

Inflation Monitor

December 2011



State Bank of Pakistan

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	Contents	Page
1.	Inflation in Brief	1
2.	City- wise Inflation	6
3.	Income Group- wise Inflation	7
4.	Weighted Contribution	9
5.	Inflation Diffusion Index	10
6.	Domestic Commodity Prices	11
7.	Global Commodity Prices	11
8.	Seasonal Adjustment in CPI	12
Annexure A		16
Table A1:	CPI Inflation by Groups	
Table A2:	Distribution of Price Changes (YoY) of CPI Basket	
Table A3:	Top Ten Contributors to CPI Inflation (YoY)	
Table A4:	Distribution of Price Changes (YoY) - Selected CPI Items	
Table A5:	City-wise CPI Inflation by Income Groups	
Table A6:	City- wise CPI Inflation (YoY)	
Table A7:	Income Group-wise Inflation	
Table A8:	SPI Item-wise Price Movements	
Table A9:	Distribution of Price Changes (YoY)-WPI Items	
Table A10:	Consumer Price Index Numbers by Major Groups and Selected Commodities	
Table A11:	Wholesale Price Index Numbers by Major Groups and Selected Commodities	
Table A12:	Price Indices	
Table A13:	International Commodity Prices/ Indices	
Table A14:	CPI Data Series- Original and Seasonally Adjusted	
Table A15:	CPI Food Data Series- Original and Seasonally Adjusted	
Table A16:	CPI Monthly & Average Seasonal Factors	
Table A17:	CPI Food Monthly & Average Seasonal Factors	
Table A18:	CPI MoM% Change- Original & Seasonally Adjusted Series	
Table A19:	CPI Food MoM% Change- Original & Seasonally Adjusted Series	
Figure A1	CPI Non-food Inflation	
Figure A2	Frequency Distribution of Price Changes of CPI Items	
Figure A3	Frequency Distribution of Price Changes of WPI Commodities	
Figure A4	Group- wise Inflation Diffusion Index and Respective/ Overall YoY Inflation	
Annexure B	Technical Notes	39

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Review

Inflation in Brief

1. Headline CPI inflation on base (2007-08 = 100) is recorded at 9.7 percent on year-on-year basis in December 2011 as compared to 10.2 percent in the previous month and 15.5 percent in the corresponding month of last year.
2. CPI inflation on month-on-month basis decreased to -0.7 percent in December 2011 as compared to 0.3 percent in the previous month and -0.3 percent in the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation comes to 0.5 percent in December 2011 as compared to 0.7 percent in previous month.
3. Core inflation (trimmed) on year-on-year basis decreased to 10.6 percent in December 2011 as compared to 11.5 percent in the previous month and 13.4 percent in the corresponding month of last year.
4. On month-on-month basis, the Core inflation (trimmed) was 0.3 percent in December 2011 as compared to 0.5 percent in November 2011 and 0.8 percent in December 2010.
5. Non-food, non-energy inflation measured by CPI Core (NFNE) on year-on-year basis is recorded at 10.2 percent in December 2011 as compared to 10.4 percent a month earlier and 9.8 percent in December 2010.
6. Core NFNE inflation on month-on-month basis decreased to 0.5 percent in December 2011 as compared to 0.6 percent a month earlier. Core NFNE was 0.7 percent in December 2010.
7. WPI inflation on year-on-year basis decreased to 8.3 percent in December 2011 when compared to 12.0 percent a month earlier. During December 2010, WPI inflation was recorded at 22.5%.

8. WPI inflation on month-on-month basis decreased to -1.3 percent in December 2011 as compared to -0.5 percent a month earlier. It was 2.0 percent in December 2010.
9. SPI inflation on year-on-year basis is recorded at 5.1 percent in December 2011 as compared to 5.9 percent a month earlier and 21.6 percent in corresponding month of the last year.
10. SPI inflation on month-on-month basis decreased to -1.4 percent in December 2011 when compared to 0.6 percent a month earlier while it was -0.6 percent in December 2010.

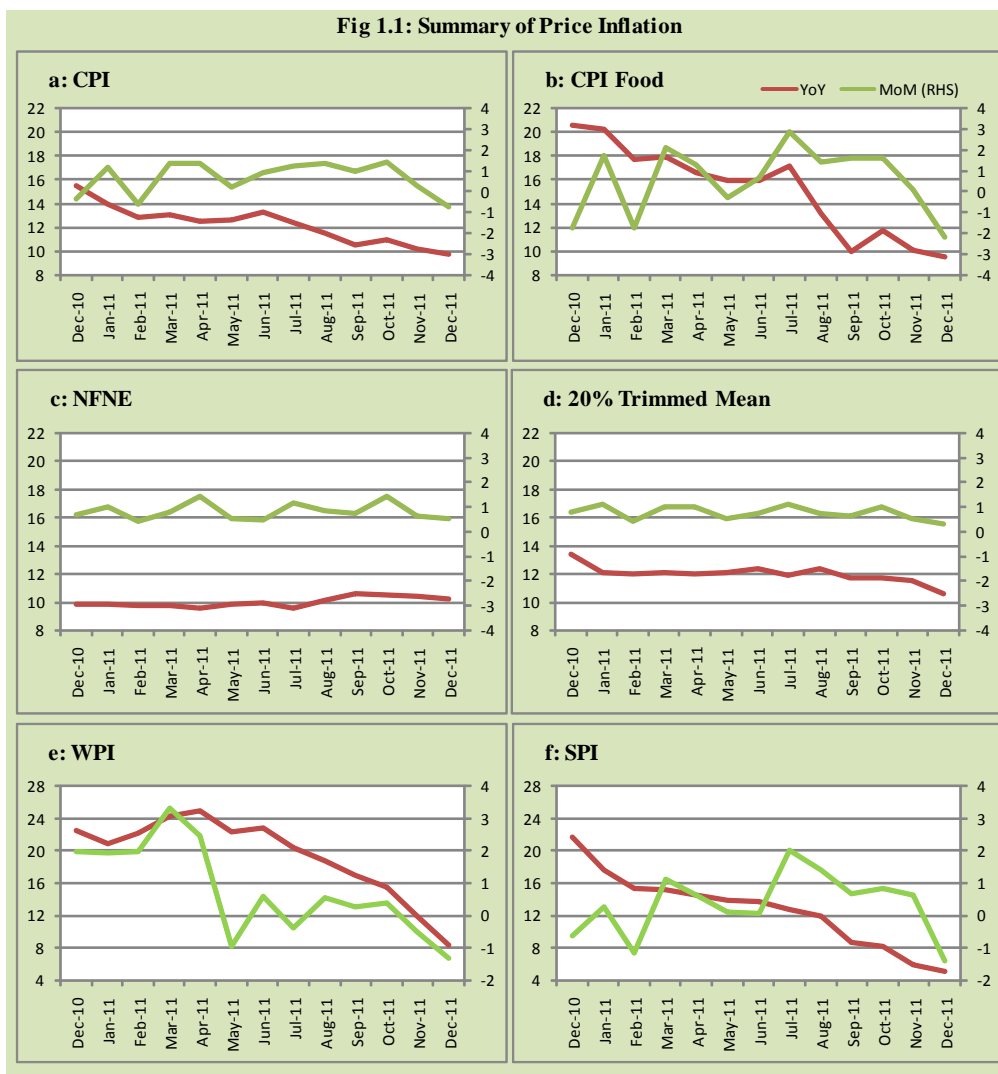
Table 1.1 Inflation Trends (percent) (Base 2007- 08 = 100)

