

Inflation Monitor

November 2011



State Bank of Pakistan

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Review

Inflation in Brief

1. Headline CPI inflation on revised base (2007-08 = 100) is recorded at 10.2 percent on year-on-year basis in November 2011 as compared to 11.0 percent in the previous month and 15.0 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis decreased to 0.3 percent in November 2011 as compared to 1.4 percent in the previous month and 1.0 percent in the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation comes to 0.8 percent in November 2011 as compared to 1.0 percent in previous month.
3. Core inflation (trimmed) on year-on-year basis decreased to 11.5 percent in November 2011 as compared to 11.7 percent in the previous month and 12.8 percent in the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) was 0.5 percent in November 2011 as compared to 1.0 percent in October 2011 and 0.8 percent in November 2010.
5. Non-food, non-energy inflation measured by CPI Core (NFNE) on year-on-year basis is recorded at 10.4 percent in November 2011 as compared to 10.5 percent a month earlier and 9.4 percent in November 2010.
6. Core NFNE inflation on month-on-month basis decreased to 0.6 percent in November 2011 as compared to 1.4 percent a month earlier. Core NFNE was 0.6 percent in November 2010.
7. WPI inflation on year-on-year basis decreased to 12.0 percent in November 2011 when compared to 15.4 percent a month earlier. During November 2010, WPI inflation was recorded at 20.3%.

8. WPI inflation on month-on-month basis decreased to -0.5 percent in November 2011 as compared to 0.4 percent a month earlier. It was 2.5 percent in November 2010.
9. SPI inflation on year-on-year basis is recorded at 5.9 percent in November 2011 as compared to 8.2 percent a month earlier and 22.3 percent in corresponding month of the last year.
10. SPI inflation on month-on-month basis decreased to 0.6 percent in November 2011 when compared to 0.8 percent a month earlier while it was 2.8 percent in November 2010.

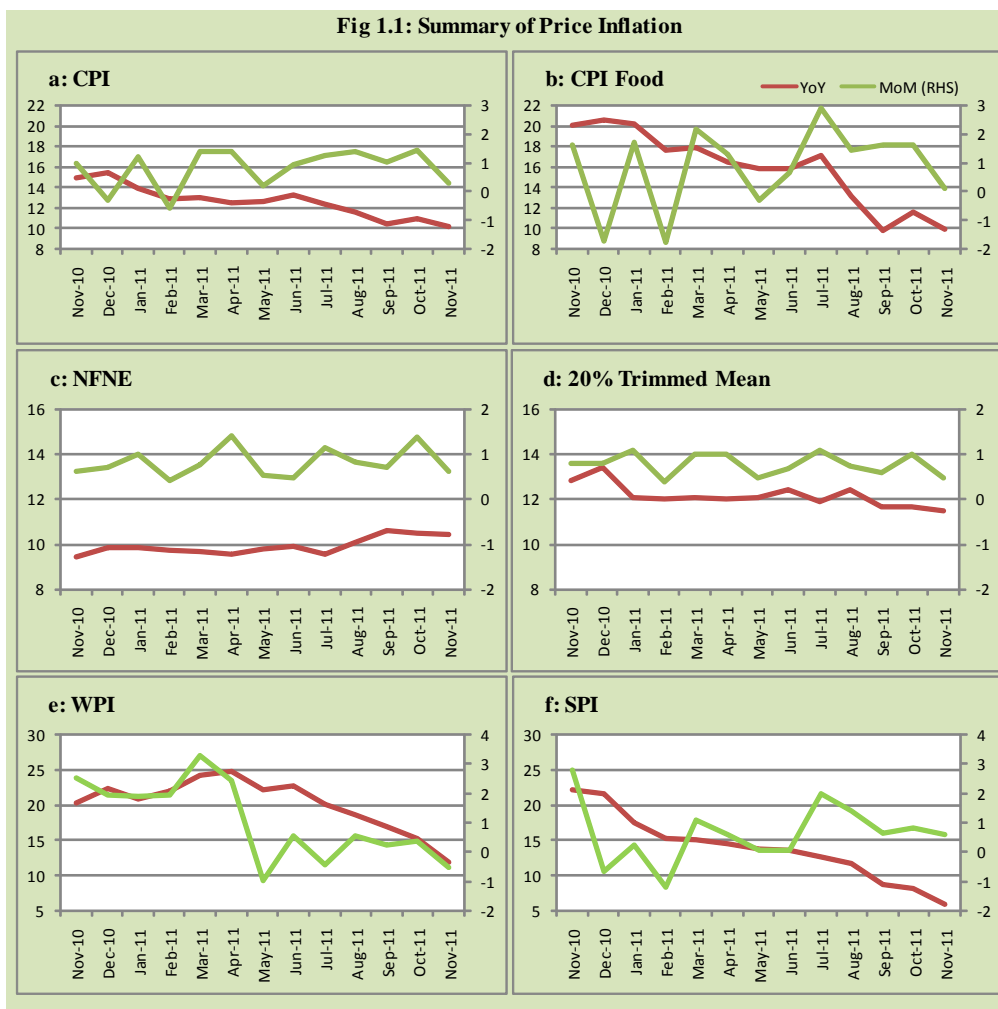
Table 1.1 Inflation Trends (percent) (Base 2007- 08 = 100)

Period	CPI Inflation						Core Inflation				WPI Inflation		SPI** Inflation	
	General		Food		Non-food		NFNE*		Trimmed					
	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM
Nov-10	15.0	1.0	20.0	1.6	11.5	0.5	9.4	0.6	12.8	0.8	20.3	2.5	22.3	2.8
Dec-10	15.5	-0.3	20.5	-1.7	12.0	0.8	9.8	0.7	13.4	0.8	22.5	2.0	21.6	-0.6
Jan-11	13.9	1.2	20.2	1.7	9.7	0.8	9.9	1.0	12.1	1.1	20.9	1.9	17.6	0.3
Feb-11	12.8	-0.6	17.6	-1.8	9.7	0.3	9.7	0.4	12.0	0.4	22.1	2.0	15.4	-1.2
Mar-11	13.0	1.4	17.9	2.2	9.7	0.9	9.7	0.8	12.1	1.0	24.3	3.3	15.1	1.1
Apr-11	12.5	1.4	16.5	1.3	9.8	1.5	9.5	1.4	12.0	1.0	24.9	2.4	14.5	0.6
May-11	12.6	0.2	15.8	-0.3	10.5	0.6	9.8	0.5	12.1	0.5	22.3	-1.0	13.8	0.1
Jun-11	13.3	1.0	15.9	0.7	11.6	1.2	9.9	0.5	12.4	0.7	22.8	0.6	13.7	0.1
Jul-11	12.4	1.3	17.1	2.9	9.3	0.1	9.6	1.2	11.9	1.1	20.3	-0.4	12.7	2.0
Aug-11	11.6	1.4	13.2	1.4	10.4	1.4	10.1	0.8	12.4	0.7	18.7	0.6	11.9	1.4
Sep-11	10.5	1.0	9.9	1.6	10.9	0.6	10.6	0.7	11.7	0.6	17.0	0.2	8.7	0.7
Oct-11	11.0	1.4	11.7	1.6	10.4	1.3	10.5	1.4	11.7	1.0	15.4	0.4	8.2	0.8
Nov-11	10.2	0.3	10.0	0.1	10.3	0.4	10.4	0.6	11.5	0.5	12.0	-0.5	5.9	0.6

* NFNE is Non-food non-energy

** SPI for all income groups combined

Fig 1.1: Summary of Price Inflation



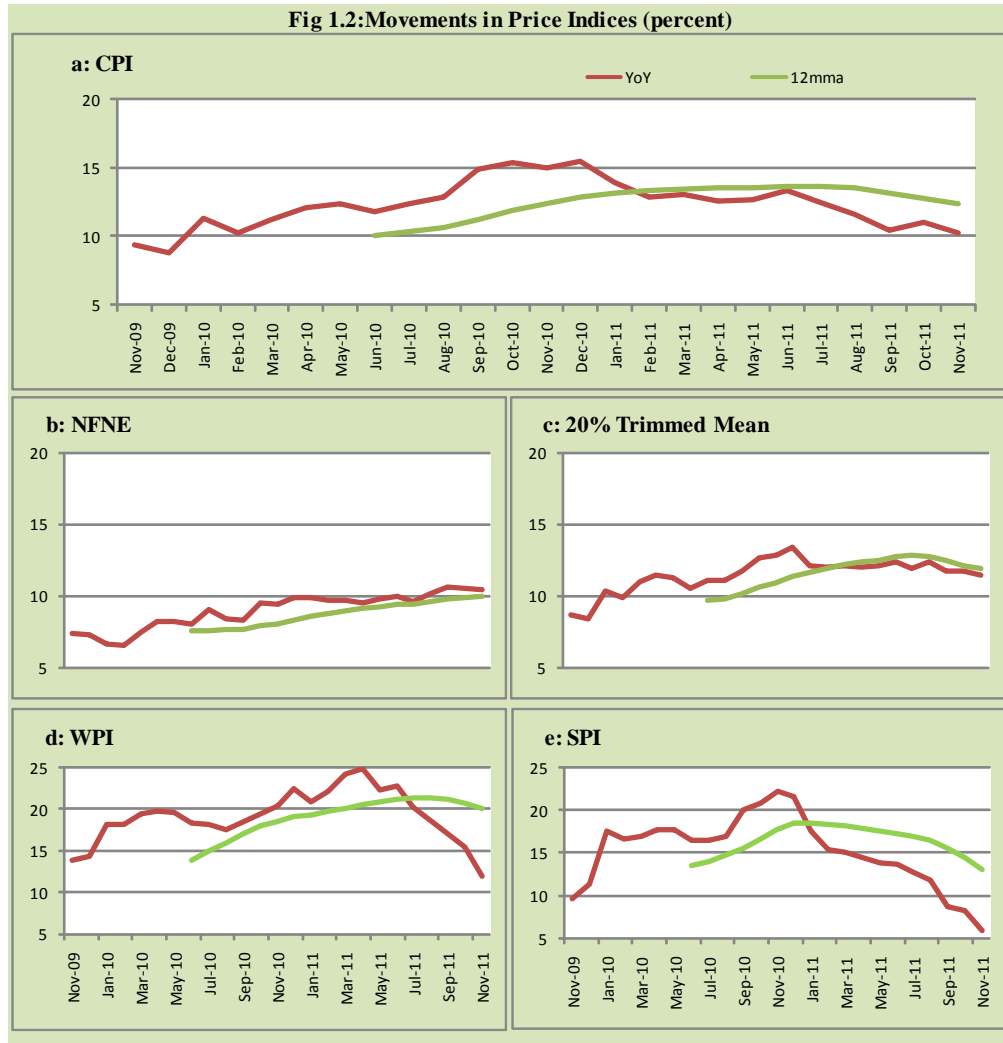


Fig 1.3: Movements in Price Indices -MoM (percent)

