4.21
13	Ready Made Garment	0.97	13.58	7.28	4.17
14	Onion	0.53	-7.61	10.67	3.68
15	Ready Made Food	1.23	11.86	4.38	3.60
Total		48.80			178.04
Bottom 15 Contributors					
1	Potatoes	0.47	122.55	-62.50	-38.66
2	Motor Fuel	3.03	4.76	-18.86	-30.45
3	Transport Services	2.70	4.58	-6.92	-11.12
4	Vegetable Ghee	2.07	1.29	-10.81	-9.90
5	Cooking Oil	1.75	0.15	-12.21	-9.71
6	Rice	1.58	3.00	-10.57	-9.12
7	Wheat Flour	4.16	4.84	-2.48	-6.21
8	Fresh Fruits	1.86	16.89	-3.75	-5.36
9	Fresh Vegetable	1.68	6.40	-4.31	-4.56
10	Tomatoes	0.44	-48.10	-11.33	-2.35
11	Fish	0.30	10.68	-4.72	-0.87
12	Wheat	0.35	4.27	-3.83	-0.76
13	Egg	0.46	6.13	-1.60	-0.36
14	Mustard Oil	0.10	-0.15	-3.76	-0.16
15	Motor Vehicle Accessories	0.24	5.33	-0.84	-0.13
Total		21.20			-129.71

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

<u>Top 15 Contributors</u>		Weights	<u>MoM Change</u>		Weighted Contribution
Items/ Contributors			Jun-15	Jul-15	
Ranked by Weighted Contribution					
1	House Rent	21.81	0.00	1.19	59.47
2	Fresh Fruits	1.86	-3.11	7.20	45.17
3	Sugar	1.04	4.80	5.37	16.96
4	Cigarette	1.39	13.45	1.70	9.91
5	Meat	2.43	0.33	1.14	9.35
6	Household Servant	1.04	0.00	2.46	8.05
7	Wheat Flour	4.16	-1.60	0.62	7.30
8	Potatoes	0.47	31.72	6.81	7.23
9	Pulse Gram	0.24	7.07	8.26	5.69
10	Ready Made Garment	0.97	0.77	1.42	4.22
11	Beverages	1.20	1.81	1.10	3.86
12	Tailoring	0.88	1.74	1.09	3.62
13	Tea	0.84	1.47	1.33	3.53
14	Besan	0.15	8.32	5.63	2.48
15	Milk Fresh	6.68	1.06	0.07	1.74
Total		45.18			188.57
<u>Bottom 15 Contributors</u>					
1	Tomatoes	0.44	22.58	-29.06	-36.76
2	Chicken	1.36	14.91	-5.30	-23.75
3	Fresh Vegetable	1.68	-11.11	-3.74	-19.22
4	Onion	0.53	-0.55	-8.83	-18.08
5	Cooking Oil	1.75	-0.86	-0.90	-3.10
6	Personal Equipments	0.84	-0.10	-0.69	-2.14
7	Rice	1.58	-1.26	-0.55	-2.10
8	Pulse Moong	0.23	-0.93	-1.73	-1.72
9	Fish	0.30	-0.33	-1.03	-0.90
10	Dry Fruits	0.25	0.99	-0.66	-0.59
11	Pulse Mash (Washed)	0.21	3.49	-0.23	-0.17
12	Beans	0.03	1.27	-1.63	-0.14
13	Motor Vehicle	0.66	0.00	-0.08	-0.12
14	Betel Leaves & Nuts	0.02	1.68	-1.36	-0.09
15	Woolen Readymade Garments	0.40	0.00	0.00	0.00
Total		10.30			-108.88

Table A3.2: Top Fifteen Contributors to CPI Inflation (YoY) in July 2015					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Jul-14	Jul-15	
A. Ranked by Percentage Change					
1	Pulse Gram	0.24	-6.93	38.10	4.21
2	Besan	0.15	-5.25	32.44	2.34
3	Pulse Mash (Washed)	0.21	11.71	21.30	2.62
4	Cigarette	1.39	22.46	16.71	17.37
5	Sugar	1.04	2.73	15.54	9.15
6	Chicken	1.36	-1.86	14.04	10.68
7	Tea	0.84	-18.05	13.51	6.56
8	Gram Whole	0.16	-4.28	11.17	0.91
9	Onion	0.53	-7.61	10.67	3.68
10	Woolen Readymade Garments	0.40	13.45	10.31	2.50
11	Tailoring	0.88	11.92	9.73	6.11
12	Education	3.94	16.49	9.32	19.70
13	Sewing Needle & Dry Cell	0.15	9.29	9.23	0.70
14	Gur	0.02	-1.69	8.62	0.14
15	Pulse Masoor	0.27	14.47	8.35	1.14
Total		11.59			87.81
B. Ranked by Weights					
1	House Rent	21.81	7.81	5.66	55.30
2	Milk Fresh	6.68	7.59	4.41	20.13
3	Electricity	4.40	15.82	1.79	5.03
4	Wheat Flour	4.16	4.84	-2.48	-6.21
5	Education	3.94	16.49	9.32	19.70
6	Communication & Apparatus	3.15	0.19	0.17	0.19
7	Motor Fuel	3.03	4.76	-18.86	-30.45
8	Transport Services	2.70	4.58	-6.92	-11.12
9	Meat	2.43	5.98	4.90	7.96
10	Vegetable Ghee	2.07	1.29	-10.81	-9.90
11	Fresh Fruits	1.86	16.89	-3.75	-5.36
12	Cooking Oil	1.75	0.15	-12.21	-9.71
13	Cotton Cloth	1.73	15.95	3.54	3.53
14	Fresh Vegetable	1.68	6.40	-4.31	-4.56
15	Rice	1.58	3.00	-10.57	-9.12
Total		63.00			25.43
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 1.8 percent in July, 2015.					

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

Table 1: Top 10 Contributors to CPI Food Inflation (2017, July 2015)					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Jul-14	Jul-15	
A. Ranked by Weighted Contribution					
1	Milk Fresh	6.68	7.59	4.41	20.13
2	Cigarette	1.39	22.46	16.71	17.37
3	Chicken	1.36	-1.86	14.04	10.68
4	Sugar	1.04	2.73	15.54	9.15
5	Meat	2.43	5.98	4.90	7.96
6	Tea	0.84	-18.05	13.51	6.56
7	Pulse Gram	0.24	-6.93	38.10	4.21
8	Onion	0.53	-7.61	10.67	3.68
9	Ready Made Food	1.23	11.86	4.38	3.60
10	Pulse Mash (Washed)	0.21	11.71	21.30	2.62
Total		15.95			85.96
B. Ranked by Percentage Change					
1	Pulse Gram	0.24	-6.93	38.10	4.21
2	Besan	0.15	-5.25	32.44	2.34
3	Pulse Mash (Washed)	0.21	11.71	21.30	2.62
4	Cigarette	1.39	22.46	16.71	17.37
5	Sugar	1.04	2.73	15.54	9.15
6	Chicken	1.36	-1.86	14.04	10.68
7	Tea	0.84	-18.05	13.51	6.56
8	Gram Whole	0.16	-4.28	11.17	0.91
9	Onion	0.53	-7.61	10.67	3.68
10	Gur	0.02	-1.69	8.62	0.14
Total		5.95			57.64
C. Ranked by Weights					
1	Milk Fresh	6.68	7.59	4.41	20.13
2	Wheat Flour	4.16	4.84	-2.48	-6.21
3	Meat	2.43	5.98	4.90	7.96
4	Vegetable Ghee	2.07	1.29	-10.81	-9.90
5	Fresh Fruits	1.86	16.89	-3.75	-5.36
6	Cooking Oil	1.75	0.15	-12.21	-9.71
7	Fresh Vegetable	1.68	6.40	-4.31	-4.56
8	Rice	1.58	3.00	-10.57	-9.12
9	Cigarette	1.39	22.46	16.71	17.37
10	Chicken	1.36	-1.86	14.04	10.68
Total		24.98			11.29
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 0.6 percent in July, 2015.					