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
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
Dec-11	9.7	-0.7	9.5	-2.2	9.9	0.4	10.2	0.5	10.6	0.3	8.3	-1.3	5.1	-1.4

* NFNE is Non-food non-energy

** SPI for all income groups combined

Fig 1.1: Summary of Price Inflation



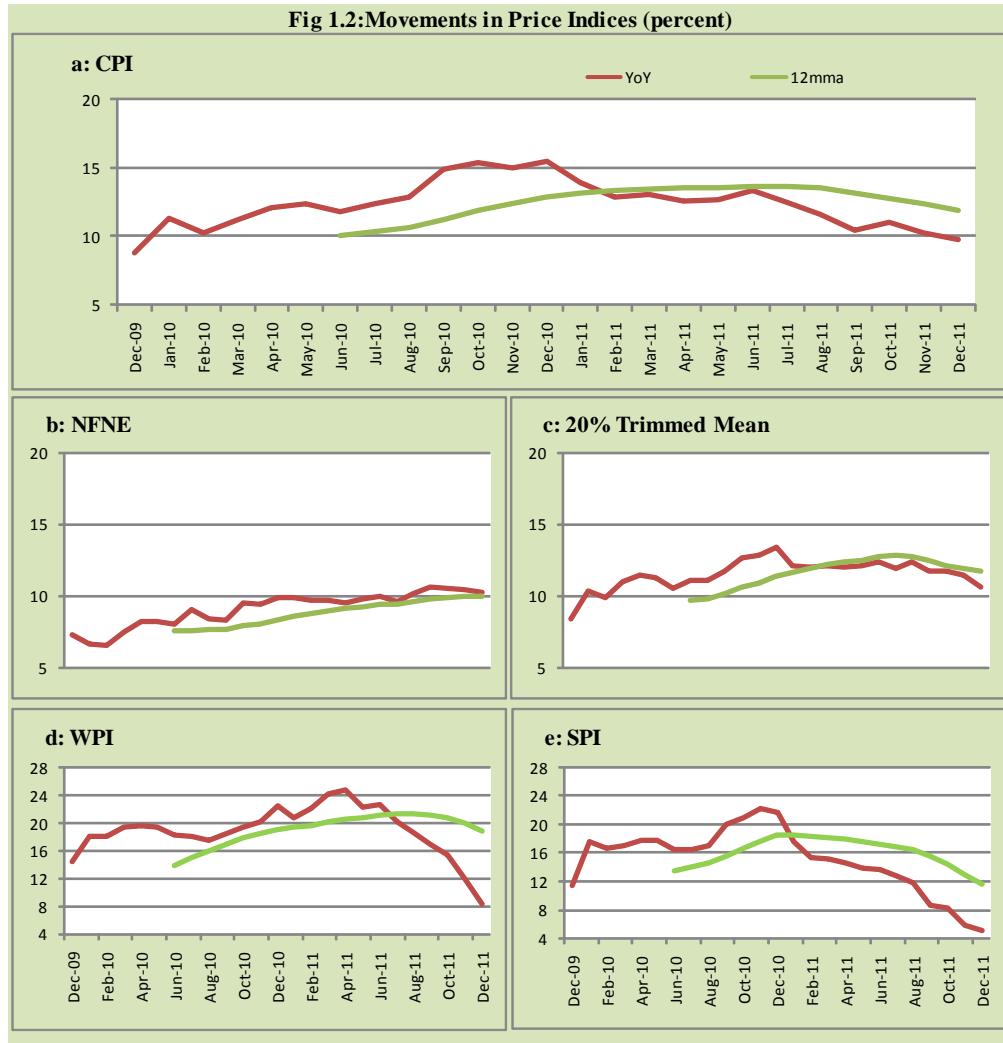


Fig 1.3: Movements in Price Indices -MoM (percent)