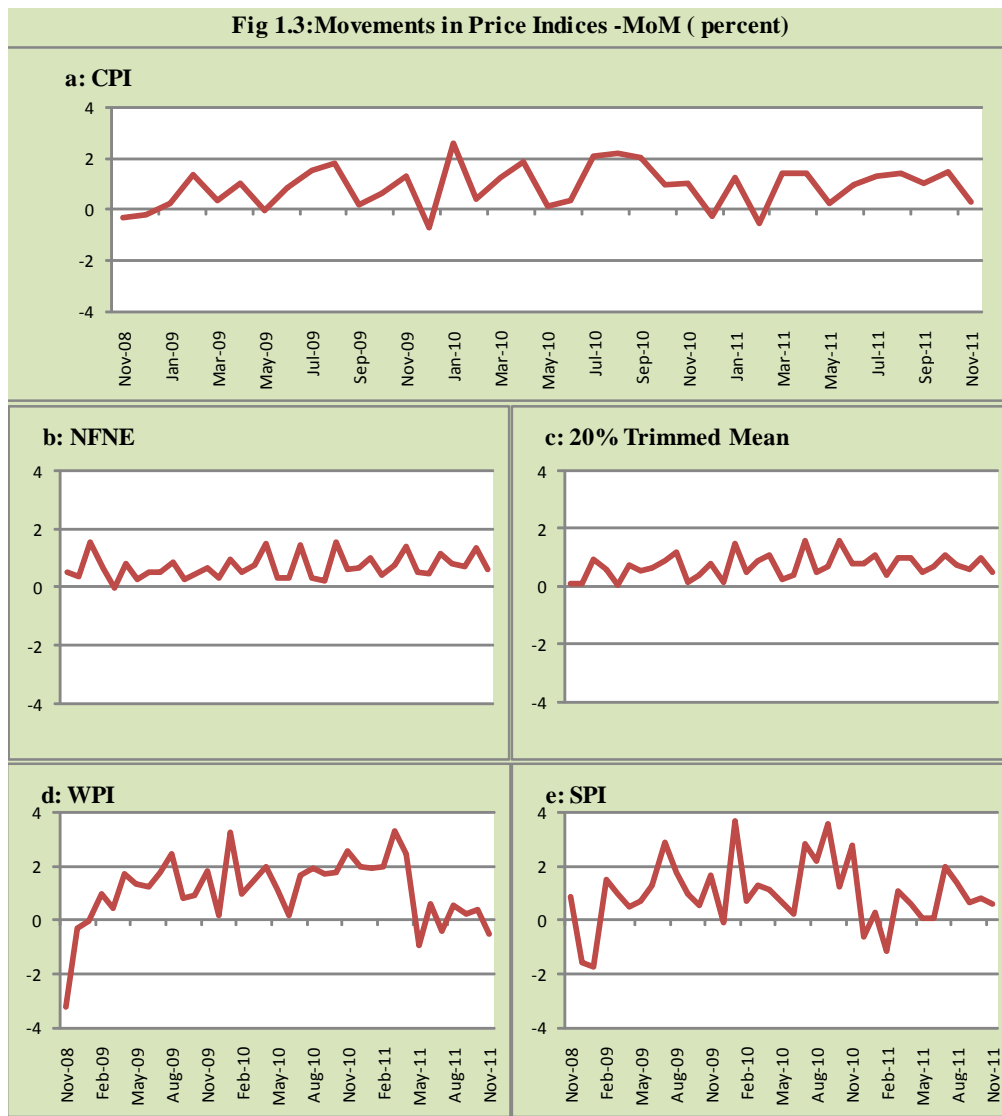
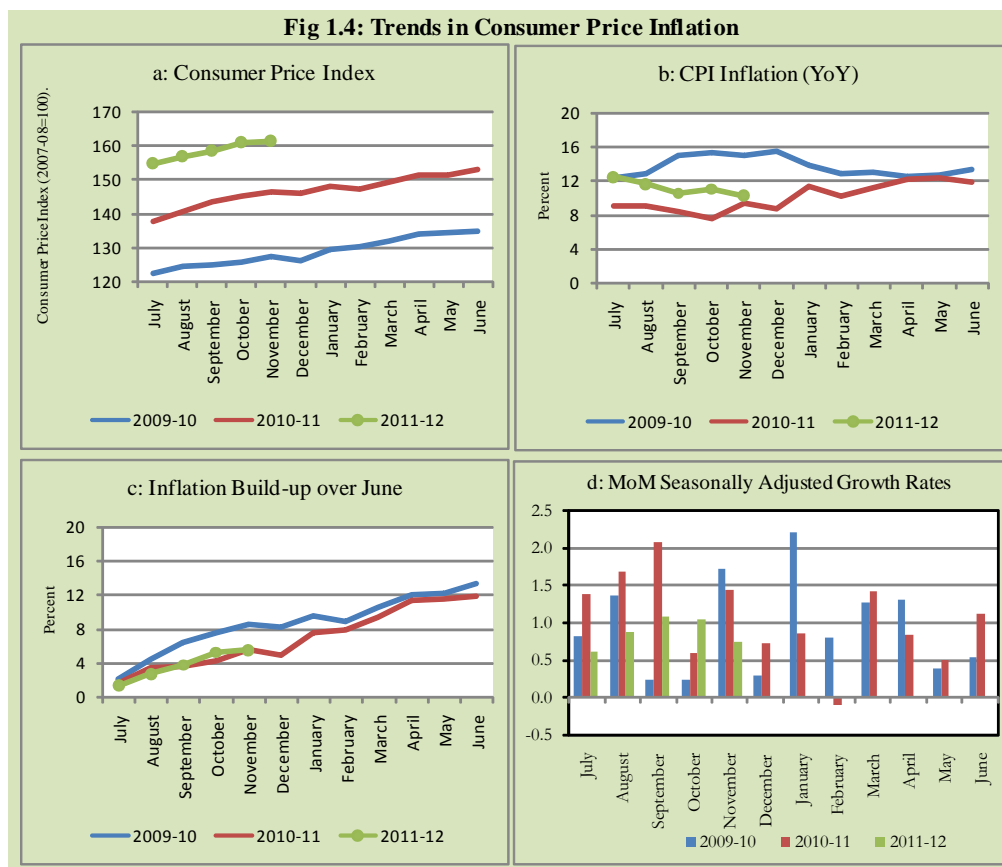


Fig 1.4: Trends in Consumer Price Inflation



2. City wise Inflation

CPI Inflation on year-on-year basis in federal and provincial capitals of Pakistan was lower than overall inflation observed during November 2011. The inflation in Islamabad and Karachi was 8.8 and 8.9 percent respectively while it was 8.2 percent in Lahore, Peshawar and Quetta. Among these five cities, the highest inflation was observed in Karachi (Table A6).

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

	Nov-10		Oct-11		Nov-11	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	1.0	15.0	1.4	11.0	0.3	10.2
Islamabad	0.5	14.0	0.9	9.5	-0.1	8.8
Karachi	1.5	14.5	1.7	11.0	-0.4	8.9
Lahore	-0.3	11.6	0.4	8.3	-0.4	8.2
Peshawar	1.5	16.0	1.8	9.7	0.0	8.2
Quetta	2.1	16.3	1.7	10.4	0.1	8.2

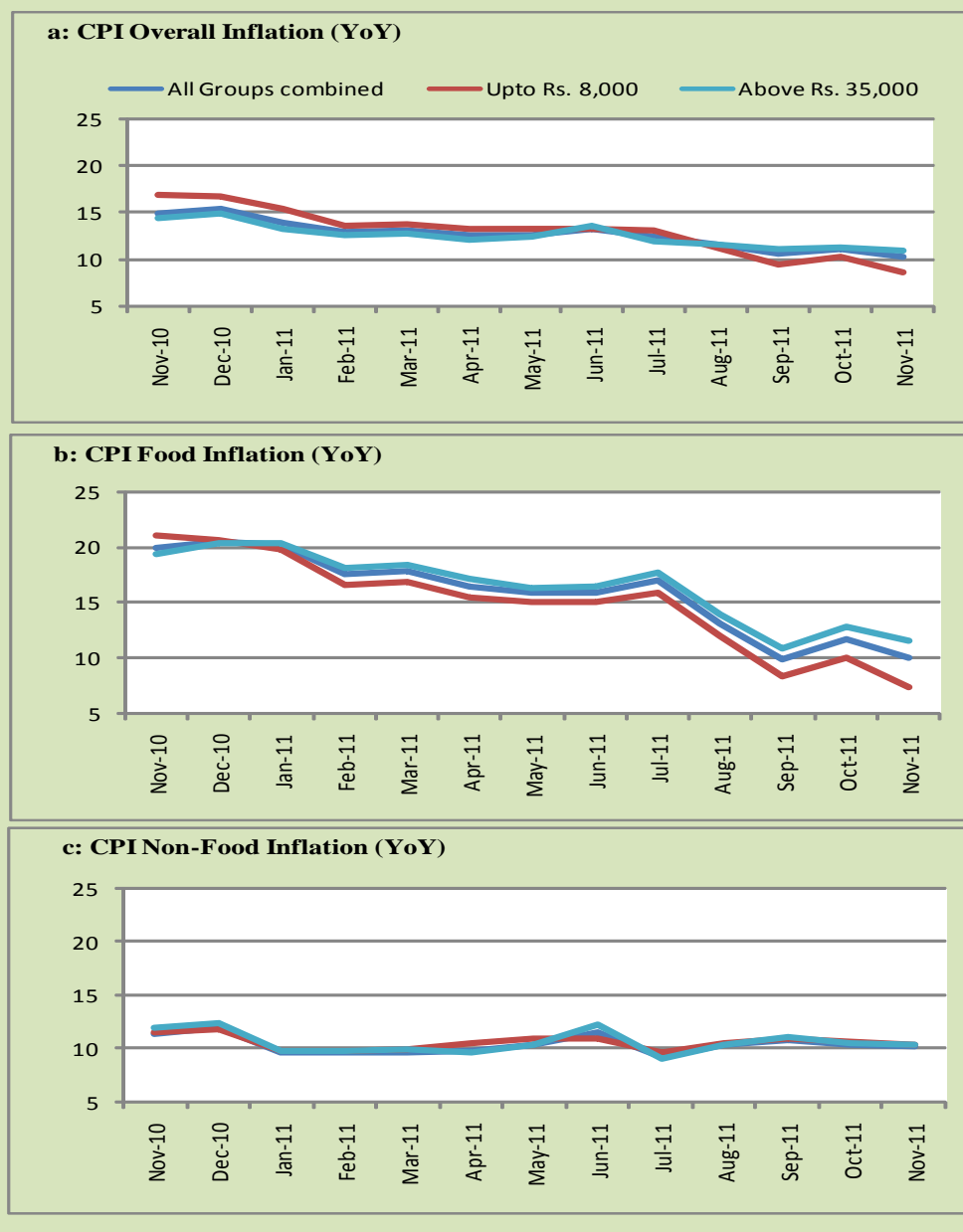
3. Income Group wise Inflation

Income group- wise data showed that income group above Rs. 35,000 has highest inflation than the overall inflation in CPI basket during November 2011 for general, food and non-food groups. The lowest income group (Up to Rs. 8, 000) has the lowest inflation in general and food groups during the month of November 2011 (Table A7).

Table 3.1 Income Group- wise Inflation (YoY)

Income Groups	General			Food			Non-food		
	Nov-10	Oct-11	Nov-11	Nov-10	Oct-11	Nov-11	Nov-10	Oct-11	Nov-11
All Groups combined	15.0	11.0	10.2	20.0	11.7	10.0	11.5	10.4	10.3
Up to Rs. 8,000	16.9	10.3	8.6	21.1	10.0	7.4	11.5	10.7	10.4
Rs. 8,001- 12,000	16.1	10.6	9.3	20.7	10.6	8.3	11.1	10.6	10.4
Rs. 12,001- 18,000	14.5	10.7	9.6	20.4	11.1	9.1	9.0	10.3	10.1
Rs. 18,001- 35,000	16.1	10.8	9.9	20.0	11.6	9.9	12.9	10.1	9.9
Above Rs. 35,000	14.4	11.2	10.8	19.3	12.7	11.5	12.1	10.5	10.5

Fig 3.1: Income Group- wise Inflation



4. Weighted Contribution

The weighted contribution of food group in the overall inflation decreased to 41.90 percent during November 2011 from 45.19 percent in October 2011 while it was 54.57 percent in November 2010.

The weighted contribution of non-food group showed increase to touch 58.10 percent in November 2011 from 54.81 percent in October 2011.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)

Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
Nov-10	54.57	5.24	22.97	6.76	1.60	8.87
Dec-10	53.50	5.30	23.66	6.41	1.81	9.32
Jan-11	58.16	5.58	18.91	5.27	1.78	10.30
Feb-11	54.92	6.78	20.37	4.70	1.88	11.34
Mar-11	55.44	7.17	19.99	3.76	2.21	11.43
Apr-11	53.46	7.93	21.27	4.85	2.98	9.51
May-11	50.91	7.31	21.02	8.14	2.92	9.71
Jun-11	48.53	7.57	19.80	11.33	3.02	9.76
Jul-11	55.81	7.49	15.60	7.29	3.41	10.39
Aug-11	47.56	8.12	18.86	9.01	4.24	12.21
Sep-11	40.43	9.57	20.32	10.15	4.56	14.96
Oct-11	45.19	9.37	18.53	9.18	3.71	14.02
Nov-11	41.90	9.98	19.57	9.28	3.97	15.30

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change													
	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11
General	48.5	45.9	57.8	49.3	61.7	42.7	52.8	38.2	51.3	53.4	56.1	52.2	47.3
Food & Non-Alcoholic Beverages	36.4	39.3	64.9	44.2	66.1	27.9	24.3	28.9	63.2	51.7	57.8	60.9	15.3
Alcoholic Beverages & Tobacco	33.3	0.0	33.3	33.3	33.3	50.0	16.7	83.3	66.7	83.3	33.3	33.3	50.0
Clothing & Footwear	72.9	79.7	86.4	74.6	74.6	62.7	64.4	66.1	49.2	62.7	54.2	47.5	76.3
Housing, Water, Elect, Gas & other Fuels	58.3	77.8	41.7	38.9	55.6	61.1	47.2	41.7	58.3	33.3	25.0	61.1	41.7
Furnishing & Household Equip. Maintenance etc	72.5	66.7	81.2	68.1	85.5	50.7	89.9	46.4	81.2	78.3	87.0	89.9	89.9
Health	10.3	30.8	23.1	25.6	23.1	38.5	30.8	17.9	43.6	35.9	23.1	25.6	33.3
Transport	37.2	16.3	32.6	48.8	51.2	53.5	55.8	16.3	39.5	41.9	53.5	48.8	32.6
Communication	25.0	25.0	50.0	33.3	25.0	16.7	41.7	-8.3	0.0	50.0	8.3	25.0	25.0
Recreation & Culture	33.3	10.3	35.9	20.5	35.9	20.5	51.3	41.0	28.2	41.0	51.3	7.7	25.6
Education	50.0	18.8	43.8	43.8	43.8	43.8	68.8	56.3	31.3	43.8	37.5	31.3	62.5
Restaurant & Hotels	100.0	100.0	100.0	83.3	83.3	66.7	83.3	66.7	100.0	83.3	100.0	66.7	100.0
Miscellaneous	65.7	48.6	57.1	60.0	91.4	40.0	80.0	42.9	14.3	57.1	91.4	51.4	77.1
NFNE	53.3	47.6	56.5	52.4	60.1	47.3	63.3	40.8	48.2	53.8	55.6	49.7	59.8