Table A3.4: Top Ten Contributors to CPI Non-food Inflation (YoY) in July 2015					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Jul-14	Jul-15	
A. Ranked by Weighted Contribution					
1	House Rent	21.81	7.81	5.66	55.30
2	Education	3.94	16.49	9.32	19.70
3	Tailoring	0.88	11.92	9.73	6.11
4	Electricity	4.40	15.82	1.79	5.03
5	Household Servant	1.04	11.34	6.82	4.38
6	Ready Made Garment	0.97	13.58	7.28	4.17
7	Cotton Cloth	1.73	15.95	3.54	3.53
8	Personal Care	1.49	7.89	3.37	2.83
9	Woolen Readymade Garments	0.40	13.45	10.31	2.50
10	Household Textile	0.65	9.54	4.87	1.77
Total		37.33			105.33
B. Ranked by Percentage Change					
1	Woolen Readymade Garments	0.40	13.45	10.31	2.50
2	Tailoring	0.88	11.92	9.73	6.11
3	Education	3.94	16.49	9.32	19.70
4	Sewing Needle & Dry Cell	0.15	9.29	9.23	0.70
5	Construction Wage Rate	0.33	7.99	7.56	1.41
6	Ready Made Garment	0.97	13.58	7.28	4.17
7	Household Servant	1.04	11.34	6.82	4.38
8	Postal Services	0.07	0.03	6.24	0.25
9	House Rent	21.81	7.81	5.66	55.30
10	Hosiery	0.51	12.82	5.62	1.77
Total		30.11			96.31
C. Ranked by Weights					
1	House Rent	21.81	7.81	5.66	55.30
2	Electricity	4.40	15.82	1.79	5.03
3	Education	3.94	16.49	9.32	19.70
4	Communication & Apparatus	3.15	0.19	0.17	0.19
5	Motor Fuel	3.03	4.76	-18.86	-30.45
6	Transport Services	2.70	4.58	-6.92	-11.12
7	Cotton Cloth	1.73	15.95	3.54	3.53
8	Gas	1.58	0.00	0.00	0.00
9	Footwear	1.55	-3.08	0.60	0.43
10	Personal Care	1.49	7.89	3.37	2.83
Total		45.39			45.46
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 2.7 percent in July, 2015.					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: July 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, Chillies Green, Ginger, Grapes, Cooking Oil (Pakwan), Cooking Oil (Dalda), Vegetable Ghee (Loose), Tomatoes, Tinda	Pastry Av.Qlty., Cold Drink (Standard Size), Beef With Bone Av.Qlty., Coffee-Nescafe 75 Gm, Cornflakes Fauji 225 Gm.	Coriander Seed Powd.National., Raisins Av.Qlty., Tomato Ketchup Ahmed/Mitchells, Gur Av.Qlty	Pulse Gram, Besan Av. Qlty., Mango Kalmi, Garlic, Gram Whole Black Av Qlty., Pulse Mash (Washed), Almonds Whole Av.Qlty., Tea Lipton Yellow Label 200 Gm, Tapal Danedar Tea 200 Gm, Sugar Refined
Alcoholic Beverages & Tobacco		Betel Leaves	Betel Nuts	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	Azarband Cotton Avg. Qlty, Shoe Polish Charges Avg, Heavy Wt Suiting Law.Pur Sup. Qlty, Washing Charges Paint & Shirt, Tropical Suiting Law.Pur	Frock W/Wear Girls, Vest/Shameez (Women) Avg. Qlty, Awami-Suit W&W (Gents)Av.Qlty, School Uni. Pant, Shirt Boys	Secondhand Sweater For Men, Gloves Av.Qlty, Tailoring Suit (Female), Tailoring Awami-Suit (Male)
Housing, Water, Elect, Gas & other Fuels	Kerosene Oil, Iron Bar (M.S. Bar) 1/2", Cement (Local), Elect. Charges Upto 50 Units	Firewood Whole, Bricks (New) Ist Class, Timber Shesham Log, Synthetic Enemal ICI, Cement Blocks (6"X8"X12")	Plumber Wage Rate, Electrician Wage Rate(P/Pnt), Mason (Raj) Wage Rate, Carpenter Wage Rate, House Rent For Q-II	Unskilled Labour Wage Rat
Furnishing & Household Equip. Maintenance etc	Surf Excel 400 Gms Poly Bag, Electric Blub Energy Saver 14 Watt, Sewing Machine Needle (Singer)	Tea Set Pak. China Wear 21 Pcs, Pressure Cooker 4 Ltr. Bed Sheet Double With Two Pillow Cover, Elect. Iron Philips	Harpic, Thermos Starvac 1 Ltr, Match Box (Small) Robin Blue (35 Gms), Boot Polish Cherry/Kiwi 50 Ml, Chair Shesham Wood, Lota Plastic (Med Size) Avg. Qlty	
Health	Flagyl Tab. 200 Mg., Betnovate-N Ointment 5 Gm, Calcium Syrup Sandoz, Burnol Cream 30 Gm, Lederplex Syrup	Thermometer China, Glycerin Small Bottle, O.R.S. (Nimcol), Doctor (MBBS) Clinic Fee, Septran Tablets, ECG Charges	Gripe-Water Woodward's, X-Ray (Chest) Charges, Urine Test (Dr) Charges, Blood Test (Cp) Charges	Jouhar Joshanda, Hydryllin Syrup 120 Ml.
Transport	Petrol Super, High Speed Diesel HSD, Gas Cylinder S. Size (L.P.G), Minibus Fare Max. Within City, Bus Fare Outside City (A/C)	Car Service Charges, Car Suzuki 1000 CC, Motor Cycle Service Charges, Cycle Overhauling Charges, Bicycle With Tyres & Tube	Train Fare Eco. 1-100 Km., Train Fare Eco. 101-500 K, Train Fare Ist Slp. 1-100, Tyre Puncture Charges, Train Fare Ist Slp.101-500	
Communication	Postal Envelope Domestic, Mobile Cell Charges, Telephone Charges Local Call	Internet Charges, Telephone Set Av. Qlty, Fax Charges (Local), Postal Envelope For Saudi Arabia		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	Pencil Goldfish/Deer, Urdu Book Ist Year/ Inter, Urdu Book Class V (T.B.Board), Fountain Pen Hero/Wings/China, Photostat Paper 70 Gm	Cinema Non-A/C High Class, Maths Book Class IX or X, Maths Book Cals V (T.B.Board), Cinema A/C High Class, English Book Class V1	
Education	Govt. Med. College Fee MBBS Ist Year, Govt. Engg. Coll. Fee Ist Year	MBA Tuition Fee, Pvt Med. College Fee MBBS(Ist Year), I.T. Tuition Fees	Govt. University Fee MSC/ MA	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)
Restaurant & Hotels		Chicken Biryani Full/Double, Bread Tandoori St. Size	Cooked Beef (Av. Hotel), Tea Prepared (Ordinary), Cooked Dal (Av. Hotel)	
Miscellaneous	Toilet Soap Lux 95 Gms, Silver Tezabi 24 Ct, Gold Tezabi 24 Ct, Toothpaste Macleans 70 Gms	Disposable Razor Gillette-II, Toothpaste Med Size Colgate 70Gms, Hair Color Bigen	Haircut Charges For Men, Perfume Med. Size Medora/Broche, Suitcase Regin (24"X16"X6")	Shaving Charges, Purse Ladies (Leather) Av. Qlty