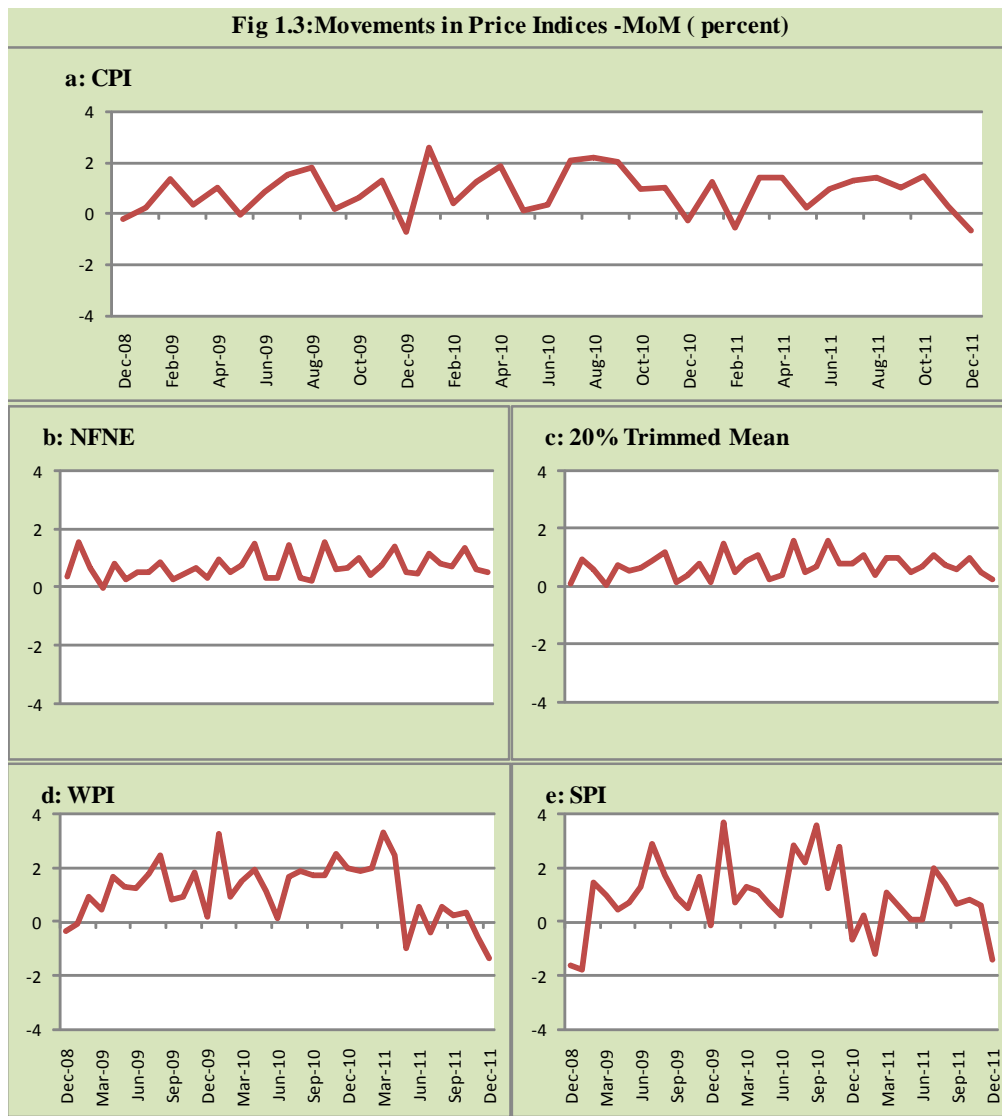
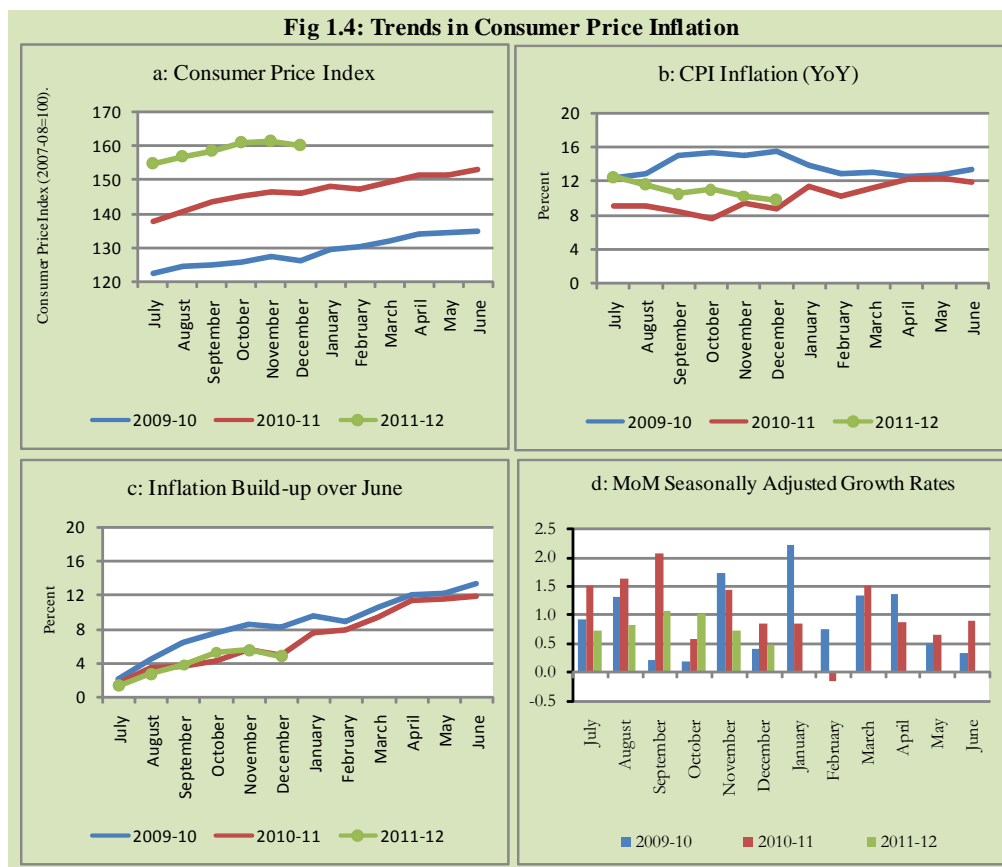


Fig 1.4: Trends in Consumer Price Inflation



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 December 2011. Among these five cities, the lowest inflation was observed in Quetta which is 7.8 percent while the highest inflation was observed in Karachi which is 9.1 percent (Table A6 of annexure-A).