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

	Item	Unit	Nov-10		Oct-11		Nov-11	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg.	2.46	2.31	0.10	0.70	-0.39	1.80
2	Wheat Flour Bag	10 Kg.	4.96	0.98	-0.53	0.35	-0.72	0.78
3	Rice Basmati Sup. Qlty.	Kg.	10.77	0.74	11.22	0.43	12.45	1.86
4	Pulse Masoor (Washed)	Kg.	0.10	0.59	-9.17	0.42	-12.03	-2.57
5	Pulse Moong (Washed)	Kg.	105.64	-1.48	-3.38	1.08	-8.33	-6.52
6	Pulse Mash (Washed)	Kg.	43.96	-1.13	-11.34	1.02	-12.44	-2.36
7	Pulse Gram	Kg.	43.33	0.68	1.82	0.14	0.56	-0.56
8	Vegetable Ghee (Loose)	Kg.	37.20	8.64	24.19	0.29	12.20	-1.85
9	Sugar Refined	Kg.	54.55	4.58	-11.27	-5.29	-20.77	-6.61
10	Milk Fresh (Unboiled)	Ltr.	17.45	2.35	21.34	0.74	21.13	2.16
11	Curd	Kg.	16.13	2.22	21.22	0.24	20.19	1.35
12	Beef With Bone Av. Qlty.	Kg	24.61	2.00	18.69	1.08	18.60	1.92
13	Mutton Av. Qlty.	Kg	33.56	2.08	20.64	0.85	20.92	2.31
14	Chicken Farm Broiler (Live)	Kg	-5.26	-12.93	0.73	-3.64	7.72	-6.89
15	Eggs Farm	Doz	-5.52	-4.90	0.94	0.61	16.64	9.89
16	Potatoes	Kg	36.96	18.70	-10.15	-2.61	-29.19	-6.46
17	Onion	Kg	168.03	65.13	-5.74	25.84	-20.44	39.38
18	Tomatoes	Kg	36.84	-14.04	21.12	75.00	42.02	0.79
19	Ginger	Kg	95.37	9.34	-28.67	2.65	-42.14	-11.32
20	Garlic	Kg	73.24	5.35	-41.49	-1.78	-45.71	-2.24

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Nov-10		Oct-11		Nov-11	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	16.5	3.1	17.1	-2.9	15.8	1.9
Food	21.0	1.9	1.6	-5.8	-1.0	-0.7
Metals	31.2	0.6	8.4	-10.4	3.7	-3.8
Energy	11.3	3.6	25.4	-0.3	26.1	4.2
Agricultural	35.6	6.5	2.9	-5.9	-7.6	-4.4
Cotton	116.6	22.8	-12.6	-5.2	-32.7	-5.4

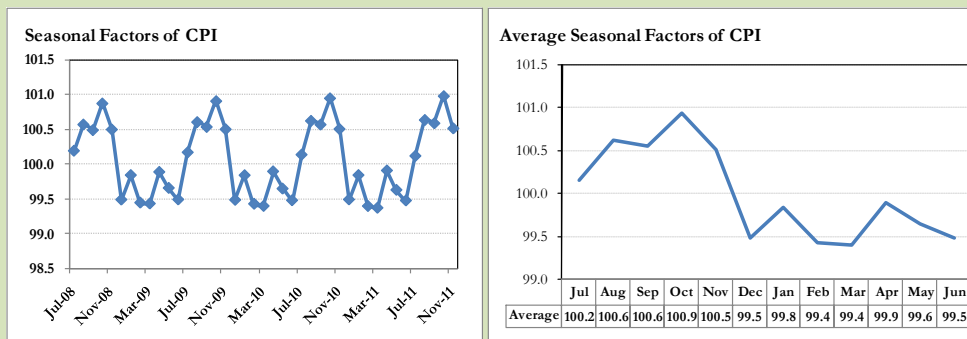
8. Seasonal Adjustment in CPI

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

The changes in consumer prices are normally reported in terms of year-on-year and month-on-month basis. Seasonal adjustment is particularly useful for analyzing month-on-month changes. The monthly data series of Consumer Price Index (CPI) from July 2008 to November 2011 has been taken for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

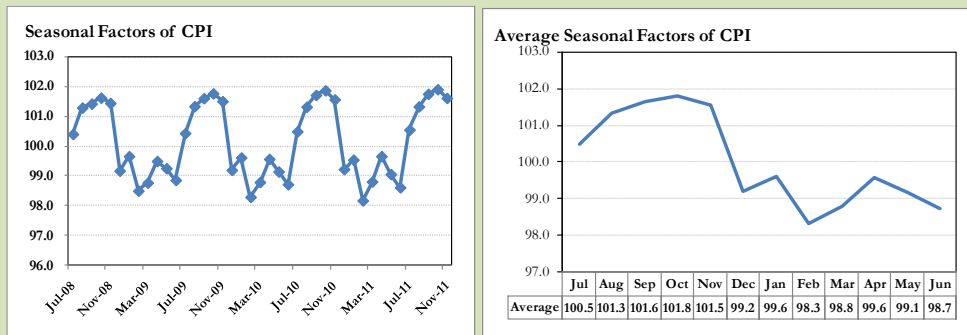
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months of July to November and downward seasonality in the remaining months of the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

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

Fig. 8.3 Seasonal Plots of CPI

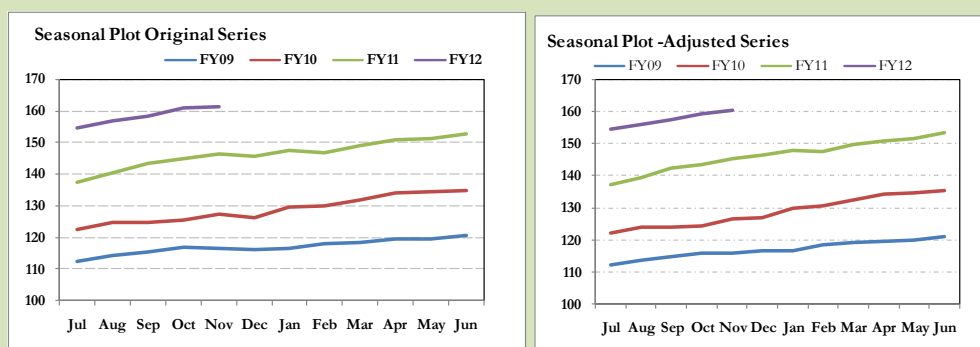
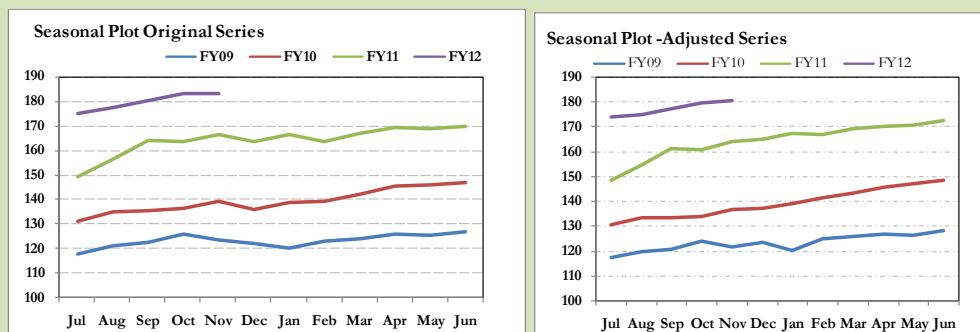


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for November 2011 stood at 160.41 against 161.25 in original series showing a decrease of 0.84 on account of adjustment of upward seasonality in November 2011.

Seasonally adjusted CPI food group for November 2011 stood at 180.37 against 183.26 in original series showing a decrease of 2.89 on account of adjustment of upward seasonality in November 2011.

Month-on-month change of seasonally adjusted CPI series stood at 0.75% reflecting a decrease during November over October 2011 as compared to 0.29% of the original series.

Month-on-month change of seasonally adjusted CPI food group series stood at 0.40% reflecting a decrease during November over October 2011 as compared to 0.10% of the original series.

It is important to note that inflation rates should be analyzed on the basis of seasonally adjusted rates. This is especially needed for inflation rates on month-on-month basis. The most recent annual rate of inflation is usually indicated by annualizing the seasonally adjusted month-on-month rate. Annualized rate of CPI inflation in November (corresponding to the seasonally adjusted month-on-month rate) is 9.41 percent.

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

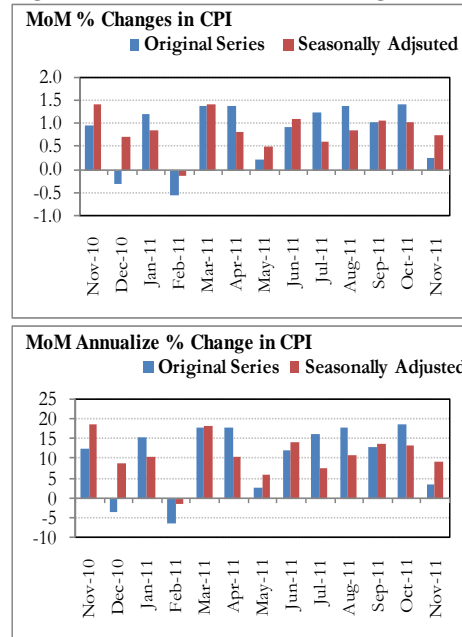
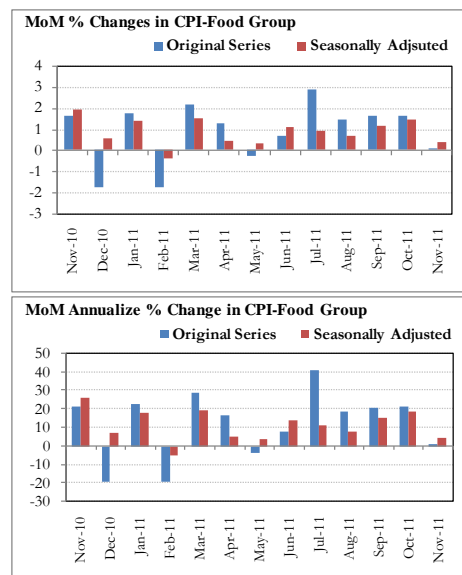


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)							
	Weights	MoM change			YoY change		
		Nov-10	Oct-11	Nov-11	Nov-10	Oct-11	Nov-11
I. Food Group	37.5	1.6	1.6	0.1	20.0	11.7	10.0
Food & Non-Alcoholic Beverages	34.8	1.7	1.7	0.1	20.3	11.7	10.0
Alcoholic Beverages & Tobacco	1.4	0.0	0.0	0.1	13.9	6.8	6.9
Restaurant & Hotels	1.2	3.0	0.3	0.9	16.3	15.5	13.1
II. Non-Food Group	62.5	0.5	1.3	0.4	11.5	10.4	10.3
Clothing & Footwear	7.6	1.1	1.5	1.0	11.2	15.2	15.0
Housing, Water, Elect, Gas & other Fuels	29.4	0.1	1.5	0.1	12.5	7.5	7.4
Furnishing & Household Equip. Maintenance	4.2	1.0	3.1	2.2	7.3	16.7	18.0
Health	2.2	2.1	1.2	0.5	9.1	12.5	10.7
Transport	7.2	0.6	1.5	-0.1	13.9	14.0	13.2
Communication	3.2	0.1	0.0	-0.1	15.5	1.1	0.8
Recreation & Culture	2.0	-0.2	0.6	0.3	4.6	4.6	5.1
Education	3.9	0.4	0.1	0.4	6.5	11.9	11.9
Miscellaneous	2.8	1.9	-0.7	1.8	11.7	19.6	19.4
Headline	100.0	1.0	1.4	0.3	15.0	11.0	10.2

Table A2: Distribution of Price changes (YoY) of CPI basket											
Groups	% changes	Total number of items		No of items in each inflation range							
				Decrease or no change (0% or less)		Subdued increase (>0% but <5%)		Moderate increase (5% but less than 10%)		Double digit increase (10% or more)	
		Nov-11	Nov-10	Nov-11	Nov-10	Nov-11	Nov-10	Nov-11	Nov-10	Nov-11	Nov-11
I. Food Group	10.0	129	129	10	17	13	8	17	23	89	81
Food & Non-Alcoholic Beverages	10.0	117	117	10	17	13	7	14	19	80	74
Alcoholic Beverages & Tobacco	6.9	6	6	0	0	0	1	1	3	5	2
Restaurant & Hotels	13.1	6	6	0	0	0	0	2	1	4	5
II. Non-Food Group	10.3	348	348	59	40	55	51	90	67	144	190
Clothing & Footwear	15.0	59	59	4	9	3	1	17	8	35	41
Housing, Water, Elect, Gas & other Fuels	7.4	36	36	1	0	2	4	10	13	23	19
Furnishing & Household Equip. Maintenance etc	18.0	69	69	5	2	9	3	25	15	30	49
Health	10.7	39	39	14	14	8	7	5	4	12	14
Transport	13.2	43	43	11	1	4	7	9	7	19	28
Communication	0.8	12	12	5	5	3	2	2	4	2	1
Recreation & Culture	5.1	39	39	10	6	14	20	5	5	10	8
Education	11.9	16	16	3	2	6	2	4	3	3	9
Miscellaneous	19.4	35	35	6	1	6	5	13	8	10	21
Overall	10.2	477	477	69	57	68	59	107	90	233	271

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

Table A3: Top Ten Contributors to CPI Inflation (YoY) in November 2011					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Nov-10	Nov-11	
A. Ranked by Weighted contribution					
1	Milk Fresh	6.68	17.36	21.11	15.18
2	House Rent	21.81	7.96	7.07	12.70
3	Meat	2.43	27.39	19.35	5.40
4	Fresh Fruits	1.86	20.26	29.62	5.23
5	Motor Fuel	3.03	12.63	18.07	5.00
6	Education	3.94	6.52	11.92	3.97
7	Vegetable Ghee	2.07	25.75	16.64	3.07
8	Gas	1.58	29.37	13.55	2.93
9	Transport Services	2.70	18.13	9.72	2.86
10	Cooking Oil	1.75	11.84	19.56	2.80
Total		47.86			59.14
B. Ranked by Percentage change					
1	Tomatoes	0.41	36.85	42.02	1.84
2	Spices	0.54	37.43	36.37	2.42
3	Fresh Fruits	1.86	20.26	29.62	5.23
4	Household Servant	1.04	1.80	28.65	2.49
5	Medical Equipment	0.01	13.04	27.83	0.02
6	Fire Wood Whole	0.23	14.17	25.46	0.60
7	Betel Leaves & Nuts	0.02	17.31	24.56	0.05
8	Woolen Cloth	0.88	13.78	24.32	1.93
9	Blades	0.03	6.43	24.26	0.07
10	Gram Whole	0.16	22.53	24.19	0.42
Total		5.19			15.08
C. Ranked by Weights					
1	House Rent	21.81	7.96	7.07	12.70
2	Milk Fresh	6.68	17.36	21.11	15.18
3	Electricity	4.40	25.83	3.19	1.54
4	Wheat Flour	4.16	3.01	0.30	0.14
5	Education	3.94	6.52	11.92	3.97
6	Communication & Apparatus	3.15	15.90	0.77	0.20
7	Motor Fuel	3.03	12.63	18.07	5.00
8	Transport Services	2.70	18.13	9.72	2.86
9	Meat	2.43	27.39	19.35	5.40
10	Vegetable Ghee	2.07	25.75	16.64	3.07
Total		54.39			50.05
Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in CPI, which is 10.2 percent in November, 2011.					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: November 2011