Table A5: City- wise CPI Inflation by Income Groups, July 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	0.1	3.2	-0.3	1.4	0.7	5.5	0.2	3.5	-0.2	1.2	0.6	6.1
2 Islamabad	0.6	1.7	0.6	0.7	0.5	2.9	0.6	1.9	0.7	1.2	0.5	2.7
3 Lahore	0.2	1.7	0.2	0.9	0.2	3.0	0.1	1.7	0.1	1.0	0.2	2.6
4 Gujranwala	1.1	2.4	0.7	1.1	1.6	4.1	1.1	2.2	0.8	1.1	1.5	3.4
5 Sialkot	0.3	0.5	0.4	-1.2	0.1	2.8	0.2	0.1	0.4	-1.6	0.0	2.1
6 Faisalabad	0.2	-0.1	0.1	-2.1	0.3	2.6	0.1	0.0	0.0	-1.6	0.3	1.8
7 Multan	0.9	1.5	1.1	0.6	0.6	2.6	0.8	1.6	1.1	1.1	0.6	2.1
8 Sargodha	1.5	3.8	0.4	0.6	2.6	7.5	1.5	4.3	0.4	1.0	2.5	7.6
9 Bahawalpur	0.3	0.5	0.3	-1.9	0.4	3.2	0.4	0.6	0.4	-1.2	0.4	2.3
10 Karachi	0.3	0.7	-0.3	-3.0	1.1	5.8	0.3	0.8	-0.3	-2.8	1.0	5.2
11 Hyderabad	0.2	2.1	0.0	1.4	0.4	3.1	0.2	2.5	0.0	1.9	0.3	3.2
12 Sukkur	0.8	-0.3	1.2	-3.2	0.2	3.4	0.9	0.4	1.5	-2.5	0.2	3.8
13 Larkana	0.5	-1.6	0.4	-4.0	0.6	1.3	0.6	-0.8	0.5	-2.8	0.6	1.3
14 Peshawar	-0.5	2.6	-1.2	1.5	0.2	3.9	-0.3	3.0	-0.8	2.2	0.3	3.8
15 Bannu	1.0	0.7	1.5	-1.4	0.4	3.2	1.0	0.6	1.6	-1.7	0.4	3.2
16 Quetta	0.9	0.6	1.5	-0.8	0.1	2.6	0.7	0.9	1.3	-0.2	0.0	2.2
17 Khuzdar	0.3	1.1	-0.5	0.9	1.3	1.3	0.0	0.4	-0.5	1.1	0.5	-0.4
	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	0.2	3.7	-0.2	1.5	0.6	5.8	0.2	3.7	-0.2	2.0	0.6	5.1
2 Islamabad	0.6	1.8	0.8	1.5	0.5	2.1	0.6	1.9	0.8	1.7	0.5	2.1
3 Lahore	0.1	1.6	0.1	1.3	0.2	1.9	0.1	1.5	0.0	1.7	0.2	1.3
4 Gujranwala	1.1	2.2	0.6	1.5	1.6	3.0	1.0	2.1	0.5	1.9	1.3	2.2
5 Sialkot	0.2	-0.5	0.6	-2.2	-0.1	1.3	0.2	-0.3	0.8	-1.7	-0.3	1.1
6 Faisalabad	0.1	0.2	0.0	-1.2	0.3	1.7	0.1	0.2	-0.1	-0.6	0.3	1.0
7 Multan	0.8	1.6	0.9	1.3	0.7	1.9	0.6	1.7	0.7	1.8	0.5	1.6
8 Sargodha	1.8	4.5	0.5	1.2	2.8	7.4	1.7	4.4	0.3	1.7	2.7	6.5
9 Bahawalpur	0.3	0.8	0.2	-0.8	0.4	2.1	0.2	0.7	-0.1	-0.3	0.4	1.5
10 Karachi	0.3	1.1	-0.3	-2.3	0.9	4.9	0.4	1.5	-0.1	-1.7	0.9	4.5
11 Hyderabad	0.3	2.6	0.2	2.5	0.4	2.6	0.3	2.5	0.2	3.1	0.3	2.0
12 Sukkur	1.0	0.7	1.6	-2.2	0.3	3.8	0.8	1.0	1.5	-1.6	0.2	3.3
13 Larkana	0.4	-0.4	0.2	-2.3	0.5	1.3	0.3	0.2	0.2	-1.4	0.5	1.5
14 Peshawar	-0.2	3.1	-0.8	2.3	0.4	3.8	-0.1	3.0	-0.6	2.8	0.3	3.3
15 Bannu	0.9	0.7	1.3	-1.9	0.5	3.2	1.0	1.2	1.7	-1.6	0.5	3.6
16 Quetta	0.7	0.8	1.3	0.2	0.0	1.5	0.7	1.1	1.5	0.9	0.0	1.4
17 Khuzdar	0.0	0.2	-0.4	1.8	0.4	-1.4	0.0	0.6	-0.3	2.4	0.4	-1.0
	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	0.4	5.1	0.0	2.4	0.6	6.4	0.3	4.5	-0.1	2.1	0.6	6.3
2 Islamabad	0.6	3.7	1.0	2.6	0.4	4.3	0.6	3.5	1.0	2.3	0.4	4.4
3 Lahore	0.0	1.7	0.0	1.8	0.1	1.7	0.1	1.6	0.0	1.6	0.1	1.7
4 Gujranwala	1.0	2.3	0.5	2.1	1.3	2.5	1.0	2.2	0.6	1.7	1.4	2.6
5 Sialkot	0.2	-0.2	0.7	-1.7	0.0	0.6	0.2	-0.2	0.7	-1.8	-0.1	1.0
6 Faisalabad	0.1	0.5	-0.3	-0.1	0.2	0.9	0.1	0.3	-0.1	-0.9	0.2	1.1
7 Multan	0.6	1.8	0.8	2.8	0.5	1.3	0.7	1.7	0.8	1.9	0.5	1.5
8 Sargodha	1.9	4.7	0.4	2.0	2.6	5.9	1.7	4.4	0.4	1.5	2.5	6.3
9 Bahawalpur	0.2	1.1	0.1	-0.1	0.2	1.7	0.3	0.8	0.2	-0.7	0.3	1.8
10 Karachi	1.5	4.0	0.2	-0.7	2.1	6.7	1.0	2.9	0.0	-1.5	1.8	6.4
11 Hyderabad	0.4	2.7	0.7	4.3	0.3	1.7	0.3	2.5	0.3	3.1	0.3	2.1
12 Sukkur	0.6	1.6	1.3	-1.3	0.3	3.0	0.8	0.8	1.4	-2.0	0.4	2.9
13 Larkana	0.2	0.8	-0.2	-0.4	0.3	1.4	0.4	-0.3	0.3	-2.1	0.5	0.9
14 Peshawar	0.1	3.0	-0.5	3.0	0.3	3.0	-0.1	3.0	-0.7	2.5	0.3	3.3
15 Bannu	0.7	0.8	1.6	-0.8	0.3	1.6	0.9	0.8	1.5	-1.5	0.5	2.5
16 Quetta	0.4	1.1	1.0	0.6	0.1	1.4	0.6	1.0	1.3	0.4	0.1	1.5
17 Khuzdar	0.3	1.3	0.1	5.2	0.4	-0.6	0.1	0.6	-0.4	2.3	0.5	-0.5