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

	Dec-10		Nov-11		Dec-11	
	MoM	YoY	MoM	YoY	MoM	YoY
Overall CPI	-0.3	15.5	0.3	10.2	-0.7	9.7
Islamabad	0.2	14.9	-0.1	8.8	-0.3	8.3
Karachi	-0.8	14.2	-0.4	8.9	-0.6	9.1
Lahore	-1.0	12.3	-0.4	8.2	-0.9	8.3
Peshawar	-0.8	14.9	0.0	8.2	-1.0	7.9
Quetta	0.2	18.3	0.1	8.2	-0.1	7.8

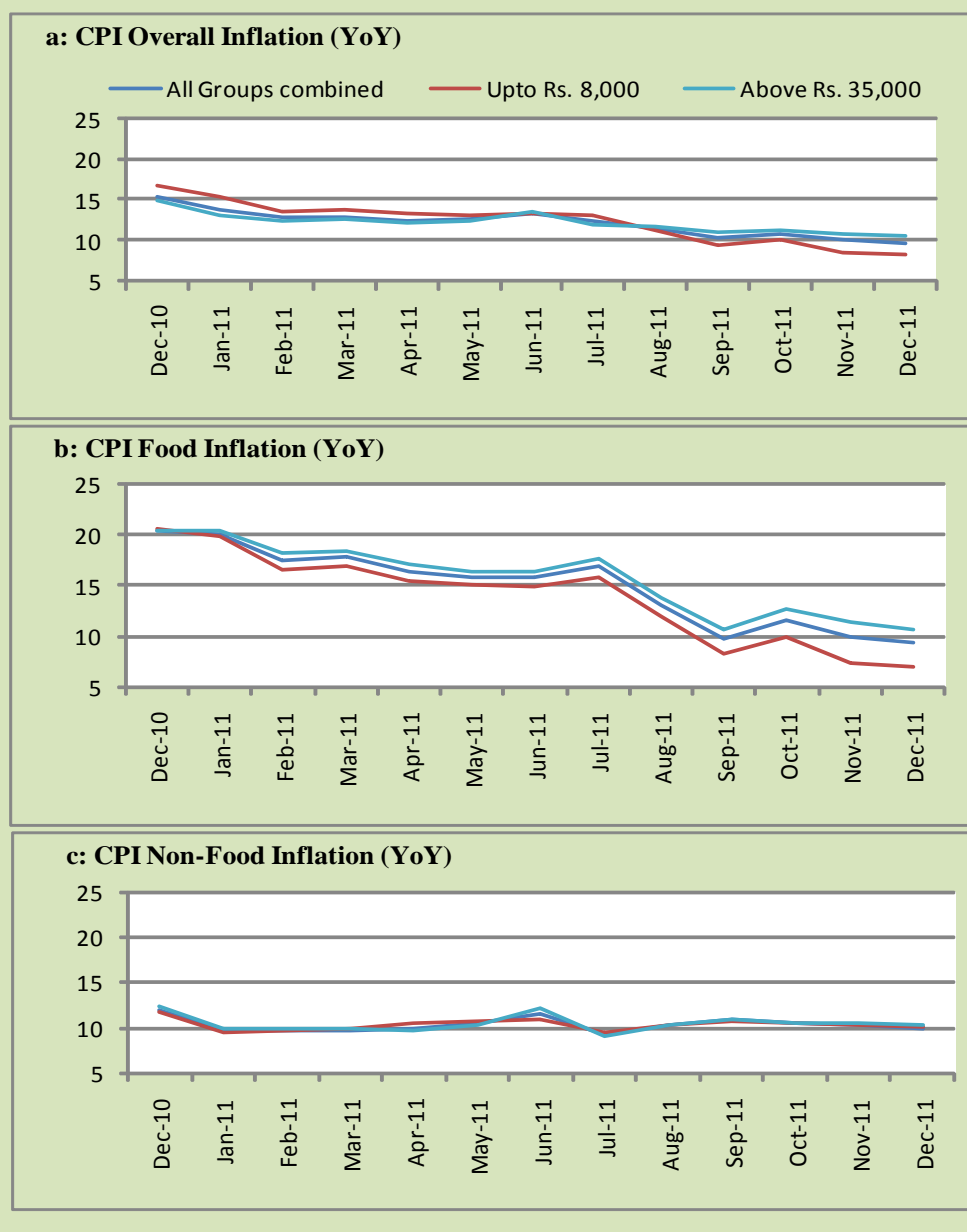
3. Income Group wise Inflation

Income group- wise data showed that income group above Rs. 35,000 has highest inflation than the overall inflation in CPI basket during December 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 December 2011 (Table A7 of annexure-A).

Table 3.1 Income Group- wise Inflation (YoY)

Income Groups	General			Food			Non-food		
	Dec-10	Nov-11	Dec-11	Dec-10	Nov-11	Dec-11	Dec-10	Nov-11	Dec-11
All Groups combined	15.5	10.2	9.7	20.5	10.0	9.5	12.0	10.3	9.9
Up to Rs. 8,000	16.7	8.6	8.4	20.6	7.4	7.1	11.8	10.4	10.2
Rs. 8,001- 12,000	16.1	9.3	9.0	20.7	8.3	8.0	11.3	10.4	10.1
Rs. 12,001- 18,000	14.7	9.6	9.2	20.6	9.1	8.6	9.2	10.1	9.8
Rs. 18,001- 35,000	16.4	9.9	9.5	20.6	9.9	9.3	13.1	9.9	9.7
Above Rs. 35,000	15.0	10.8	10.6	20.4	11.5	10.9	12.4	10.5	10.4

Fig 3.1: Income Group- wise Inflation



4. Weighted Contribution

The weighted contribution of food group in the overall inflation decreased to 40.91 percent during December 2011 from 41.90 percent in November 2011 while it was 53.50 percent in December 2010.

The weighted contribution of non-food group showed increase to touch 59.09 percent in December 2011 from 58.10 percent in November 2011.