Groups	Decrease or no change	Subdued increase (Up to 5%)	Moderate increase (5 to 10%)	More than 10% increase
Food & Non-Alcoholic Beverages	Garlic, Ginger, Potatoes, Sugar Refined, Onion, Chillies Green, Pulse Mash (Washed), Pulse Masoor (Washed)	Suji, Besan Av. Qlty., Maida, Coriander Seed (Loose), Wheat Flour Avg. Qlty, Wheat Flour Fine/Superior, Pulse Gram	Fish-Rahu Medium Size, Groundnuts (With Shell), Coriander Seed, Powd.National., Chips, Bread Plain Medium Size, Tinda	Chillies Powd.National 200 Gm, Cloves Loose Av.Qlty, Turnip, Malta/Mosambi, Carrot, Cardamom Large Loose Av.Qlty, Cornflakes Fauji 225 Gm., Lemon, Tomatoes, Milo 200 Gm.
Alcoholic Beverages & Tobacco		Cigarettes Capstan 20,S	Cigarettes Gold Leaf 20,S, Cigarettes Morven Gold 20,S, Cigarettes K-20,S	Betel Nuts, Betel Leaves
Clothing & Footwear	Heavy Wt Suiting Law.Pur Av. Qlty, Child Shoe Power Lite Bata, Gents Shoes Paul Bata, Gents Spoung Chappal Bata, Ladies Spoung Chappal	Pullover Gents Oxford/Bon	Washing Charges Paint & Shirt, Secondhand Winter Jacket, Tailoring Coat-Pant Suit, Vest/Shameez (Women) Av.Qlty, Secondhand Sweater For Men, Tailoring	Brassier Av.Qlty, Heavy Wt Suiting Law.Pur Sup. Qlty, Lungi/Dhoti(Cotton) Av.Qlty, Linen Av.Qlty, Georgette Av.Qlty, Dopatta Georgette Av.Qlty, Vest For Men Av.Qlty., Frock W/Wear Girls, Shirting Av.Qlty., Awami-Suit W & W (Boys) 24"/26", Dopatta Cotton Av. Qlty
Housing, Water, Elect, Fuels		Elect. Charges Overall/ Combined, Elect. Charges Up to 50 Units, Elect. Charges 301 - 1000 Units, Elect. Charges Above 1000 Units	Timber Shesham Log, Cement Blocks (6"X8"X12"), Water Charges Per House, Plumber Wage Rate, Electrician Wage Rate, House Rent For Q-I	Bricks (New) 1st Class, Firewood Whole, Cement (Local), Kerosene Oil, Synthetic Enamel ICI, Synthetic Enamel Robialac, Iron Bar (M.S. Bar) 1/2", Gas Chrg All Over 500 Mmbtu, Gas Chrg Overall/ Combined, Gas Chrg Over 300 - 500
Furnishing & Household Equip. Maintenance etc	Match Box (Small), Washing Machine (Singer)	Non Stick Cooking Pan, Bulb Philips 100-Watt, Tube Light Philips 40 Watt	Water Set Jug+6 Glasses, Pedestal Fan 22" Super Qlty, Chair Plastic (Chairman) Av. Qlty, Air Cooler Super Asia, Tawa Iron (Medium Size)	Robin Blue (35 Gms), Electric Blubs "0" Watt, Towel(3'X2') Av. Qlty, Washing Soap 250 Gm, Household Servant Female (Part Time), Hand Stitching Needle, Elect. Iron Philips, Chair Shesham Wood, Marriage Hall Charges
Health	Amoxil Capsule 250 Mg., Dettol (Medium), Sancos Syrup (50 Ml.), Phenergan Syrup 120 Ml., Flagyl Tab. 200 Mg., Calpol	Brufen Tabs 200-Mg., Lederplex Syrup, Ventolin Tab. 2Mg., Polyfax Eye Ointment, Daonil Tab. 5 Mg., Renitec Tab. 5 Mg.	ECG Charges, Panadol Tab. Extra/Plain, Blood Test (Cp) Charges, Ear Drops (Cardisorpine)	Cac. 1000 Tab, Glaxose-D (450 Gm), Gripe-Water Woodward's, Cotton Bandage 2" - 4", O.R.S. (Nimcol), Trisil Tab., Saniplast (1 Putty), Vicks Vaporub/ Balm, Glycerin Small Bottle, Sugar Test (Random/Fasting)
Transport	Platform Ticket	Bus Fare Min (Within City), Motorcycle Honda Cd-70, Car Suzuki 1000 Cc, Minibus Fare Min.Within City, Suzuki Fare Min.Within City	Taxi 4 Seater Fare, Tyre Puncture Charges, Suzuki Fare Maximum Within City, Motorcycle Yamaha 100 Cc, Minibus Fare Min.	Train Fare Eco. > 500 Km., Tyre Cycle, Bus Fare Outside City (A/C), High Speed Diesel HSD, Petrol Super, Tyre Motor Cycle Without Tube, Car Tax For 800 Cc To 1300 Cc, Air Fare Economy Class., Gas Cylinder S. Size (L.P.G)
Communication	Mobile Set Nokia/Sony/Ericsson Av.Qlty, U.M.S. Reg Charges Min., Telephone	Postal Envelope For Saudi Arabia, Mobile Cell Charges	Telephone Set Av. Qlty, Internet Charges, T.C.S. Ch. Min. Within Zone, Fax Charges (Local)	Postal Registration Charges
Recreation & Culture	English Book Class V1, English Book BA/B.Sc, TV License Fee Domestic, Daily "Nawa-E-Waqt", Daily "Jang", Daily "Dawn",	English Book Class Ix Or X, Urdu Book Class V (T.B.Board), Cinema A/C High Class, Radio With C.Player National, Cable Charges, Maths Book Cals V	Paper Fool Scape (27"X17"), Exercise Book Lined 80/10, Maths Book Class Ix Or X, Fountain Pen Hero/Wings/China, Pen Ink Dollor 57 Ml Bottle	Weekly "Mag", Monthly "Naunehal Digest", Cinema Non-A/C High Class, Pakistan Studies Book BA/B.Sc, Weekly "Akhbar-E-Jahan", Tape Recorder Cassette (Blank), Pencil Goldfish/Deer, Photostat Paper 70 Gm
Education	Pvt. Eng. College Fee (1st Year), Govt. College Fee 1st. Year	Govt. College Fee 4Th. Year, I.T. Tuition Fee	Coaching Charges For Class Xi/ Xii Science Group, Govt. University Fee M. Sc/ MA, Pvt. Med. Coll. Fee MBBS	Govt. Med. College Fee MBBS 1st Year, Govt. Eng. Coll. Fee 1st Year, Pvt. School Fee Eng. Med (Class-Vi), Pvt. School Fee Eng. Med (Class-I), Coaching Charges For Class Xi/ Xii
Restaurant & Hotels			Bread Tandoori St. Size	Chicken Biryani Full/Double, Tea Prepared (Ordinary), Cooked Beef (Av. Hotel), Cooked Mutton (Av. Hotel), Cooked Dal (Av. Hotel)
Miscellaneous	Lipstick S. Miss/Medora	Hair Color Bigen, Wrist Watch Gents Citizen, Toothpowder Dentonic 90 Gms, Wrist Watch Ladies	Nail Polish S. Miss/Medora, Purse Ladies (Leather) Av. Qlty, Shaving Cream Touch-Me/Admiral	Toothpaste Med Size Colgate 70Gms, Silver Tezabi 24 Ct, Blade Treet Ordinary (10), Toilet Soap Lux 95 Gms, Gel Medium Size, Gold Tezabi 24 Ct, Toilet Soap Lifebuoy 140 Gms

Table A5: City- wise CPI Inflation by Income Groups, November 2011

	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	0.0	7.7	-0.4	6.7	0.6	9.0	0.1	8.1	-0.4	7.1	0.6	9.2
2 Islamabad	0.0	7.6	-0.2	7.2	0.3	8.3	-0.1	8.2	-0.4	7.9	0.3	8.5
3 Lahore	-0.6	7.2	-1.2	6.7	0.5	8.1	-0.6	7.6	-1.3	7.3	0.3	7.9
4 Gujranwala	0.2	11.2	0.4	12.3	-0.1	9.7	0.3	11.4	0.6	13.1	0.0	9.6
5 Sialkot	-0.5	4.2	-1.2	2.8	0.4	6.2	-0.6	4.7	-1.5	3.3	0.4	6.3
6 Faisalabad	-0.4	6.5	-1.2	3.4	0.8	11.0	-0.4	7.2	-1.4	4.4	0.9	10.8
7 Multan	0.1	8.7	-0.2	6.9	0.4	11.3	0.2	9.2	0.0	7.9	0.4	10.8
8 Sargodha	0.1	8.1	-0.1	3.3	0.3	14.4	0.1	9.1	0.0	4.1	0.3	14.7
9 Bahawalpur	0.1	9.9	-0.1	5.9	0.4	15.3	0.0	10.5	-0.2	7.0	0.3	14.4
10 Karachi	-0.7	7.5	-1.4	5.9	0.4	10.0	-0.6	8.2	-1.4	7.1	0.3	9.5
11 Hyderabad	-0.2	7.0	-0.8	6.1	0.6	8.3	-0.2	7.7	-0.8	7.1	0.5	8.5
12 Sukkur	-0.1	8.9	-0.3	7.8	0.1	10.3	0.0	9.6	-0.1	9.2	0.1	10.0
13 Larkana	1.4	14.4	2.0	13.3	0.6	15.9	1.3	14.8	1.8	13.3	0.7	16.6
14 Peshawar	-0.2	7.1	-0.6	5.4	0.3	9.2	-0.1	7.4	-0.5	6.3	0.3	8.7
15 Bannu	-1.0	7.4	-1.9	2.6	0.2	14.1	-0.8	7.8	-1.6	3.7	0.2	12.7
16 Quetta	0.0	6.4	-0.6	4.3	0.7	9.4	0.1	6.9	-0.4	5.1	0.7	9.3
17 Khuzdar	-0.1	8.6	-0.5	5.7	0.4	12.4	-0.4	9.3	-0.8	5.8	0.0	13.2

	Rs 12001-18000						Rs 18001-35000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-0.1	8.8	-0.6	7.9	0.5	9.7	-0.2	9.6	-0.9	9.3	0.5	10.0
2 Islamabad	-0.3	8.4	-0.8	8.4	0.2	8.5	-0.2	8.5	-0.8	9.1	0.3	8.0
3 Lahore	-0.6	8.1	-1.3	7.9	0.2	8.3	-0.5	8.2	-1.2	8.6	0.2	7.8
4 Gujranwala	0.5	12.5	1.0	14.7	0.1	10.4	0.6	12.4	1.1	15.3	0.1	10.0
5 Sialkot	-0.7	4.8	-1.6	3.4	0.2	6.2	-0.6	5.3	-1.4	3.9	0.2	6.5
6 Faisalabad	-0.4	7.6	-1.5	5.1	0.7	10.3	-0.2	8.1	-1.4	5.7	0.9	10.3
7 Multan	0.2	9.7	0.0	8.6	0.4	11.0	0.1	9.8	-0.2	9.2	0.3	10.2
8 Sargodha	0.0	9.9	-0.2	4.7	0.2	15.1	0.0	10.4	-0.1	5.5	0.1	14.6
9 Bahawalpur	-0.2	11.1	-0.2	7.6	-0.3	14.6	-0.3	11.4	-0.4	8.2	-0.3	14.2
10 Karachi	-0.6	8.7	-1.4	7.7	0.2	9.7	-0.6	8.8	-1.4	8.1	0.2	9.4
11 Hyderabad	-0.3	8.6	-0.9	8.1	0.4	9.1	-0.3	9.0	-1.0	9.0	0.4	9.0
12 Sukkur	0.0	10.3	-0.1	10.1	0.1	10.5	0.1	10.5	0.0	10.6	0.2	10.5
13 Larkana	1.4	15.3	1.9	13.6	0.8	17.2	1.3	15.6	1.9	14.0	0.8	17.1
14 Peshawar	-0.1	7.7	-0.5	6.3	0.3	9.1	-0.1	8.0	-0.5	7.5	0.3	8.5
15 Bannu	-0.8	8.3	-1.7	3.9	0.2	13.0	-0.8	8.7	-1.8	5.1	0.1	11.9
16 Quetta	0.1	7.8	-0.4	6.1	0.7	9.6	0.1	8.4	-0.5	6.9	0.6	9.9
17 Khuzdar	-0.2	10.0	-0.5	6.6	0.1	13.7	-0.1	9.9	-0.5	6.7	0.3	12.7