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

City	High inflation cities			City	Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Mardan	5.1	5.0	5.1	Multan	1.7	1.9	1.5
Nawabshah	4.9	3.1	6.0	Lahore	1.6	1.6	1.7
Rawalpindi	4.5	2.1	6.3	Sahiwal	1.4	-2.9	4.2
Sargodha	4.4	1.5	6.3	Vehari	1.3	3.7	-0.4
Mingora	4.3	2.9	5.2	Quetta	1.0	0.4	1.5
Islamabad	3.5	2.3	4.4	D. I. Khan	0.9	1.6	0.4
Wazirabad	3.0	3.7	2.5	Sukkur	0.8	-2.0	2.9
Peshawar	3.0	2.5	3.3	Bahawalpur	0.8	-0.7	1.8
Karachi	2.9	-1.5	6.4	Bannu	0.8	-1.5	2.5
Jhelum	2.6	3.3	2.1	D.G. Khan	0.7	-1.1	1.9
Hyderabad	2.5	3.1	2.1	Loralai & Cantt	0.7	-0.2	1.3
Attock	2.4	-1.7	5.4	Khuzdar	0.6	2.3	-0.5
Bahawalnagar	2.4	2.8	2.1	Mirpur Khas	0.6	-0.2	1.3
Gujranwala	2.2	1.7	2.6	Rahim Yar Khan	0.6	-1.6	2.1
Mianwali	1.9	-1.4	4.0	Dadu	0.4	-0.2	0.8
Mithi	1.8	1.2	2.2	Faisalabad	0.3	-0.9	1.1
Abbotabad	1.8	2.4	1.3	Jhang	0.2	-0.9	0.9
				Sialkot	-0.2	-1.8	1.0
				Larkana	-0.3	-2.1	0.9
				Gwadar	-0.6	-0.8	-0.5
				Turbat	-0.7	-2.1	0.3
				Muzaffargarh	-1.0	-2.7	0.3
				Dera Mrd.Jamali	-2.1	-6.0	0.7

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		
	Jul-14	Jun-15	Jul-15	Jul-14	Jun-15	Jul-15
<u>Up to Rs. 8000</u>						
General	1.9	0.6	0.3	6.7	2.8	1.1
Food	2.7	0.9	0.1	6.4	1.9	-0.6
Non-food	1.0	0.1	0.6	7.2	3.8	3.5
<u>Rs. 8001- 12000</u>						
General	1.9	0.6	0.3	6.8	2.9	1.3
Food	2.7	1.1	0.1	6.6	2.3	-0.2
Non-food	0.9	0.2	0.6	7.0	3.5	3.1
<u>Rs. 12001- 18000</u>						
General	1.8	0.7	0.3	8.0	3.1	1.6
Food	2.7	1.2	0.1	6.8	2.8	0.2
Non-food	0.9	0.2	0.5	9.1	3.4	2.9
<u>Rs. 18001- 35000</u>						
General	1.7	0.7	0.3	8.2	3.1	1.7
Food	2.7	1.3	0.1	7.0	3.3	0.6
Non-food	0.9	0.2	0.5	9.2	3.0	2.5
<u>Above Rs. 35000</u>						
General	1.6	0.6	0.4	8.1	3.3	2.1
Food	2.7	1.2	0.2	7.4	3.7	1.2
Non-food	1.0	0.2	0.5	8.4	3.1	2.6
<u>All income groups</u>						
General	1.7	0.6	0.4	7.9	3.2	1.8
Food	2.7	1.2	0.1	7.0	3.2	0.6
Non-food	1.0	0.2	0.5	8.5	3.2	2.7

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices Jul-15	Percentage change	
				YoY	MoM
1	Wheat	10Kg.	327.7	-5.0	0.6
2	Wheat Flour Bag	10Kg.	377.1	-2.3	0.4
3	Rice Basmati Broken	Kg.	68.9	-7.1	-0.2
4	Rice Irri-6	Kg.	49.8	-8.7	-0.7
5	Bread Plain Med. Size (340-400 Gm.)	Each	40.8	0.5	0.0
6	Beef	Kg.	307.4	5.0	0.9
7	Mutton	Kg.	606.5	4.6	0.7
8	Chicken Live (Farm)	Kg.	187.7	13.7	1.6
9	Milk Fresh	Litr	77.4	3.2	0.1
10	Curd	Kg.	90.9	3.4	0.2
11	Milk Powdered Nido	500G	356.5	2.6	0.2
12	Egg Hen (Farm)	Doz.	90.0	1.3	8.4
13	Mustard Oil	Kg.	179.1	-3.4	0.3
14	Cooking Oil (Tin)	2.5Ltr	465.1	-13.9	-0.4
15	Veg. Ghee (Tin)	2.5Kg.	457.4	-10.6	-0.4
16	Veg. Ghee Loose	Kg.	141.1	-11.5	-0.5
17	Bananas	Doz.	100.6	-11.1	2.3
18	Masoor Pulse Washed	Kg.	141.7	9.7	-0.5
19	Moong Pulse Washed	Kg.	164.0	2.5	-3.0
20	Mash Pulse Washed	Kg.	184.3	22.8	0.8
21	Gram Pulse Washed	Kg.	107.2	43.8	9.4
22	Potatoes	Kg.	27.2	-60.4	10.7
23	Onions	Kg.	42.4	6.7	-8.0
24	Tomatoes	Kg.	46.9	-6.2	-20.4
25	Sugar	Kg.	65.4	17.0	4.7
26	Gur	Kg.	91.8	12.6	2.1
27	Salt Powdered Loose (Lahori)	Kg.	10.3	4.7	1.6
28	Red Chilies Powder Loose	Kg.	270.1	8.2	0.4
29	Garlic	Kg.	146.4	20.9	2.7
30	Tea (Yellow Label)	200Gm.	156.5	26.0	2.2
31	Cooked Beef Plate	Each	84.0	2.5	0.1
32	Cooked Dal Plate	Each	49.2	3.8	0.0
33	Tea Prepared (Sada)	Cup	18.9	2.9	0.1
34	Cigarettes K-2 (20'S)	20'S	54.7	22.1	6.1
35	Long Cloth (Coarse Latha)	Mtr.	202.5	1.9	0.1
36	Shirting	Mtr.	161.0	3.2	0.5
37	Lawn	Mtr.	243.0	2.3	0.1
38	Georgette (Voil Printed)	Mtr.	123.1	0.8	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	124.2	0.0	0.0
44	Kerosene	Litr	91.1	-23.2	0.1
45	Firewood	40Kg	580.0	4.6	0.1
46	Energy Savor 14 Watts	Each	166.2	0.6	0.3
47	Washing Soap (200-250 Gm.)	Cake	24.4	0.8	0.0
48	Match Box	Each	1.9	25.5	0.5
49	Petrol	Litr	78.5	-28.3	0.0
50	Diesel	Litr	88.0	-20.6	0.0
51	L.P.G.(11 Kg Cylinder.)	Each	1064.9	-19.6	-1.3
52	Tele. Local Call	Call	3.9	0.0	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	36.5	1.3	0.2
Maximum				43.8	10.7
Median				1.3	0.1
Minimum				-60.4	-20.4