Table 4.1 Weighted Contribution to CPI Inflation (YoY)

Period	Food	Clothing & Footwear	Housing, Water, Elect, Gas & Other Fuel	Transport	Education	Others
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
Dec-11	40.91	10.44	18.07	10.09	3.95	16.54

5. Inflation Diffusion Index

Table 5.1 Inflation Diffusion Index - based on MoM change													
	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
General	45.9	57.8	49.3	61.7	42.7	52.8	38.2	51.3	53.4	56.1	52.2	47.3	37.7
Food & Non-Alcoholic Beverages	39.3	64.9	44.2	66.1	27.9	24.3	28.9	63.2	51.7	57.8	60.9	15.3	9.4
Alcoholic Beverages & Tobacco	0.0	33.3	33.3	33.3	50.0	16.7	83.3	66.7	83.3	33.3	33.3	50.0	16.7
Clothing & Footwear	79.7	86.4	74.6	74.6	62.7	64.4	66.1	49.2	62.7	54.2	47.5	76.3	69.5
Housing, Water, Elect, Gas & other Fuels	77.8	41.7	38.9	55.6	61.1	47.2	41.7	58.3	33.3	25.0	61.1	41.7	27.8
Furnishing & Household Equip. Maintenance etc	66.7	81.2	68.1	85.5	50.7	89.9	46.4	81.2	78.3	87.0	89.9	89.9	88.4
Health	30.8	23.1	25.6	23.1	38.5	30.8	17.9	43.6	35.9	23.1	25.6	33.3	28.2
Transport	16.3	32.6	48.8	51.2	53.5	55.8	16.3	39.5	41.9	53.5	48.8	32.6	41.9
Communication	25.0	50.0	33.3	25.0	16.7	41.7	-8.3	0.0	50.0	8.3	25.0	25.0	0.0
Recreation & Culture	10.3	35.9	20.5	35.9	20.5	51.3	41.0	28.2	41.0	51.3	7.7	25.6	12.8
Education	18.8	43.8	43.8	43.8	43.8	68.8	56.3	31.3	43.8	37.5	31.3	62.5	-43.8
Restaurant & Hotels	100.0	100.0	83.3	83.3	66.7	83.3	66.7	100.0	83.3	100.0	66.7	100.0	83.3
Miscellaneous	48.6	57.1	60.0	91.4	40.0	80.0	42.9	14.3	57.1	91.4	51.4	77.1	68.6
NFNE	47.6	56.5	52.4	60.1	47.3	63.3	40.8	48.2	53.8	55.6	49.7	59.8	47.3

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	Dec-10		Nov-11		Dec-11	
			YoY	MoM	YoY	MoM	YoY	MoM
1	Wheat	10 Kg.	2.20	1.19	-0.39	1.80	1.27	2.88
2	Wheat Flour Bag	10 Kg.	4.91	0.18	-0.72	0.78	0.26	1.16
3	Rice Basmati Sup. Qlty.	Kg.	12.52	1.20	12.45	1.86	10.53	-0.53
4	Pulse Masoor (Washed)	Kg.	-1.52	-0.89	-12.03	-2.57	-11.14	0.10
5	Pulse Moong (Washed)	Kg.	87.39	-1.62	-8.33	-6.52	-7.43	-0.66
6	Pulse Mash (Washed)	Kg.	33.77	-1.77	-12.44	-2.36	-10.70	0.18
7	Pulse Gram	Kg.	44.02	0.96	0.56	-0.56	-1.39	-0.99
8	Vegetable Ghee (Loose)	Kg.	35.59	3.54	12.20	-1.85	8.59	0.21
9	Sugar Refined	Kg.	34.90	-13.29	-20.77	-6.61	-24.57	-17.44
10	Milk Fresh (Unboiled)	Ltr.	18.26	1.46	21.13	2.16	20.04	0.55
11	Curd	Kg.	16.68	0.41	20.19	1.35	20.64	0.78
12	Beef With Bone Av. Qlty.	Kg	27.38	1.99	18.60	1.92	16.45	0.15
13	Mutton Av. Qlty.	Kg	34.39	1.00	20.92	2.31	20.34	0.52
14	Chicken Farm Broiler (Live)	Kg	7.40	-2.78	7.72	-6.89	7.03	-3.40
15	Eggs Farm	Doz	11.59	9.22	16.64	9.89	14.09	6.84
16	Potatoes	Kg	10.48	-35.49	-29.19	-6.46	-14.54	-22.14
17	Onion	Kg	122.20	-20.62	-20.44	39.38	-27.44	-27.60
18	Tomatoes	Kg	147.66	27.49	42.02	0.79	-0.12	-10.34
19	Ginger	Kg	80.37	-9.37	-42.14	-11.32	-44.05	-12.35
20	Garlic	Kg	50.94	-5.80	-45.71	-2.24	-52.21	-17.08

7. Global Commodity Prices

Table 7.1 Changes in Major Global Indices (percent)

Item/ Group	Dec-10		Nov-11		Dec-11	
	YoY	MoM	YoY	MoM	YoY	MoM
Overall	23.6	5.9	15.8	1.8	8.4	-0.9
Food	26.8	6.6	-0.9	-0.7	-8.7	-1.7
Metals	29.6	4.0	3.7	-3.8	-0.8	-0.6
Energy	21.1	6.4	26.1	4.1	17.9	-0.5
Agricultural	34.5	2.7	-7.6	-4.4	-12.6	-2.8
Cotton	119.1	8.2	-32.7	-5.4	-43.3	-8.8

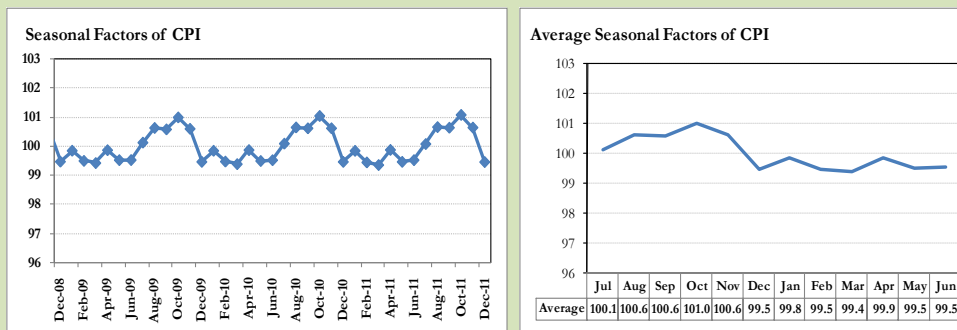
8. Seasonal Adjustment in CPI

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 December 2011 has been taken for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