	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	0.1	10.4	-0.9	10.6	0.5	10.3	0.0	9.9	-0.8	9.7	0.6	10.1
2 Islamabad	0.0	8.9	-0.7	11.5	0.3	7.6	-0.1	8.8	-0.7	10.9	0.4	7.3
3 Lahore	-0.3	8.6	-1.1	10.5	0.2	7.5	-0.4	8.2	-1.2	9.1	0.2	7.6
4 Gujranwala	0.7	12.5	1.7	16.5	0.3	10.6	0.5	12.1	1.1	14.8	0.1	10.2
5 Sialkot	-0.4	5.9	-1.2	4.7	0.0	6.5	-0.5	5.3	-1.4	4.0	0.1	6.3
6 Faisalabad	0.5	10.3	-1.2	7.6	1.4	11.6	-0.1	8.4	-1.3	5.5	0.9	10.5
7 Multan	0.2	10.6	0.2	11.1	0.2	10.3	0.2	9.9	0.0	9.3	0.3	10.3
8 Sargodha	0.2	12.3	0.3	6.9	0.2	15.0	0.1	10.3	0.0	5.1	0.2	13.9
9 Bahawalpur	-0.1	12.2	-0.3	9.4	0.0	13.7	-0.1	11.2	-0.2	7.7	0.0	13.8
10 Karachi	-0.3	9.2	-1.0	9.8	0.2	8.8	-0.4	8.9	-1.2	8.8	0.2	9.0
11 Hyderabad	-0.1	10.2	-1.1	10.7	0.5	10.0	-0.2	8.9	-1.0	8.7	0.4	9.1
12 Sukkur	0.2	11.3	0.1	11.2	0.3	11.4	0.1	10.3	0.0	10.1	0.1	10.4
13 Larkana	1.2	16.8	1.6	15.2	1.1	17.7	1.3	15.3	1.8	13.8	0.9	16.4
14 Peshawar	0.2	8.9	-0.2	9.5	0.4	8.6	0.0	8.2	-0.4	7.4	0.3	8.7
15 Bannu	-0.3	10.7	-1.6	6.3	0.3	13.0	-0.7	8.5	-1.7	4.3	0.0	11.7
16 Quetta	0.1	9.2	-0.6	7.6	0.4	10.0	0.1	8.2	-0.5	6.5	0.5	9.5
17 Khuzdar	0.4	12.0	-0.7	8.8	1.0	13.7	-0.2	9.5	-0.6	6.2	0.1	11.9

Table A6: City- wise CPI Inflation (YoY) November, 2011							
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Larkana	15.3	13.8	16.4	Rawalpindi	9.9	9.7	10.1
Bahawalnagar	13.6	12.2	14.5	Multan	9.9	9.3	10.3
Gawadar	12.7	11.6	13.4	Sahiwal	9.8	6.7	12.1
Gujranwala	12.1	14.8	10.2	Attock	9.7	9.9	9.5
Dadu	11.7	12.2	11.4	D.I. Khan	9.6	9.2	10.0
Loralai & Cantt	11.6	10.9	12.1	Turbat	9.6	8.0	10.6
Mithi	11.5	10.7	12.1	Khuzdar	9.5	6.2	11.9
Abbotabad	11.5	9.0	13.2	Wazirabad	9.3	8.6	9.8
Mingora	11.5	11.7	11.3	Hyderabad	8.9	8.7	9.1
Nawabshah	11.3	8.9	13.0	Karachi	8.9	8.8	9.0
Muzaffargarh	11.2	11.9	10.8	Islamabad	8.8	10.9	7.3
Bahawalpur	11.2	7.7	13.8	Bannu	8.5	4.3	11.7
D.G. Khan	11.1	12.2	10.4	Faisalabad	8.4	5.5	10.5
Dera Murad Jamali	11.1	10.6	11.4	Vehari	8.3	7.0	9.4
Rahim Yar Khan	11.0	10.6	11.4	Lahore	8.2	9.1	7.6
Jhelum	10.7	10.9	10.6	Quetta	8.2	6.5	9.5
Jhang	10.5	9.4	11.3	Peshawar	8.2	7.4	8.7
Mirpur Khas	10.5	13.0	8.6	Mianwali	8.1	5.9	9.7
Sargodha	10.3	5.1	13.9	Sialkot	5.3	4.0	6.3
Sukkur	10.3	10.1	10.4				
Mardan	10.2	5.8	13.2				
Note: High inflation refers to equal or above average inflation, and low inflation refers to below average							

Table A7: Income Group-wise Inflation (percent)

	MoM			YoY		
	Nov-10	Oct-11	Nov-11	Nov-10	Oct-11	Nov-11
<u>Up to Rs. 8000</u>						
General	1.7	1.5	0.2	16.9	10.3	8.6
Food	2.4	1.6	0.0	21.1	10.0	7.4
Non-food	0.7	1.4	0.4	11.5	10.7	10.4
<u>Rs. 8001- 12000</u>						
General	1.4	1.5	0.2	16.1	10.6	9.3
Food	2.1	1.6	0.0	20.7	10.6	8.3
Non-food	0.6	1.3	0.4	11.1	10.6	10.4
<u>Rs. 12001- 18000</u>						
General	1.2	1.5	0.2	14.5	10.7	9.6
Food	1.9	1.6	0.0	20.4	11.1	9.1
Non-food	0.5	1.3	0.4	9.0	10.3	10.1
<u>Rs. 18001- 35000</u>						
General	1.0	1.4	0.2	16.1	10.8	9.9
Food	1.6	1.6	0.1	20.0	11.6	9.9
Non-food	0.5	1.3	0.3	12.9	10.1	9.9
<u>Above Rs. 35000</u>						
General	0.7	1.4	0.4	14.4	11.2	10.8
Food	1.2	1.6	0.2	19.3	12.7	11.5
Non-food	0.5	1.3	0.5	12.1	10.5	10.5
<u>All income groups</u>						
General	1.0	1.4	0.3	15.0	11.0	10.2
Food	1.6	1.6	0.1	20.0	11.7	10.0
Non-food	0.5	1.3	0.4	11.5	10.4	10.3

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices	Percentage change	
			Nov-11	YoY	MoM
1	Wheat	10Kg.	266.9	0.4	1.8
2	Wheat Flour Bag	10Kg.	302.1	-1.0	1.1
3	Rice Basmati Broken	Kg.	59.9	21.9	1.4
4	Rice Irri-6/9	Kg.	45.2	20.5	0.1
5	Bread Plain Med. Size (340-400 Gm.)	Each	31.2	11.7	0.7
6	Beef	Kg.	252.2	17.6	1.2
7	Mutton	Kg.	477.1	17.3	1.5
8	Chicken Live (Farm)	Kg.	127.1	7.9	-3.8
9	Milk Fresh	Litr	57.1	16.4	1.0
10	Curd	Kg.	66.9	16.7	0.8
11	Milk Powdered Nido	500G	245.0	22.5	2.6
12	Egg Hen (Farm)	Doz.	88.5	12.2	7.1
13	Mustard Oil	Kg.	177.6	16.3	0.8
14	Cooking Oil (Tin)	2.5Ltr	495.0	21.0	0.0
15	Veg. Ghee (Tin)	2.5Kg.	495.0	21.0	0.0
16	Veg. Ghee Loose	Kg.	160.8	10.4	-0.6
17	Bananas	Doz.	48.4	22.9	4.0
18	Masoor Pulse Washed	Kg.	104.6	-13.9	-1.0
19	Moong Pulse Washed	Kg.	129.6	-7.9	-3.3
20	Mash Pulse Washed	Kg.	147.3	-11.8	-0.9
21	Gram Pulse Washed	Kg.	71.6	-0.5	-1.2
22	Potatoes	Kg.	28.5	-24.8	-3.3
23	Onions	Kg.	53.2	-19.8	24.5
24	Tomatoes	Kg.	78.1	69.7	2.1
25	Sugar	Kg.	65.2	-26.8	-6.8
26	Gur	Kg.	84.0	-6.8	-8.4
27	Salt Powdered Loose (Lahori)	Kg.	8.0	14.1	0.8
28	Red Chilies Powder Loose	Kg.	319.5	44.4	1.8
29	Garlic	Kg.	103.7	-55.1	-4.0
30	Tea (Yellow Label 200 Gm.)	200Gm.	131.6	11.6	0.0
31	Cooked Beef Plate	Each	59.6	14.8	1.8
32	Cooked Dal Plate	Each	36.5	10.6	0.0
33	Tea Prepared (Sada)	Cup	13.9	11.9	1.5
34	Cigarettes K-2 (20'S)	20'S	28.7	5.6	0.0
35	Long Cloth (Coarse Latha)	Mtr.	96.4	-37.2	-1.5
36	Shirting	Mtr.	107.5	25.2	1.7
37	Lawn	Mtr.	101.9	-32.4	4.7
38	Georgette (Voil Printed)	Mtr.	85.0	21.8	1.6
39	Sandal Gents Bata	Pair	499.0	0.0	0.0
40	Chappal Spong. Bata (Gents)	Pair	139.0	0.0	0.0
41	Sandal Ladies Bata	Pair	399.0	0.0	0.0
42	Electric Charges	Unit	1.9	2.2	0.0
43	Gas Charges	Mmbtu	125.1	13.5	0.0
44	Kerosene	Litr	98.6	19.9	-0.5
45	Firewood	40Kg	426.5	27.1	2.1
46	Energy Savor 14 Watts	Each	138.8	13.0	1.2
47	Washing Soap (200-250 Gm.)	Cake	17.9	25.8	0.7
48	Match Box	Each	1.1	6.0	0.0
49	Petrol	Litr	88.5	20.0	-1.8
50	Diesel	Litr	95.1	20.3	0.0
51	L.P.G.(11 Kg Cylinder.)	Each	1312.4	7.7	-0.6
52	Tele. Local Call	Call	3.6	0.0	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	30.0	25.0	0.0
Maximum				69.7	24.5
Median				11.9	0.0
Minimum				-55.1	-8.4

Table A9: Distribution of Price Changes (YoY) - WPI Items: November 2011

Groups	Decrease or no change	Subdued increase (Up to 5%)	Moderate increase (5 to 10%)	More than 10% increase
Agriculture Forestry & Fishery Products	Fibre Crops, Edible Roots/Potatoes, Stimulant And Spice Crops, Sorghum/Jowar, Fish Live Fresh or Chilled, Sugar Crops	Poultry, Wheat,	Eggs,	Vegetables, Fuel Wood In Logs, Pulses, Millet/Bajra, Rice, Hides And Fur Skins, Raw, Other Oil Seeds, Milk From Bovine Animals, Dry Fruits, Cotton Seeds, Fresh Fruits, Raw Animal Material/Wool, Maize, Unmanufactured Tobacco
Ores & Minerals, Electricity Gas & Water		Electrical Energy		Salt & Pure Sodium Chloride, Natural Gas Liquefied, Coal Not Agglomerated
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Cotton Yarn, Milk And Cream In Solid Form, Sugar Refined, Sugar Confectionary, Footwear's	Leather With Out Hairs, Wheat Flour, Woolen Carpets, Chocolate	Other Leather N.E.C, Other Cereal Flour, Synthetic Carpets, Oil Cakes, Tobacco Products	Spices, Mineral Water, Other Food Products, Vegetable Ghee, Dairy Products N.E.C, Towels, Woven Fabrics, Vegetable Oil Refined, Hosiery Products, Bed Sheets, Cotton Fabrics, Other Fabrics, Meat Of Animals, Blankets, Dried Fruits & Nuts, Fruit Juices, Vegetables & Fruit Juices, Coffee And Tea, Processed Liquid Milk, Nylon Yarn, Beverages, Silk And Rayon Fabrics, Ready Made Garments, Quilts, Ice Cream, Blended Yarn
Other Transportable Goods except Metal Products, Machinery and Equipments	Medicines, Dying Materials	Ceramics And Sanitary	Timber, Matches, Insecticides	Fertilizers, Plastic Products, Furnace Oil, Hard Board, Other Glass Articles, Pesticides, Chemicals, Diesel Oil, Paints & Varnishes, Kerosene Oil, Auto Tyres, Motor Sprit, Bricks Blocks And Tiles, Soaps & Detergent, Mobil Oil, Coke, Bed Foams, Printing Paper, Cement, Glass Sheets
Metal Product Machinery & Equipment	Pig Iron	Motor Cycles, Lathe Machines, Engines And Motors, Vacuum Pumps, Chuff Cutter, Concrete Mixer	Radio And Television, Cultivators	Lighting Equipments, Refrige,Wash& Sew Mach,Iron,Fan, Steel Products, Bicycles, Tractors, Steel Bars & Sheets, Air Conditioners, Electrical Wires, Motor Vehicles, Pipe Fittings