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

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

Items and specification	Weights	Index		
		Jul-14	Jun-15	Jul-15
General	100.00	198.05	200.89	201.62
Food & Non-Alcoholic Beverages.	34.83	220.48	219.66	219.76
1 Wheat	0.35	203.12	193.72	195.34
2 Wheat Flour	4.16	214.47	207.87	209.15
3 Wheat Product	0.10	216.16	211.77	212.14
4 Besan	0.15	171.35	214.84	226.93
5 Rice	1.58	194.78	175.16	174.19
6 Cereals	0.16	237.23	241.01	242.61
7 Bakery & Confectionary	1.16	204.30	208.28	208.80
8 Nimco	0.46	232.48	239.40	240.02
9 Meat	2.43	238.64	247.52	250.33
10 Chicken	1.36	199.78	240.58	227.83
11 Fish	0.30	221.80	213.54	211.33
12 Milk Fresh	6.68	244.00	254.57	254.76
13 Milk Product	0.63	240.15	246.89	247.17
14 Milk Powder	0.11	223.66	226.31	226.78
15 Egg	0.46	177.27	172.26	174.43
16 Mustard Oil	0.10	158.40	151.35	152.44
17 Cooking Oil	1.75	161.87	143.39	142.10
18 Vegetable Ghee	2.07	157.83	140.50	140.77
19 Dry Fruits	0.25	237.98	254.52	252.84
20 Fresh Fruits	1.86	273.57	245.63	263.31
21 Pulse Masoor	0.27	180.20	195.23	195.25
22 Pulse Moong	0.23	301.58	311.53	306.14
23 Pulse Mash (Washed)	0.21	208.89	253.97	253.39
24 Pulse Gram	0.24	166.99	213.03	230.62
25 Gram Whole	0.16	179.25	193.36	199.27
26 Beans	0.03	240.10	236.80	232.93
27 Potatoes	0.47	469.93	165.00	176.23
28 Onion	0.53	230.52	279.84	255.12
29 Tomatoes	0.44	167.23	209.01	148.28
30 Fresh Vegetable	1.68	224.72	223.39	215.04
31 Sugar	1.04	201.28	220.70	232.55
32 Gur	0.02	257.03	272.24	279.18
33 Honey	0.04	288.66	303.39	304.35
34 Sweet Meet	0.25	227.84	235.81	235.91
35 Beverages	1.20	208.53	213.32	215.67
36 Jam, Tomato Ketchup & Pickle	0.25	196.07	208.86	209.37
37 Condiments	0.27	247.60	257.93	258.03
38 Spices	0.54	228.43	236.20	237.36
39 Tea	0.84	207.09	231.98	235.06
Alcoholic Beverages, Tobacco	1.41	265.82	304.76	309.83
40 Cigarette	1.39	266.88	306.27	311.47
41 Betel Leaves & Nuts	0.02	202.02	213.15	210.25
Clothing & Footwear	7.57	209.51	218.56	219.65
42 Cotton Cloth	1.73	206.19	213.01	213.49
43 Woolen Cloth	0.88	228.36	234.23	234.73
44 Ready Made Garment	0.97	210.19	222.33	225.49
45 Woolen Readymade Garments	0.40	218.34	240.86	240.86
46 Hosiery	0.51	220.45	230.96	232.85
47 Dopatta	0.44	225.70	232.70	232.89
48 Cleaning & Laundering	0.21	229.21	238.32	238.32

Table A10: Consumer Price Index Numbers by Major Groups and Composite Commodities				
Items and specification	Weights	Index		
		Jul-14	Jun-15	Jul-15
49 Tailoring	0.88	253.71	275.40	278.39
50 Footwear	1.55	163.78	164.64	164.77
Housing,Water,Elect,Gas & Other Fuel	29.41	171.62	177.76	179.29
51 House Rent	21.81	159.82	166.88	168.87
52 Construction Input Item	0.56	234.10	239.17	239.75
53 Construction Wage Rate	0.33	200.14	213.11	215.28
54 Water Supply	0.50	149.92	149.92	149.92
55 Electricity	4.40	227.44	231.52	231.52
56 Gas	1.58	143.81	143.81	143.81
57 Kerosene Oil	0.01	278.37	223.49	223.65
58 Fire Wood Whole	0.23	264.49	272.98	275.52
Furnished H.Hold Equip.& Maint. Etc	4.21	204.42	211.59	213.53
59 Furniture	0.33	195.17	205.27	205.94
60 Household Textile	0.65	199.95	209.43	209.69
61 Household Equipment	0.59	170.88	175.10	175.41
62 Utensils	0.32	206.30	214.29	216.41
63 Plastic Products	0.25	195.95	202.65	203.33
64 Washing Soap & Detergent	0.79	221.06	222.38	223.42
65 Sewing Needle & Dry Cell	0.15	182.15	198.97	198.97
66 Household Servant	1.04	219.87	229.23	234.86
67 Marriage Hall Charges	0.08	224.45	231.83	232.28
Health	2.19	173.40	178.55	178.91
68 Drug Medicine	1.27	145.59	148.37	148.93
69 Medical Equipment	0.01	220.36	226.26	226.26
70 Doctor (MBBS) Clinic Fee	0.59	234.15	242.85	242.85
71 Medical Test	0.32	170.28	178.21	178.44
Transport	7.20	198.38	178.59	178.62
72 Motor Vehicle	0.66	160.37	163.41	163.28
73 Motor Vehicle Accessories	0.24	228.75	226.28	226.83
74 Motor Fuel	3.03	190.45	154.52	154.54
75 Mechanical Service	0.46	206.25	216.12	216.37
76 Motor Vehicle Tax	0.11	210.18	210.18	210.18
77 Transport Services	2.70	212.03	197.35	197.35
Communication	3.22	129.85	130.30	130.35
78 Postal Services	0.07	215.95	227.95	229.42
79 Communication & Apparatus	3.15	128.05	128.25	128.27
Recreation & Culture	2.02	188.76	192.98	193.01
80 Recreation & Culture	0.86	127.43	128.25	128.25
81 Text Books	0.57	279.73	290.62	290.62
82 News Papers	0.19	175.42	175.42	175.42
83 Stationery	0.40	197.92	201.99	202.14
Education	3.94	191.33	209.17	209.17
84 Education	3.94	191.33	209.17	209.17
Restaurants And Hotels	1.23	239.23	249.24	249.70
85 Ready Made Food	1.23	239.23	249.24	249.70
Miscellaneous Goods And Services	2.76	216.98	223.37	223.13
86 Personal Care	1.49	200.54	206.85	207.30
87 Cosmetics	0.39	183.13	190.66	191.12
88 Blades	0.03	184.82	185.88	187.44
89 Personal Equipments	0.84	262.76	268.97	267.12