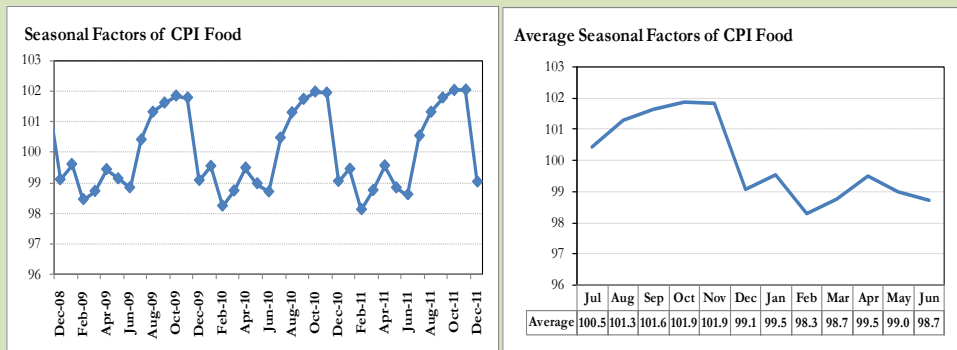
Figure 8.1 reveals that seasonality in CPI has been increasing over the period of last four years. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during the months of July to November and downward seasonality in the remaining months of the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

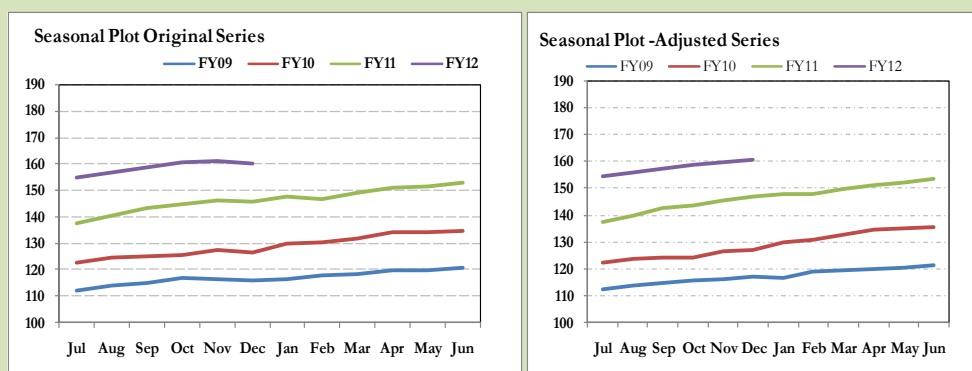
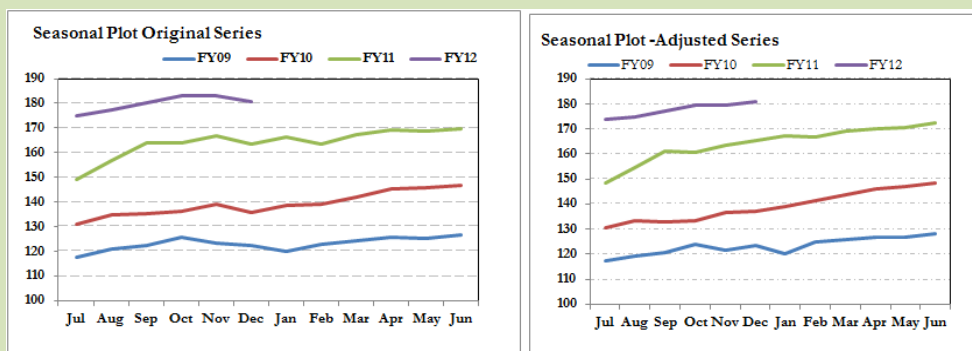


Fig. 8.4 Seasonal Plots of CPI (Food)



Seasonally adjusted CPI for December 2011 stood at 160.99 against 160.12 in original series showing an increase of 0.87 on account of adjustment of downward seasonality in December 2011.

Seasonally adjusted CPI food group for December 2011 stood at 180.96 against 179.21 in original series showing an increase of 1.75 on account of adjustment of downward seasonality in December 2011.

Month-on-month change of seasonally adjusted CPI series stood at 0.47% reflecting an increase during December over November 2011 and decrease of 0.70% in original series.

Month-on-month change of seasonally adjusted CPI food group series stood at 0.77% reflecting an increase during December over November 2011 and decrease of 2.21% 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 December (corresponding to the seasonally adjusted month-on-month rate) is 5.80 percent.

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

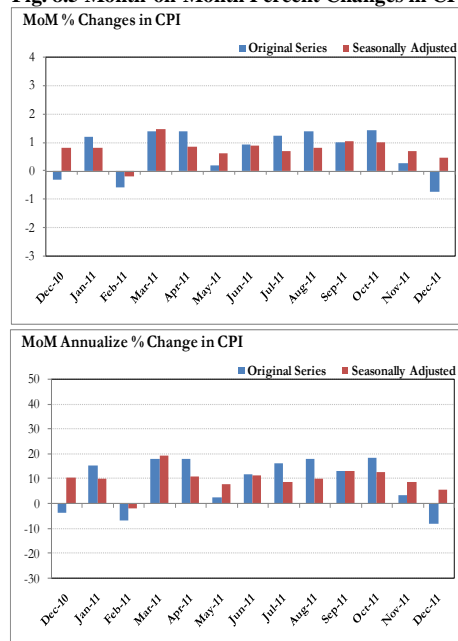
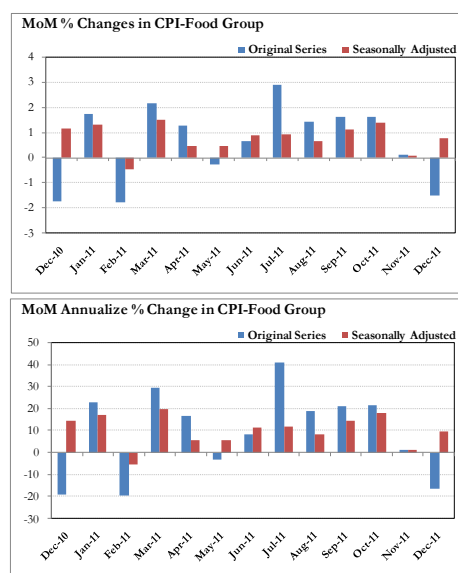