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities				
Items and specification	Weights	Index		
		Nov-10	Oct-11	Nov-11
General	100.00	146.34	160.79	161.25
Food & Non-Alcoholic Beverages.	34.83	167.40	184.02	184.17
1 Wheat	0.35	157.48	154.09	156.86
2 Wheat Flour	4.16	163.80	162.53	164.29
3 Wheat Product	0.10	155.34	161.96	161.67
4 Besan	0.15	159.55	166.33	165.36
5 Rice	1.58	128.18	152.25	152.32
6 Cereals	0.16	158.90	184.14	187.46
7 Bakery & Confectionary	1.16	144.93	160.32	161.20
8 Nimco	0.46	155.45	177.21	177.99
9 Meat	2.43	171.21	200.24	204.34
10 Chicken	1.36	144.74	167.45	155.91
11 Fish	0.30	159.17	171.04	175.02
12 Milk Fresh	6.68	160.51	190.19	194.40
13 Milk Product	0.63	157.98	187.88	190.31
14 Milk Powder	0.11	137.05	157.02	159.01
15 Egg	0.46	157.66	167.36	183.90
16 Mustard Oil	0.10	131.19	150.50	152.21
17 Cooking Oil	1.75	121.68	145.35	145.48
18 Vegetable Ghee	2.07	132.99	156.57	155.12
19 Dry Fruits	0.25	164.66	193.26	193.54
20 Fresh Fruits	1.86	141.25	189.95	183.09
21 Pulse Masoor	0.27	171.81	156.45	152.29
22 Pulse Moong	0.23	270.33	265.11	247.82
23 Pulse Mash (Washed)	0.21	242.75	217.69	212.55
24 Pulse Gram	0.24	160.77	162.58	161.66
25 Gram Whole	0.16	161.25	198.47	200.26
26 Beans	0.03	152.75	175.46	177.36
27 Potatoes	0.44	273.08	206.71	193.36
28 Onion	0.51	416.58	237.79	331.44
29 Tomatoes	0.41	158.02	222.66	224.42
30 Fresh Vegetable	1.77	214.57	236.89	209.00
31 Sugar	1.04	302.93	257.00	240.01
32 Gur	0.02	278.55	286.63	264.16
33 Honey	0.04	188.68	201.20	204.13
34 Sweet Meet	0.25	166.88	185.08	191.34
35 Beverages	1.20	134.01	158.79	160.53
36 Jam, Tomato Ketchup & Pickle	0.25	149.34	169.49	169.65
37 Condiments	0.27	155.34	182.60	191.83
38 Spices	0.54	182.11	244.45	248.34
39 Tea	0.84	177.32	200.28	200.77
Alcoholic Beverages, Tobacco	1.41	151.30	161.57	161.67
40 Cigarette	1.39	151.53	161.50	161.51
41 Betel Leaves & Nuts	0.02	137.24	165.88	170.94
Clothing & Footwear	7.57	130.71	148.92	150.36
42 Cotton Cloth	1.73	126.06	147.69	148.82
43 Woolen Cloth	0.88	135.15	166.84	168.02
44 Ready Made Garment	0.97	127.00	146.47	148.22
45 Woolen Readymade Garments	0.40	131.59	141.11	142.85
46 Hosiery	0.51	134.26	158.72	160.52
47 Dopatta	0.44	128.40	155.63	157.87
48 Cleaning & Laundering	0.21	141.09	160.44	163.04

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

Items and specification	Weights	Index		
		Nov-10	Oct-11	Nov-11
49 Tailoring	0.88	152.30	173.30	176.63
50 Footwear	1.55	121.27	123.11	123.20
Housing, Water, Elect, Gas & Other Fuel	29.41	134.11	143.95	144.03
51 House Rent	21.81	122.69	131.37	131.37
52 Construction Input Item	0.56	153.52	181.83	184.15
53 Construction Wage Rate	0.33	137.69	150.91	151.37
54 Water Supply	0.50	118.21	127.24	128.32
55 Electricity	4.40	163.49	168.71	168.71
56 Gas	1.58	204.32	232.00	232.00
57 Kerosene Oil	0.01	189.64	230.00	228.18
58 Fire Wood Whole	0.23	154.90	192.12	194.34
Furnished H.Hold Equip.& Maint. Etc	4.21	133.44	154.18	157.52
59 Furniture	0.33	132.75	146.78	149.28
60 Household Textile	0.65	131.16	150.62	153.13
61 Household Equipment	0.59	136.00	147.52	148.25
62 Utensils	0.32	130.75	144.44	147.06
63 Plastic Products	0.25	143.55	161.30	163.36
64 Washing Soap & Detergent	0.79	145.03	172.01	173.59
65 Sewing Needle & Dry Cell	0.15	121.42	135.15	136.48
66 Household Servant	1.04	124.43	152.17	160.08
67 Marriage Hall Charges	0.08	140.33	165.97	167.43
Health	2.19	122.77	135.22	135.85
68 Drug Medicine	1.27	114.52	123.86	124.15
69 Medical Equipment	0.01	133.78	170.41	171.01
70 Doctor (MBBS) Clinic Fee	0.59	138.59	157.19	158.46
71 Medical Test	0.32	125.94	138.73	139.52
Transport	7.20	145.95	165.39	165.16
72 Motor Vehicle	0.66	132.11	139.90	140.39
73 Motor Vehicle Accessories	0.24	158.10	181.20	185.04
74 Motor Fuel	3.03	136.23	162.74	160.84
75 Mechanical Service	0.46	138.95	153.42	154.55
76 Motor Vehicle Tax	0.11	100.00	120.91	119.48
77 Transport Services	2.70	162.17	177.01	177.93
Communication	3.22	122.17	123.37	123.19
78 Postal Services	0.07	159.29	163.13	164.71
79 Communication & Apparatus	3.15	121.39	122.54	122.32
Recreation & Culture	2.02	133.86	140.30	140.74
80 Recreation & Culture	0.86	110.97	115.10	115.32
81 Text Books	0.57	159.17	164.45	164.45
82 News Papers	0.19	137.66	149.97	149.97
83 Stationery	0.40	145.49	155.75	157.52
Education	3.94	125.90	140.35	140.91
84 Education	3.94	125.90	140.35	140.91
Restaurants And Hotels	1.23	161.18	180.73	182.32
85 Ready Made Food	1.23	161.18	180.73	182.32
Miscellaneous Goods And Services	2.76	150.45	176.45	179.71
86 Personal Care	1.49	137.70	159.65	162.39
87 Cosmetics	0.39	124.49	137.36	138.81
88 Blades	0.03	127.31	156.13	158.20
89 Personal Equipments	0.84	185.74	224.82	229.83

Table A11: Wholesale Price Index Numbers by Major Groups and Selected Commodities			
Items and Specifications	Index		
	Nov-10	Oct-11	Nov-11
General	159.29	179.34	178.39
Agriculture Forestry & Fishery	179.17	189.95	184.98
1 Wheat	161.75	159.45	162.51
2 Maize	136.34	155.85	151.51
3 Rice	117.43	150.79	151.90
4 Sorghum/Jowar	184.38	171.73	177.59
5 Millet/Bajra	113.35	150.84	147.59
6 Vegetables	201.50	289.33	282.06
7 Fresh Fruits	93.49	164.50	112.52
8 Dry Fruits	153.50	185.82	188.14
9 Cotton Seeds	160.07	200.09	196.11
10 Other Oil Seeds	135.80	166.79	169.50
11 Edible Roots/ Potatoes	291.24	222.49	217.20
12 Stimulant And Spice Crops	238.38	206.39	200.38
13 Pulses	159.17	209.86	207.67
14 Sugar Crops	296.35	271.70	291.82
15 Fibre Crops	268.58	208.10	194.74
16 Unmanufactured Tobacco	151.26	167.75	167.91
17 Poultry	160.50	174.87	163.25
18 Milk From Bovine Animals	153.05	187.04	188.73
19 Eggs	168.86	173.63	185.18
20 Raw Animal Material/Wool	110.48	135.67	130.85
21 Hides And Fur Skins, Raw	102.68	124.28	130.50
22 Fuel Wood In Logs	137.74	182.08	185.80
23 Fishes Live Fresh Or Chilled	143.59	139.80	140.23
Ores/Minerals, Gas & Elect.	155.70	170.17	170.09
24 Coal Not Agglomerated	112.94	125.49	125.49
25 Natural Gas Liquefied	155.84	180.08	179.87
26 Salt & Pure Sodium Chloride	122.90	150.55	153.67
27 Electrical Energy	161.76	166.13	166.13
Food, Beverages, Tobacco, Textiles	162.98	177.12	175.63
28 Meat Of Animals	170.20	209.72	213.36
29 Vegetables & Fruit Juices	143.64	175.05	176.10
30 Dried Fruits & Nuts	161.42	193.71	199.99
31 Fruit Juices	126.51	155.59	156.09
32 Vegetable Oil Refined	116.82	152.38	151.99
33 Vegetable Ghee	103.30	140.73	139.88
34 Oil Cakes	147.14	159.54	158.08
35 Processed Liquid Milk	151.71	176.43	180.23
36 Milk And Cream In Solid Form	186.59	170.87	165.95
37 Ice Cream	136.87	154.79	154.15
38 Dairy Products N.E.C	130.92	176.03	176.66
39 Wheat Flour	148.06	149.75	151.63
40 Other Cereal Flour	132.94	145.05	144.91
41 Sugar Refined	276.29	264.98	247.60
42 Chocolate	99.72	100.26	100.00
43 Sugar Confectionary	102.28	100.89	100.40
44 Coffee And Tea	156.16	188.84	188.78
45 Spices	120.97	210.44	276.42
46 Other Food Products	225.60	295.00	305.83
47 Mineral Water	119.49	161.35	162.93
48 Beverages	114.37	132.14	132.43
49 Tobacco Products	159.24	175.88	170.46
50 Cotton Yarn	232.03	202.80	192.84
51 Nylon Yarn	165.93	213.15	196.85
52 Blended Yarn	178.28	205.30	200.48
53 Woven Fabrics	122.42	161.84	162.80
54 Cotton Fabrics	130.95	163.06	164.49
55 Other Fabrics	120.73	150.74	151.58
56 Silk And Rayon Fabrics	121.10	137.41	138.37

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

Items and Specifications		Index		
		Nov-10	Oct-11	Nov-11
57	Towels	132.31	182.14	178.07
58	Blankets	116.72	144.97	146.17
59	Bed Sheets	125.79	158.15	160.30
60	Quilts	125.63	142.42	142.42
61	Woolen Carpets	103.57	106.55	105.95
62	Synthetic Carpets	138.58	154.24	150.34
63	Hosiery Products	117.03	149.42	150.62
64	Ready Made Garments	110.56	122.59	125.59
65	Leather With Out Hairs	105.18	109.34	109.34
66	Other Leather N.E.C	110.61	120.10	120.85
67	Footwear's	101.48	101.48	101.48
Other Transportable Goods		146.76	186.58	189.50
68	Timber	124.73	136.04	135.95
69	Printing Paper	105.15	118.38	118.38
70	Hard Board	104.17	141.67	141.67
71	Coke	136.21	155.28	155.28
72	Motor Sprit	123.21	150.24	147.65
73	Diesel Oil	185.47	228.14	225.86
74	Kerosene Oil	189.08	230.92	228.62
75	Furnace Oil	141.07	183.76	196.81
76	Mobil Oil	146.04	169.72	170.52
77	Chemicals	113.47	144.28	145.01
78	Dying Materials	107.04	106.14	106.14
79	Fertilizers	156.64	252.74	263.77
80	Pesticides	127.77	164.86	164.77
81	Insecticides	121.70	126.62	130.07
82	Paints & Varnishes	148.33	178.96	180.34
83	Medicines	116.05	113.92	113.92
84	Soaps & Detergent	125.61	146.21	148.10
85	Auto Tyres	142.28	167.32	172.02
86	Plastic Products	122.63	179.46	178.54
87	Glass Sheets	153.68	167.73	169.06
88	Other Glass Articles	157.91	195.83	203.99
89	Ceramics And Sanitary	128.72	132.70	132.70
90	Bricks Blocks And Tiles	139.52	162.96	166.88
91	Cement	138.30	155.02	155.21
92	Bed Foams	109.17	123.17	123.67
93	Matches	108.62	115.66	117.72
Metal Product Machinery & Equip		124.50	150.03	151.66
94	Pig Iron	128.97	128.97	128.97
95	Steel Bars & Sheets	112.67	131.03	132.89
96	Pipe Fittings	126.41	139.65	140.22
97	Steel Products	121.66	146.99	150.72
98	Engines And Motors	105.28	109.07	109.07
99	Vacuum Pumps	111.45	115.39	115.39
100	Air Conditioners	142.49	163.43	163.43
101	Cultivators	170.96	184.66	184.66
102	Chuff Cutter	126.82	131.08	131.08
103	Tractors	147.29	180.89	180.89
104	Lathe Machines	140.74	147.51	147.51
105	Concrete Mixer	134.63	138.83	138.83
106	Refrige,Wash& Sew Mach, Iron,Fan	130.91	162.49	162.72
107	Electrical Wires	140.41	157.53	158.89
108	Lighting Equipments	110.88	140.57	142.37
109	Radio And Television	120.17	129.24	131.33
110	Motor Vehicles	138.09	154.47	154.47
111	Motor Cycles	116.06	121.72	121.72
112	Bicycles	132.56	162.17	164.21