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

Items and Specifications	Index		
	Jul-14	Jun-15	Jul-15
General	215.76	210.37	209.58
Agriculture Forestry & Fishery	230.64	227.46	224.93
1 Wheat	207.97	194.99	199.02
2 Maize	191.76	196.59	194.73
3 Rice	179.66	163.26	161.31
4 Sorghum/Jowar	323.08	314.96	336.99
5 Millet/Bajra	174.47	200.42	203.58
6 Vegetables	247.48	267.36	246.36
7 Fresh Fruits	321.25	287.79	313.83
8 Dry Fruits	217.95	240.69	241.48
9 Cotton Seeds	231.50	240.08	236.29
10 Other Oil Seeds	190.46	161.27	160.55
11 Edible Roots/ Potatoes	543.47	144.68	152.85
12 Stimulant And Spice Crops	460.25	352.58	348.00
13 Pulses	198.96	233.89	235.73
14 Sugar Crops	267.92	286.29	286.29
15 Fibre Crops	201.65	177.20	159.33
16 Unmanufactured Tobacco	204.74	220.89	221.18
17 Poultry	206.33	243.62	237.79
18 Milk From Bovine Animals	242.57	252.90	252.90
19 Eggs	176.03	175.64	184.87
20 Raw Animal Material/Wool	164.70	174.22	174.22
21 Hides And Fur Skins, Raw	146.12	156.85	155.92
22 Fuel Wood In Logs	243.47	259.09	259.53
23 Fishes Live Fresh Or Chilled	246.21	296.17	308.06
Ores/Minerals, Gas & Elect.	242.67	245.32	245.36
24 Coal Not Agglomerated	223.53	223.53	223.53
25 Natural Gas Liquefied	202.34	199.99	200.06
26 Salt & Pure Sodium Chloride	243.18	252.31	252.31
27 Electrical Energy	287.44	295.61	295.61
Food, Beverages, Tobacco, Textiles	205.50	209.87	210.44
28 Meat Of Animals	246.01	262.20	262.35
29 Vegetables & Fruit Juices	194.12	199.38	200.07
30 Dried Fruits & Nuts	217.80	228.54	228.54
31 Fruit Juices	171.20	175.80	177.53
32 Vegetable Oil Refined	164.33	153.66	153.56
33 Vegetable Ghee	140.35	122.48	122.09
34 Oil Cakes	232.05	198.51	194.96
35 Processed Liquid Milk	223.02	251.52	248.71
36 Milk And Cream In Solid Form	212.82	220.46	220.46
37 Ice Cream	219.91	219.91	219.91
38 Dairy Products N.E.C	235.94	243.80	243.80
39 Wheat Flour	195.47	189.05	190.27
40 Other Cereal Flour	138.16	194.60	210.16
41 Sugar Refined	216.56	235.88	249.40
42 Chocolate	99.19	99.19	99.19
43 Sugar Confectionary	102.28	118.04	118.04
44 Coffee And Tea	184.43	206.65	210.96
45 Spices	191.70	189.97	189.84
46 Other Food Products	293.72	292.02	292.02
47 Mineral Water	185.63	187.86	188.22
48 Beverages	167.46	171.95	171.95
49 Tobacco Products	290.52	356.45	356.45
50 Cotton Yarn	200.42	171.27	171.27
51 Nylon Yarn	161.40	150.22	150.22
52 Blended Yarn	193.60	189.54	188.86
53 Woven Fabrics	226.82	258.39	258.39
54 Cotton Fabrics	196.81	201.34	201.65
55 Other Fabrics	197.56	213.71	214.27

Table A11: Wholesale Price Index Numbers by Major Groups and Composite Commodities				
		Index		
Items and Specifications		Jul-14	Jun-15	Jul-15
56 Silk And Rayon Fabrics		165.85	181.33	183.23
57 Towels		242.19	267.20	267.20
58 Blankets		219.66	235.86	235.86
59 Bed Sheets		242.12	256.29	256.29
60 Quilts		172.42	196.84	196.84
61 Woolen Carpets		132.14	132.14	132.14
62 Synthetic Carpets		116.10	126.27	126.27
63 Hosiery Products		204.27	220.66	220.66
64 Ready Made Garments		175.43	193.27	193.27
65 Leather With Out Hairs		223.51	212.68	212.68
66 Other Leather N.E.C		249.44	206.27	206.27
67 Footwear's		134.22	134.22	134.22
Other Transportable Goods		215.63	187.23	185.86
68 Timber		184.69	203.35	204.34
69 Printing Paper		172.62	164.56	164.56
70 Hard Board		229.17	197.92	197.92
71 Coke		163.45	163.45	163.45
72 Motor Sprit		182.40	131.39	131.39
73 Diesel Oil		260.69	187.52	187.52
74 Kerosene Oil		288.01	178.93	178.93
75 Furnace Oil		173.10	117.51	107.57
76 Mobil Oil		201.17	201.05	201.05
77 Chemicals		193.10	194.51	192.95
78 Dying Materials		143.77	146.55	146.55
79 Fertilizers		268.66	272.17	272.80
80 Pesticides		262.86	301.98	306.30
81 Insecticides		181.89	141.69	140.84
82 Paints & Varnishes		275.71	291.69	291.69
83 Medicines		144.21	145.19	145.20
84 Soaps & Detergent		183.11	180.02	180.02
85 Auto Tyres		188.21	191.36	191.78
86 Plastic Products		203.08	225.60	228.67
87 Glass Sheets		209.86	230.11	231.30
88 Other Glass Articles		218.27	243.63	243.63
89 Ceramics And Sanitary		200.07	219.58	221.02
90 Bricks Blocks And Tiles		201.73	209.47	209.47
91 Cement		207.76	207.25	207.29
92 Bed Foams		150.83	156.67	156.67
93 Matches		143.20	162.62	162.62
Metal Product Machinery & Equip		171.57	172.71	172.56
94 Pig Iron		128.97	128.97	128.97
95 Steel Bars & Sheets		146.08	138.84	138.82
96 Pipe Fittings		175.34	193.53	193.53
97 Steel Products		170.24	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		181.12	199.53	199.53
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		195.93	198.62	198.62
107 Electrical Wires		179.18	187.86	187.86
108 Lighting Equipments		164.95	168.19	167.30
109 Radio And Television		126.49	126.49	126.49
110 Motor Vehicles		182.59	183.03	183.03
111 Motor Cycles		126.70	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	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
	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	201.62	224.14	188.12	209.58	233.68	194.29	215.13

*: all groups combined

Table A13: International Commodity Prices/ Indices				
	Apr-15	May-15	Jun-15	Jul-15
Energy				
Crude Oil (US\$ per barrel) *	57.4	62.5	61.3	54.4
IMF Energy Index (2005 = 100)	108.7	116.3	114.0	102.4
WB Energy Index (2010 = 100) @	72.2	77.8	76.3	68.8
Food				
Rice (\$/MT)	392.4	382.4	370.5	387.7
Wheat (\$/MT)	223.3	215.1	209.9	197.4
Sugar (US cent/ pound)	12.9	12.7	12.1	11.9
Palm Oil (\$/MT)	591.8	601.4	606.4	575.7
Soybean Oil (\$/MT)	691.7	716.5	738.0	695.8
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	71.7	72.9	72.4	72.3
IMF Metal Price Index (2005 = 100)	133.8	139.6	133.2	123.0
Copper (\$/MT)	6,042.1	6,294.8	5,833.0	5,456.8
Aluminum (\$/MT)	1,819.2	1,804.0	1,687.7	1,639.5
Iron Ore (\$ cents/dry MT)	51.2	60.2	62.3	51.5
Tin (\$/MT)	15,900.9	15,803.6	15,064.9	15,071.5
Nickle (\$/MT)	12,830.9	13,511.3	12,825.2	11,413.1
Zinc (\$/MT)	2,212.7	2,281.8	2,082.1	2,000.7
Lead (\$/MT)	2,005.4	1,991.8	1,829.5	1,763.0
Uranium (\$/MT)	38.7	35.6	36.1	34.5
DAP (\$/MT)	464.0	470.0	473.0	469.0
Urea (\$/MT)	259.0	280.0	292.0	273.0
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	FY13	FY14	FY15	FY16
Jul	169.57	183.58	198.05	201.62
Aug	171.09	185.71	198.70	
Sep	172.44	185.18	199.40	
Oct	173.10	188.82	199.81	
Nov	172.42	191.21	198.79	
Dec	172.82	188.68	196.79	
Jan	175.70	189.60	196.95	
Feb	175.11	189.00	195.13	
Mar	175.82	190.82	195.57	
Apr	177.74	194.06	198.16	
May	178.65	193.55	199.66	
Jun	179.94	194.74	200.89	
Seasonally Adjusted Series				
Jul	168.96	182.83	197.18	200.71
Aug	169.74	184.20	197.12	
Sep	171.09	183.71	197.79	
Oct	171.32	186.87	197.72	
Nov	171.34	189.95	197.54	
Dec	173.76	189.69	197.81	
Jan	176.13	190.08	197.44	
Feb	177.04	191.13	197.35	
Mar	177.35	192.54	197.36	
Apr	177.88	194.24	198.36	
May	179.32	194.27	200.37	
Jun	180.84	195.71	201.87	