Fig. 8.6 Month-on-Month Percent Changes in CPI Food



Annexure A

Table A1: CPI Inflation by Groups (percent)								
	Weights	MoM change			YoY change			
		Dec-10	Nov-11	Dec-11	Dec-10	Nov-11	Dec-11	
I. Food Group	37.5	-1.7	0.1	-2.2	20.5	10.0	9.5	
Food & Non-Alcoholic Beverages	34.8	-1.9	0.1	-2.4	20.9	10.0	9.5	
Alcoholic Beverages & Tobacco	1.4	0.0	0.1	0.0	13.9	6.9	6.9	
Restaurant & Hotels	1.2	2.4	0.9	0.3	17.7	13.1	10.9	
II. Non-Food Group	62.5	0.8	0.4	0.4	12.0	10.3	9.9	
Clothing & Footwear	7.6	1.0	1.0	0.8	11.6	15.0	14.9	
Housing, Water, Elect, Gas & other Fuels	29.4	1.0	0.1	0.1	13.1	7.4	6.4	
Furnishing & Household Equip. Maintenance	4.2	0.6	2.2	1.8	9.5	18.0	19.4	
Health	2.2	1.0	0.5	1.0	10.0	10.7	10.6	
Transport	7.2	0.2	-0.1	0.6	13.5	13.2	13.6	
Communication	3.2	0.0	-0.1	-0.1	14.4	0.8	0.8	
Recreation & Culture	2.0	0.1	0.3	0.5	4.7	5.1	5.5	
Education	3.9	0.5	0.4	-0.1	7.6	11.9	11.3	
Miscellaneous	2.8	1.1	1.8	0.6	12.3	19.4	18.8	
Headline	100.0	-0.3	0.3	-0.7	15.5	10.2	9.7	

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)	
		Dec-10	Dec-11	Dec-10	Dec-11	Dec-10	Dec-11	Dec-10	Dec-11	Dec-10	Dec-11
I. Food Group	9.5	126	126	8	15	15	12	14	20	89	79
Food & Non-Alcoholic Beverages	9.5	114	114	8	15	15	10	13	15	78	74
Alcoholic Beverages & Tobacco	6.9	6	6	0	0	0	1	1	3	5	2
Restaurant & Hotels	10.9	6	6	0	0	0	1	0	2	6	3
II. Non-Food Group	9.9	348	348	53	42	57	49	82	63	156	194
Clothing & Footwear	14.9	59	59	5	9	2	0	18	7	34	43
Housing, Water, Elect, Gas & other Fuels	6.4	36	36	1	1	4	5	8	12	23	18
Furnishing & Household Equip. Maintenance etc	19.4	69	69	2	1	10	3	21	15	36	50
Health	10.6	39	39	10	16	11	5	5	4	13	14
Transport	13.6	43	43	11	1	4	7	9	4	19	31
Communication	0.8	12	12	5	5	4	3	0	3	3	1
Recreation & Culture	5.5	39	39	11	6	15	20	4	6	9	7
Education	11.3	16	16	3	2	2	2	7	3	4	9
Miscellaneous	18.8	35	35	5	1	5	4	10	9	15	21
Overall	9.7	474	474	61	57	72	61	96	83	245	273

Note: Prices of 13 seasonal items were not reported during the month.

Table A3: Top Ten Contributors to CPI Inflation (YoY) in December 2011					
Items/ Contributors		Weights	YoY Change		Weighted Contribution
			Dec-10	Dec-11	
A. Ranked by Weighted contribution					
1	Milk Fresh	6.68	18.22	20.02	15.31
2	House Rent	21.81	8.36	6.18	11.74
3	Motor Fuel	3.03	13.18	18.50	5.39
4	Meat	2.43	29.57	17.71	5.27
5	Fresh Fruits	1.86	17.73	27.80	5.03
6	Education	3.94	7.61	11.26	3.95
7	Transport Services	2.70	16.40	10.18	3.13
8	Gas	1.58	29.37	13.55	3.07
9	Household Servant	1.04	9.94	33.17	3.04
10	Cotton Cloth	1.73	15.76	17.57	2.72
Total		46.81			58.66
B. Ranked by Percentage change					
1	Household Servant	1.04	9.94	33.17	3.04
2	Spices	0.54	38.56	31.19	2.27
3	Medical Equipment	0.01	14.65	28.35	0.02
4	Fresh Fruits	1.86	17.73	27.80	5.03
5	Fire Wood Whole	0.23	14.78	27.48	0.70
6	Kerosene Oil	0.01	13.96	26.10	0.02
7	Betel Leaves & Nuts	0.02	16.82	25.68	0.06
8	Blades	0.03	5.92	25.25	0.07
9	Woolen Cloth	0.88	13.89	22.96	1.94
10	Condiments	0.27	7.23	22.84	0.67
Total		4.89			13.82
C. Ranked by Weights					
1	House Rent	21.81	8.36	6.18	11.74
2	Milk Fresh	6.68	18.22	20.02	15.31
3	Electricity	4.40	28.28	1.22	0.63
4	Wheat Flour	4.16	4.34	0.85	0.41
5	Education	3.94	7.61	11.26	3.95
6	Communication & Apparatus	3.15	14.75	0.72	0.19
7	Motor Fuel	3.03	13.18	18.50	5.39
8	Transport Services	2.70	16.40	10.18	3.13
9	Meat	2.43	29.57	17.71	5.27
10	Vegetable Ghee	2.07	27.72	12.44	2.50
Total		54.39			48.53
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 9.7 percent in December, 2011.					