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
2009	Jan	116.46	119.80	114.46	115.90	117.69	114.76	120.7
	Feb	118.06	123.01	115.10	117.00	118.78	115.87	122.56
	Mar	118.49	124.08	115.14	117.52	121.22	115.17	123.76
	Apr	119.68	125.91	115.95	119.50	123.82	116.76	124.35
	May	119.60	125.42	116.11	121.07	125.29	118.39	125.23
	Jun	120.64	126.77	116.97	122.56	125.46	120.72	126.88
	Jul	122.46	130.97	117.36	124.71	126.30	123.70	130.55
	Aug	124.68	134.95	118.53	127.79	129.44	126.74	132.84
	Sep	124.89	135.20	118.71	128.83	130.66	127.67	134.11
	Oct	125.64	135.98	119.44	130.03	131.80	128.91	134.82
	Nov	127.30	138.87	120.37	132.41	134.07	131.36	137.06
	Dec	126.37	135.81	120.72	132.65	134.59	131.42	136.90
2010	Jan	129.64	138.54	124.31	136.97	138.94	135.72	141.97
	Feb	130.13	139.06	124.78	138.26	139.65	137.38	143.00
	Mar	131.75	141.71	125.78	140.35	141.71	139.49	144.87
	Apr	134.16	145.24	127.52	143.09	143.76	142.66	146.52
	May	134.34	145.69	127.54	144.73	144.13	145.11	147.54
	Jun	134.83	146.63	127.76	144.97	147.15	143.58	147.90
	Jul	137.62	149.33	130.60	147.38	149.13	146.27	152.10
	Aug	140.63	156.70	131.00	150.19	152.48	148.74	155.44
	Sep	143.49	163.96	131.22	152.74	155.52	150.98	161.00
	Oct	144.90	163.91	133.51	155.40	156.03	155.00	163.01
	Nov	146.34	166.59	134.21	159.34	157.03	160.81	167.56
	Dec	145.90	163.69	135.24	162.48	155.88	166.67	166.52
2011	Jan	147.67	166.52	136.38	165.58	159.08	169.70	166.95
	Feb	146.85	163.56	136.83	168.83	158.33	175.49	164.99
	Mar	148.91	167.10	138.01	174.41	162.92	181.70	166.80
	Apr	150.99	169.25	140.05	178.68	165.46	187.07	167.83
	May	151.33	168.77	140.88	176.97	167.15	183.20	167.97
	Jun	152.78	169.88	142.53	177.98	172.14	181.68	168.09
	Jul	154.72	174.80	142.69	177.26	175.45	178.41	171.45
	Aug	156.88	177.32	144.63	178.24	178.67	177.97	173.86
	Sep	158.50	180.16	145.52	178.68	181.88	176.65	175.02
	Oct	160.79	183.07	147.44	179.34	182.82	177.13	176.45
	Nov	161.25	183.26	148.06	178.39	181.48	176.43	177.53

*: all groups combined

*: all groups combined

Table A13: International Commodity Prices/ Indices

	Aug-11	Sep-11	Oct-11	Nov-11
Energy				
Crude Oil (US\$ per barrel) *	100.5	100.8	99.9	105.4
IMF Energy Index (2005 = 100)	189.1	189.8	189.3	197.2
WB Energy Index (1990 = 100) @	342.1	343.5	340.1	355.3
Food				
Rice (\$/MT)	577.3	615.6	602.0	609.1
Wheat (\$/MT)	327.1	315.9	289.0	281.0
Sugar (US cent/ pound)	28.9	26.6	26.3	24.5
Palm Oil (\$/MT)	1,047.5	995.2	914.4	985.8
Soybean Oil (\$/MT)	1,225.2	1,218.9	1,126.8	1,118.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	114.1	116.7	110.6	104.7
IMF Metal Price Index (2005 = 100)	232.8	224.1	200.9	193.3
Copper (\$/MT)	8,998.0	8,300.1	7,394.2	7,581.0
Aluminum (\$/MT)	2,381.0	2,293.5	2,180.7	2,080.0
Iron Ore (\$ cents/dry MT)	177.5	177.2	150.4	135.5
Tin (\$/MT)	24,056.7	22,526.6	21,868.6	21,291.7
Nickle (\$/MT)	21,864.7	20,377.6	19,039.1	17,873.0
Zinc (\$/MT)	2,199.3	2,075.2	1,871.4	1,935.3
Lead (\$/MT)	2,393.1	2,287.7	1,960.4	1,994.2
Uranium (\$/MT)	50.7	52.0	52.3	53.2
DAP (\$/MT)	659.4	642.5	630.9	611.3
Urea (\$/MT)	477.5	503.8	487.1	470.9

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 Adjusted

CPI Index Original Series				
Period	FY09	FY10	FY11	FY12
Jul	112.35	122.46	137.62	154.72
Aug	114.32	124.68	140.63	156.88
Sep	115.23	124.89	143.49	158.50
Oct	116.83	125.64	144.90	160.79
Nov	116.46	127.30	146.34	161.25
Dec	116.18	126.37	145.90	
Jan	116.46	129.64	147.67	
Feb	118.06	130.13	146.85	
Mar	118.49	131.75	148.91	
Apr	119.68	134.16	150.99	
May	119.60	134.34	151.33	
Jun	120.64	134.83	152.78	
CPI Index Seasonally Adjusted Series				
Jul	112.13	122.24	137.42	154.53
Aug	113.66	123.92	139.75	155.87
Sep	114.66	124.21	142.66	157.56
Oct	115.81	124.50	143.52	159.21
Nov	115.87	126.65	145.59	160.41
Dec	116.77	127.02	146.64	
Jan	116.64	129.84	147.90	
Feb	118.71	130.87	147.74	
Mar	119.16	132.54	149.85	
Apr	119.81	134.29	151.12	
May	120.01	134.81	151.89	
Jun	121.25	135.53	153.58	

Table 15. CPI Food Data Series Original and Adjusted

CPI Index Original Series				
Period	FY09	FY10	FY11	FY12
Jul	117.57	130.97	149.33	174.80
Aug	120.91	134.95	156.70	177.32
Sep	122.41	135.20	163.96	180.16
Oct	125.92	135.98	163.91	183.07
Nov	123.45	138.87	166.59	183.26
Dec	122.15	135.81	163.69	
Jan	119.80	138.54	166.52	
Feb	123.01	139.06	163.56	
Mar	124.08	141.71	167.10	
Apr	125.91	145.24	169.25	
May	125.42	145.69	168.77	
Jun	126.77	146.63	169.88	
CPI Index Seasonally Adjusted Series				
Jul	117.11	130.42	148.62	173.87
Aug	119.38	133.18	154.68	175.01
Sep	120.70	133.08	161.22	177.08
Oct	123.92	133.63	160.92	179.66
Nov	121.71	136.83	164.04	180.37
Dec	123.19	136.93	164.99	
Jan	120.23	139.10	167.31	
Feb	124.90	141.50	166.63	
Mar	125.64	143.47	169.14	
Apr	126.57	145.89	169.85	
May	126.38	146.97	170.40	
Jun	128.25	148.56	172.30	

Table 16: CPI Index Monthly & Average Seasonal Factors

CPI Index – Seasonal Factors					
Period	FY09	FY10	FY11	FY12	Average
Jul	100.2	100.2	100.1	100.1	100.2
Aug	100.6	100.6	100.6	100.6	100.6
Sep	100.5	100.5	100.6	100.6	100.6
Oct	100.9	100.9	101.0	101.0	100.9
Nov	100.5	100.5	100.5	100.5	100.5
Dec	99.5	99.5	99.5		99.5
Jan	99.8	99.8	99.8		99.8
Feb	99.4	99.4	99.4		99.4
Mar	99.4	99.4	99.4		99.4
Apr	99.9	99.9	99.9		99.9
May	99.7	99.7	99.6		99.6
Jun	99.5	99.5	99.5		99.5

Table 17: CPI Food Index Monthly & Average Seasonal Factors

CPI Food – Seasonal Factors					
Period	FY09	FY10	FY11	FY12	Average
Jul	100.3	100.42	100.4	100.5	100.5
Aug	101.2	101.33	101.3	101.3	101.3
Sep	101.4	101.59	101.7	101.7	101.6
Oct	101.6	101.76	101.8	101.9	101.8
Nov	101.4	101.49	101.5	101.6	101.5
Dec	99.16	99.18	99.21		99.2
Jan	99.65	99.60	99.53		99.6
Feb	98.49	98.28	98.16		98.3
Mar	98.76	98.78	98.79		98.8
Apr	99.48	99.55	99.65		99.6
May	99.24	99.13	99.04		99.1
Jun	98.85	98.70	98.60		98.7

Table 18: CPI Index Month-on-Month Changes Original & Seasonally Adjusted				
CPI Index MoM % Change Original Series				
Period	FY09	FY10	FY11	FY12
Jul		1.51	2.07	1.27
Aug	1.75	1.81	2.19	1.40
Sep	0.80	0.17	2.03	1.03
Oct	1.39	0.60	0.98	1.44
Nov	-0.32	1.32	0.99	0.29
Dec	-0.24	-0.73	-0.30	
Jan	0.24	2.59	1.21	
Feb	1.37	0.38	-0.56	
Mar	0.36	1.24	1.40	
Apr	1.00	1.83	1.40	
May	-0.07	0.13	0.23	
Jun	0.87	0.36	0.96	
Seasonally Adjusted Series				
Jul		0.82	1.40	0.62
Aug	1.37	1.37	1.69	0.87
Sep	0.88	0.24	2.09	1.08
Oct	1.00	0.23	0.60	1.05
Nov	0.06	1.73	1.44	0.75
Dec	0.78	0.29	0.72	
Jan	-0.12	2.22	0.86	
Feb	1.78	0.80	-0.11	
Mar	0.38	1.28	1.43	
Apr	0.54	1.32	0.85	
May	0.17	0.39	0.51	
Jun	1.04	0.54	1.11	

Table 19: CPI Food Index Month-on-Month Changes Original & Seasonally				
CPI Food MoM % Change Original Series				
Period	FY09	FY10	FY11	FY12
Jul		3.32	1.84	2.90
Aug	2.84	3.04	4.93	1.44
Sep	1.25	0.19	4.64	1.60
Oct	2.86	0.58	-0.04	1.62
Nov	-1.96	2.12	1.64	0.10
Dec	-1.06	-2.20	-1.74	
Jan	-1.92	2.01	1.73	
Feb	2.68	0.38	-1.77	
Mar	0.87	1.91	2.16	
Apr	1.47	2.49	1.28	
May	-0.39	0.31	-0.28	
Jun	1.07	0.65	0.66	
Seasonally Adjusted Series				
Jul		1.69	0.04	0.91
Aug	1.94	2.12	4.08	0.66
Sep	1.11	-0.08	4.23	1.18
Oct	2.67	0.42	-0.18	1.46
Nov	-1.79	2.39	1.94	0.40
Dec	1.22	0.08	0.58	
Jan	-2.41	1.58	1.40	
Feb	3.89	1.73	-0.40	
Mar	0.59	1.39	1.51	
Apr	0.73	1.69	0.42	
May	-0.15	0.74	0.33	
Jun	1.48	1.08	1.11	