Table 15. CPI Food Data Series Original and Seasonally Adjusted				
Original Series				
Period	FY13	FY14	FY15	FY16
Jul	190.72	208.19	222.80	224.14
Aug	192.47	212.27	224.05	
Sep	193.80	209.09	224.12	
Oct	193.66	212.61	223.74	
Nov	193.03	218.16	222.74	
Dec	192.97	210.89	218.08	
Jan	196.58	210.81	217.10	
Feb	194.05	208.74	213.15	
Mar	195.06	213.11	214.25	
Apr	197.74	217.33	217.26	
May	200.00	214.75	221.22	
Jun	202.11	216.98	223.84	
Seasonally Adjusted Series				
Jul	189.45	206.60	220.94	222.19
Aug	189.28	208.64	220.24	
Sep	190.42	205.39	220.08	
Oct	190.12	208.82	219.74	
Nov	190.15	214.81	219.39	
Dec	194.52	212.53	219.66	
Jan	197.77	212.13	218.48	
Feb	198.52	213.67	218.26	
Mar	198.14	216.58	217.85	
Apr	198.76	218.54	218.57	
May	201.72	216.58	223.03	
Jun	204.29	219.28	226.14	

Table 16: CPI Monthly & Average Seasonal Factors					
Period	FY13	FY14	FY15	FY16	Average
Jul	100.36	100.41	100.44	100.45	100.40
Aug	100.79	100.82	100.80		100.79
Sep	100.79	100.80	100.82		100.80
Oct	101.04	101.04	101.06		101.04
Nov	100.63	100.66	100.63		100.63
Dec	99.46	99.47	99.49		99.47
Jan	99.75	99.75	99.75		99.75
Feb	98.91	98.88	98.88		98.90
Mar	99.14	99.11	99.09		99.13
Apr	99.92	99.91	99.90		99.91
May	99.63	99.63	99.64		99.64
Jun	99.50	99.50	99.51		99.51

Table 17: CPI Food Monthly & Average Seasonal Factors					
Period	FY13	FY14	FY15	FY16	Average
Jul	100.67	100.77	100.84	100.88	100.75
Aug	101.68	101.74	101.73		101.69
Sep	101.78	101.80	101.84		101.79
Oct	101.86	101.82	101.82		101.85
Nov	101.52	101.56	101.53		101.51
Dec	99.20	99.23	99.28		99.23
Jan	99.40	99.38	99.37		99.39
Feb	97.75	97.69	97.66		97.73
Mar	98.45	98.40	98.35		98.43
Apr	99.49	99.45	99.40		99.45
May	99.15	99.15	99.19		99.17
Jun	98.94	98.95	98.98		98.96

Table 18: CPI Month-on-Month % Change Original & Seasonally Adjusted				
Original Series				
Period	FY13	FY14	FY15	FY16
Jul	-0.25	2.02	1.70	0.36
Aug	0.90	1.16	0.33	
Sep	0.79	-0.29	0.35	
Oct	0.38	1.97	0.21	
Nov	-0.39	1.27	-0.51	
Dec	0.23	-1.32	-1.01	
Jan	1.67	0.49	0.08	
Feb	-0.34	-0.32	-0.92	
Mar	0.41	0.96	0.23	
Apr	1.09	1.70	1.32	
May	0.51	-0.26	0.76	
Jun	0.72	0.61	0.62	
Seasonally Adjusted Series				
Jul	-1.08	1.10	0.75	-0.58
Aug	0.46	0.75	-0.03	
Sep	0.80	-0.27	0.34	
Oct	0.13	1.72	-0.03	
Nov	0.01	1.65	-0.09	
Dec	1.41	-0.14	0.14	
Jan	1.37	0.21	-0.18	
Feb	0.51	0.55	-0.05	
Mar	0.17	0.74	0.01	
Apr	0.30	0.88	0.51	
May	0.81	0.01	1.01	
Jun	0.85	0.74	0.75	

Table 19: CPI Food Month-on-Month % Change Original & Seasonally Adjusted				
Original Series				
Period	FY13	FY14	FY15	FY16
Jul	1.80	3.01	2.68	0.13
Aug	0.92	1.96	0.56	
Sep	0.69	-1.50	0.03	
Oct	-0.07	1.68	-0.17	
Nov	-0.33	2.61	-0.45	
Dec	-0.03	-3.33	-2.09	
Jan	1.87	-0.04	-0.45	
Feb	-1.29	-0.98	-1.82	
Mar	0.52	2.10	0.52	
Apr	1.37	1.98	1.41	
May	1.15	-1.19	1.82	
Jun	1.05	1.04	1.18	
Seasonally Adjusted Series				
Jul	0.06	1.13	0.76	-1.75
Aug	-0.09	0.99	-0.32	
Sep	0.60	-1.56	-0.07	
Oct	-0.16	1.67	-0.15	
Nov	0.02	2.87	-0.16	
Dec	2.30	-1.06	0.12	
Jan	1.67	-0.18	-0.54	
Feb	0.38	0.72	-0.10	
Mar	-0.19	1.36	-0.19	
Apr	0.31	0.91	0.33	
May	1.49	-0.89	2.04	
Jun	1.27	1.24	1.39	