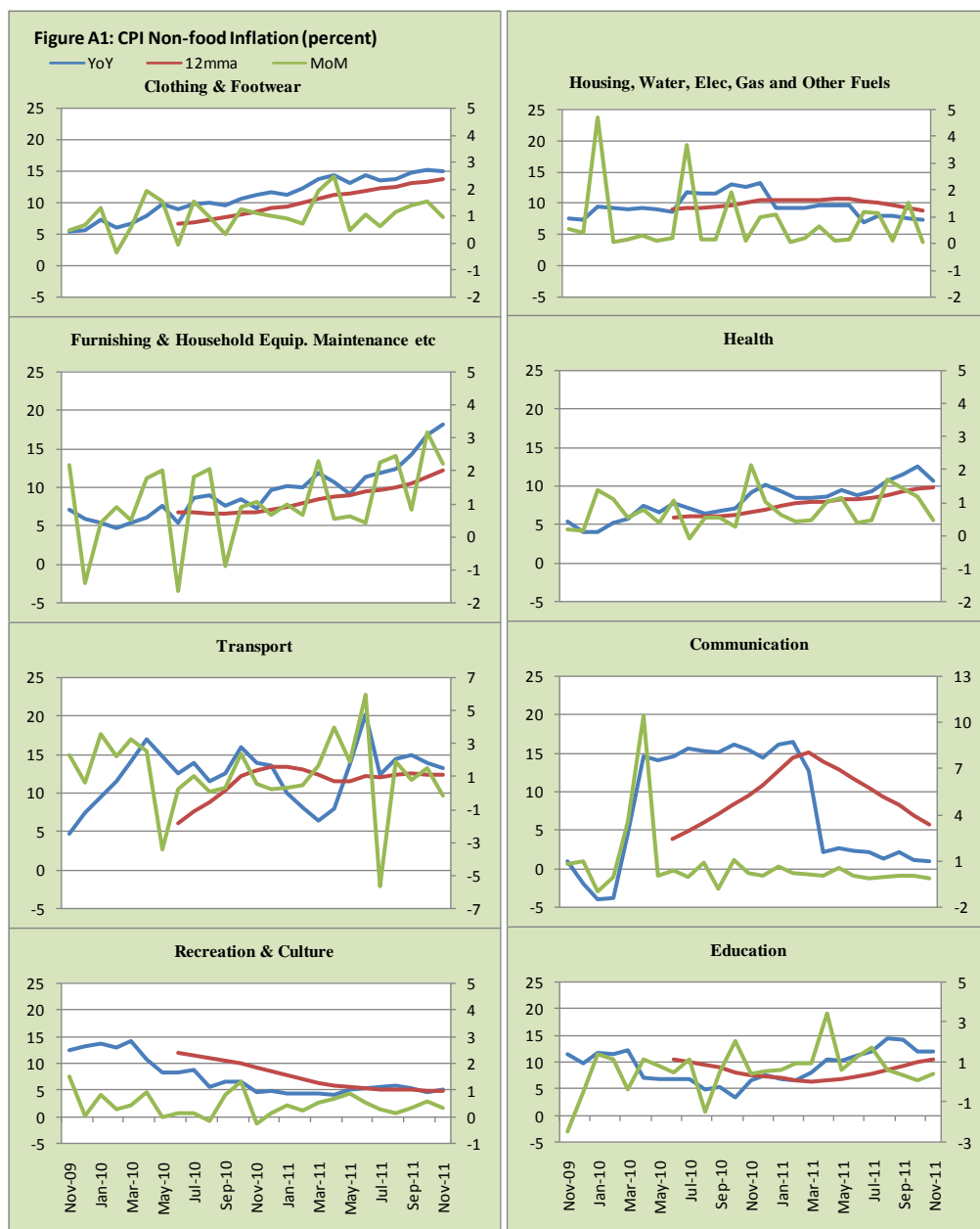


Figure A2: Frequency distribution of price changes of CPI items, November 2011

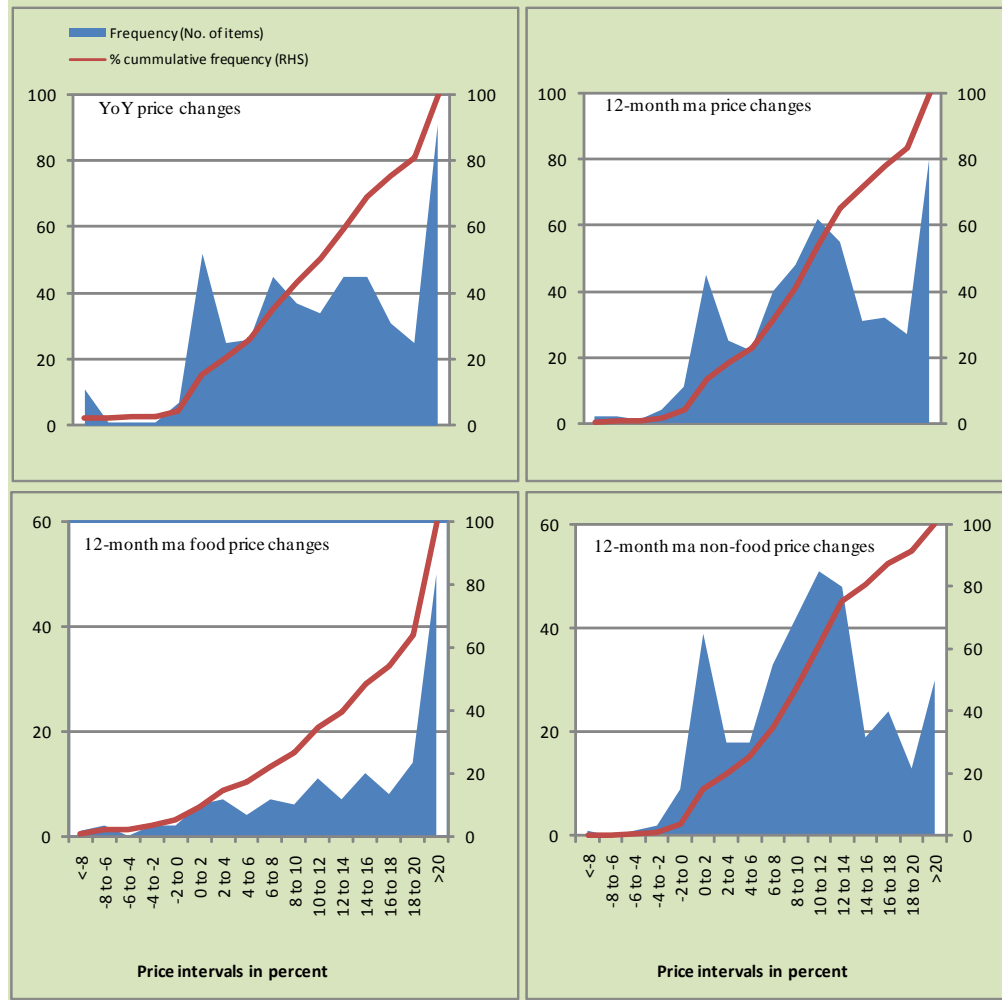
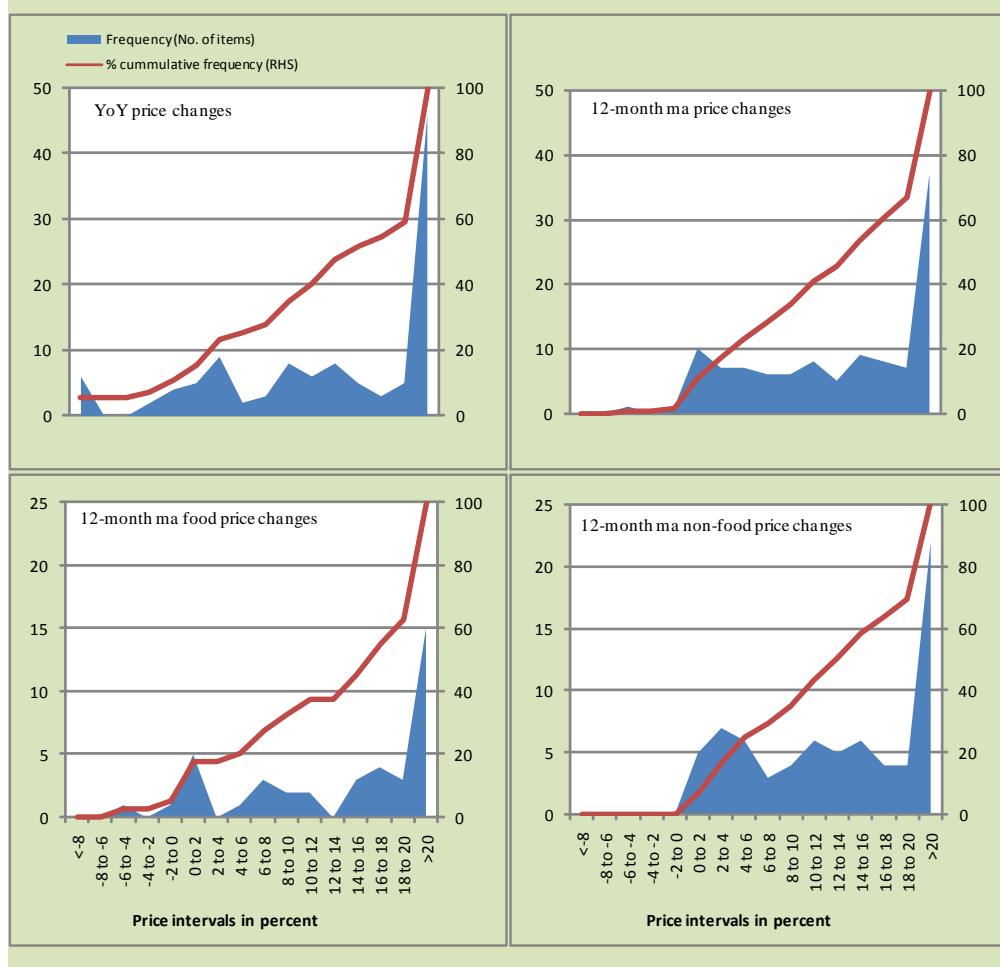
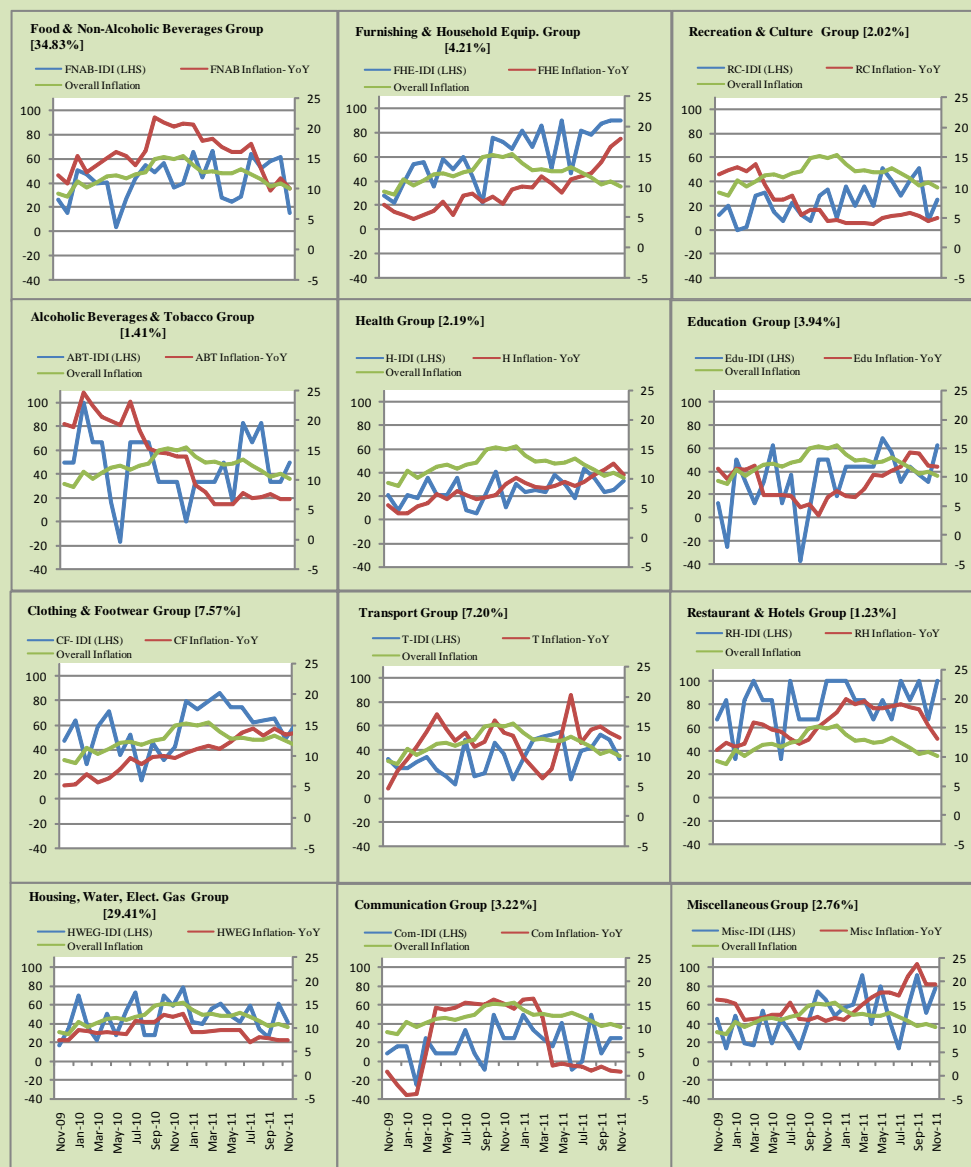


Figure A3: Frequency distribution of price changes of WPI commodities, November 2011



Inflation Monitor, November 2011

Figure A4: Group-wise 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 commodities; SPI contains 53 commodities.
4. YoY inflation is the percent change of an index in a given month over the index in the same month of the last year. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

5. Period average inflation is the percent change of the average index during the period from July to the given month of a fiscal year over the average index during the corresponding period of the last year. It is computed as follows:

$$\bar{\pi}_t = \left(\frac{\sum_{i=0}^{t-v} I_{t-i}}{\sum_{i=0}^{t-12-v} I_{t-12-i}} - 1 \right) \times 100$$

Where v is the serial number of the month of July of current fiscal year in a given time series.

6. Monthly inflation is the percent change of an index in a given month over the index in the preceding month. It is computed as follows:

$$\pi_t = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

7. 12-month moving average inflation (Long-run trend inflation) is the percent change of 12-month moving average of a price index; it is computed as follows:

$$\tilde{\pi}_t = \left(\frac{\sum_{i=0}^{11} I_{t-i}}{\sum_{i=0}^{11} I_{t-12-i}} - 1 \right) \times 100$$

8. Core Inflation is defined as the persistent component of measured inflation that excludes volatile and controlled prices. It reflects the normal supply and demand conditions in the economy. Core inflation is computed by the following two methods:
- a) Non-food, Non-energy inflation (NFNE inflation); it is computed by excluding food group and energy items (kerosene oil, petrol, diesel, CNG, electricity and natural gas) from the CPI basket.
 - b) 20% trimmed-mean inflation; it is computed through the following steps:
 - i. All CPI items are arranged in ascending order according to YoY/12-month moving average/monthly/period average changes in their price indices in a given month.
 - ii. 20 percent of the items showing extreme changes are excluded with 10 percent of the items at the top of the list (corresponding to cumulative weight of 90% or more) and 10 percent of the items at the bottom of the list (corresponding to cumulative weight of 10 percent or less).
 - iii. The weighted mean of the changes in price indices of the rest of the items is core inflation.
9. Weighted contribution of different items (or sub-groups) to total inflation is worked out as below:

Let the overall index (I_t) is the weighted average of price indexes of individual items or sub-groups (I_{it}), i.e.

$$I_t = \sum_i w_i \cdot I_{it}$$

The weighted contribution of a single item (or a sub-group) to overall inflation is defined as below:

$$C_{it} = \alpha_{it-12} \cdot w_i \cdot \left(\frac{\pi_{it}}{\pi_t} \right)$$

Where C_{it} : Contribution of i^{th} item to the overall inflation

$$\alpha_{it-12} = \frac{I_{it-12}}{I_{t-12}} ; \text{i.e. ratio of item's index to overall index in the}$$

reference month

w_i : Weights of i^{th} item

π_{it} : Inflation of i^{th} item

π_t : Overall inflation

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

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

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 487 commodities of the CPI basket. It is based on month-on-month (MoM) change in the prices of these commodities and can be obtained by estimating what is known as an ‘inflation diffusion index’ (IDI) as below:

$$\frac{\text{Number of Commodities with } \uparrow \text{ in MoM change} - \text{Number of Commodities with } \downarrow \text{ in MoM change}}{\text{Number of Commodities for which prices are reported}}$$

Thus, it is the difference between the share of items with increasing prices (i.e. depicting inflation) and the share of items with falling prices (i.e. depicting deflation) in CPI amongst the commodities for which prices have altered or remained constant¹.

Based upon commodity level price data from July 2001 to February 2011 we computed inflation diffusion indices overall (general) CPI basket and for all groups in CPI basket (except House Rent Index being single item). A simple analysis² suggests that IDI is a leading indicator for Pakistan’s YoY inflation.

¹ We do not observe the prices of certain commodities (like the seasonal items) during certain periods of time. To calculate the inflation diffusion index we consider the commodities for which prices have been reported (irrespective of changed or not) during the month under review.

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