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

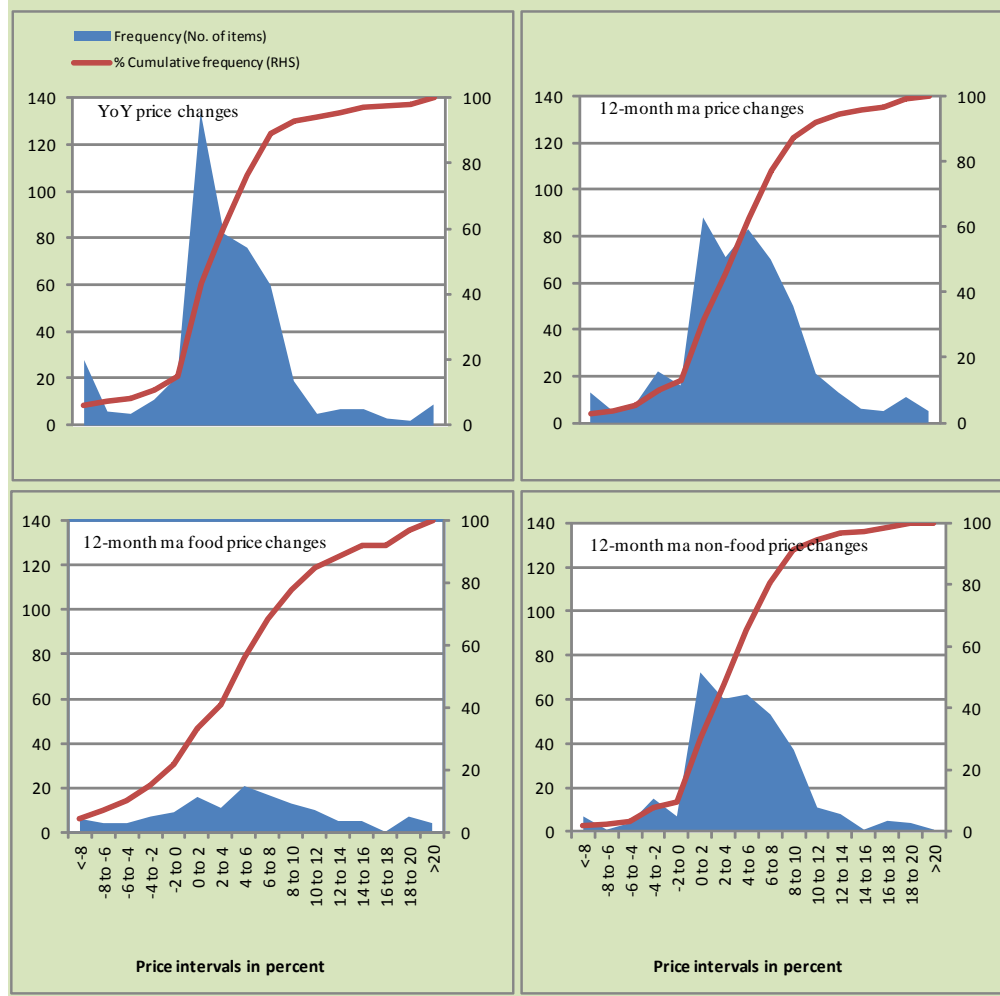


Figure A3: Frequency Distribution of Price Changes of WPI Commodities, July 2015

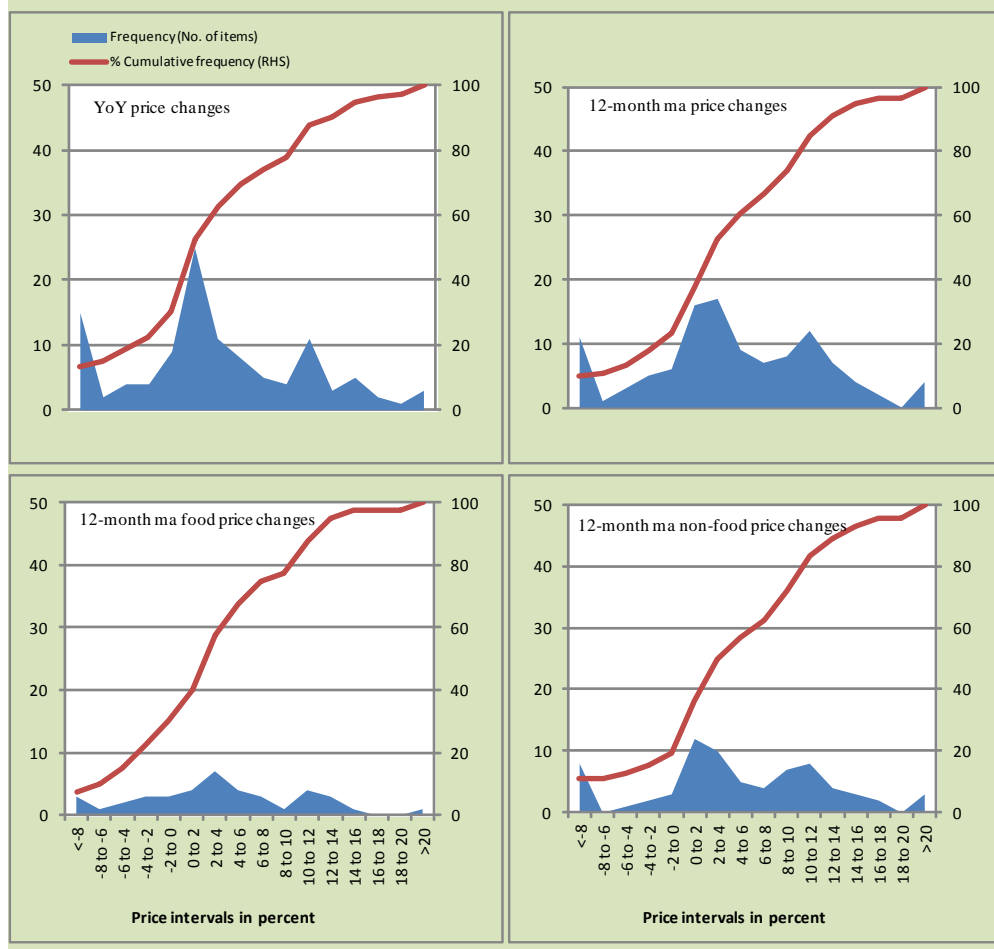
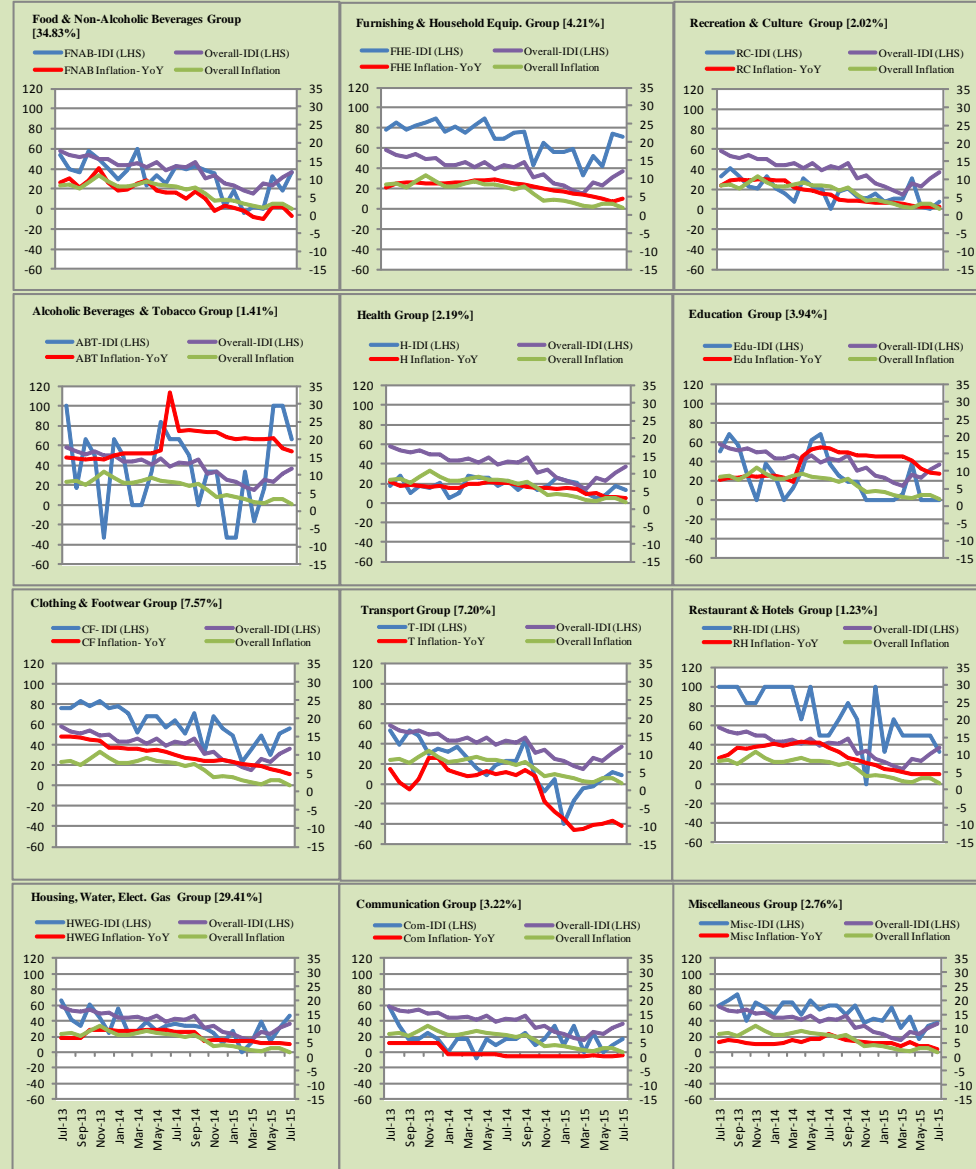


Figure A4: Group-wise/ Overall Inflation Diffusion Index (IDI) and respective/ overall YoY Inflation (percent)



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:

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.