Table A4: Distribution of Price Changes (YoY) - Selected CPI Items: December 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, Onion, Sugar Refined, Potatoes, Pulse Masoor (Washed), Pulse Mash (Washed), Pulse Masoor (Whole)	Gram Whole Black Av Qlty., Suji, Maida, Coriander Seed (Loose), Pomegranate (Annar), Wheat, Besan Av. Qlty., Wheat Flour Fine/Superior	Almonds Whole Av.Qlty., Coffee-Nescafe 75 gms, Bread Plain Medium Size, Cucumber (Kheera), Coriander Seed Powd.National	Chillies Powd.National 200 gms, Cloves Loose Av.Qlty, Turnip, Carrot, Lemon, Milo 200 gms, Apple, Radish, Spinach, Chillies Green
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		Pullover Ladies Oxford/Bon, Secondhand Sweater For Men, Tailoring Coat-Pant Suit, Tailoring Charges Pant (Men), Vest/Shameez (Women) Avg. Qlty	Brassier Av.Qlty, Heavy Wt Suiting Law.Pur Sup. Qlty, Lungi/Dhoti(Cotton) Av. Qlty, Linen Av.Qlty, Dopatta Georgette Av.Qlty, Georgette Av.Qlty, Frock W/Wear Girls, Vest For Men Av.Qlty., Shirting Av.Qlty., Awami-Suit W & W (Boys) 24"/26"
Housing, Water, Elect, Gas & other Fuels	Elect. Charges Upto 50 Units	Elect. Charges 01 - 100 Units, Elect. Charges 101 - 300 Units, Elect. Charges Overall/ Combined, Elect. Charges 301 - 1000 Units	Electrician Wage Rate, Timber Shesham Log, Cement Blocks (6"X8"X12"), Water Charges Per House, Plumber Wage Rate, House Rent For Q-I	Bricks (New) 1st Class, Firewood Whole, Kerosene Oil, Cement (Local), Synthetic Enemal ICI, Synthetic Enemal Robialac, Iron Bar (M.S. Bar) 1/2", Unskilled Labour Wage Rat, Gas Chrg All Over 500 mmbtu
Furnishing & Household Equip. Maintenance etc	Washing Machine (Singer)	Bulb Philips 100-Watt, Match Box (Small), Tube Light Philips 40 Watt	Water Set Jug+6 Glasses, Chair Plastic (Chairman) Av. Qlty, Washing Powder 1000 gms (Express), Air Cooler Super Asia	Robin Blue (35 gms), Electric Blubs "0" Watt, Towel (3'X2') Av. Qlty, Household Servant Female (Part Time), Washing Soap 250 gms, Hand Stitching Needle, Elect. Iron Philips, Dinner Set Plastic 72 Pcs, Finis 500 ml
Health	Amoxil Capsule 250 mg, Betnesol Eye Drops, Dettol (Medium), Sancos Syrup (50 ml), Phenergan Syrup 120 ml	Ear Drops (Cardisorpine), Lederplex Syrup, Ventolin Tab. 2mg, Renitec Tab. 5 mg, Daonil Tab. 5 mg	Panadol Tab. Extra/Plain, ECG Charges, Blood Test (CP) Charges, Brufen Tabs 200 mg.	Cac. 1000 Tab, Gripe-Water Woodward's, Galxos-D (450 gms), Cotton Bandage 2" - 4", Saniplast (1 Putty), O.R.S. (Nimcol), Trisil Tab, Vicks Vaporub/ Balm, Glycerin Small Bottle, Doctor (MBBS) Clinic Fee
Transport	Platform Ticket	Car Toyota 1300 cc, Car Suzuki 1000 cc, Motorcycle Honda cd-70, Minibus Fare Min.Within City, Suzuki Fare Min.Within City	Bus Fare Max (Within City), Suzuki Fare Maximum Within City, Minibus Fare Min.Within City, Bus Fare Min (Within City)	High Speed Diesel HSD, Bus Fare Outside City (a/c), Tyre Cycle, Petrol Super, Tyre Motor Cycle Without Tube, Car Tax For 800 cc To 1300 cc, Air Fare Economy Class, Tyre Car With Tube General, Auto Rickshaw Fare
Communication	Mobile Set Nokia/Sony/Ericsson Av.Qlty, U.M.S. Reg Charges Min.	T.C.S. Ch. Min.Within Zone, Postal Envelope For Saudi Arabia, Mobile Call Charges	Internet Charges, Telephone Set Av. Qlty, 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, Radio With C.Player National, Urdu Book Class V (T.B.Board), Cinema a/c High Class, Maths Book Calss V (T.B.Board)	Pencil Goldfish/Deer, Paper Fool Scape (27"X17"), Exercise Book Lined 80/10, Maths Book Class IX or X, Cable Charges, Fountain Pen Hero/Wings/China	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), Photostat Paper 70 gms
Education	Pvt. Eng. College Fee (1st Year), Govt. College Fee 1st Year	I.T. Tuition Fees, Govt. College Fee 4th Year	Pvt. School Fee Eng. Med (Class-X), Coaching Charges For Class XI/ XII Science Group	Govt. Med. College Fee MBBS 1st Year, Govt. Engg. Coll. Fee 1st Year, MBA Tuition Fee, Pvt School Fee Eng. Med (Class-I), Pvt School Fee Eng. Med (Class-VI)
Restaurant & Hotels		Bread Tandoori St. Size	Cooked Mutton (Av. Hotel), Cooked Dal (Av. Hotel)	Chicken Biryani Full/Double, Tea Prepared (Ordinary), Cooked Beef (Av. Hotel)
Miscellaneous	Lipstick S. Miss/Medora	Toothpowder Dentonic 90 gms, Hair Color Bigen, Wrist Watch Ladies Citizen, Disposable Razor Gillette-II	Nail Polish S. Miss/Medora, Hair Color (Kala Kola), Toothbrush Shield, Shaving Cream Touch-Me/Admiral	Toothpaste Med Size Colgate 70gms, Blade Treet Ordinary (10), Toilet Soap Lux 95 gms, Gel Medium Size, Gold Tezabi 24 ct, Toilet Soap Lifebuoy 140 gms, Silver Tezabi 24 ct

Table A5: City- wise CPI Inflation by Income Groups, December 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	-2.1	7.3	-3.9	6.6	0.3	8.2	-1.9	7.8	-3.8	7.2	0.3	8.4
2 Islamabad	-1.7	6.8	-3.3	6.5	0.6	7.1	-1.3	7.1	-2.8	6.6	0.5	7.7
3 Lahore	-1.7	7.4	-3.4	7.3	0.9	7.4	-1.5	7.7	-3.3	8.0	0.7	7.3
4 Gujranwala	-2.0	9.4	-3.6	9.1	0.2	9.8	-1.9	9.7	-3.5	9.7	0.1	9.7
5 Sialkot	-1.7	4.8	-3.1	3.9	0.2	6.0	-1.4	5.3	-2.7	4.5	0.1	6.2
6 Faisalabad	-2.8	6.0	-5.1	3.1	0.4	10.0	-2.5	6.6	-4.8	4.0	0.1	9.6
7 Multan	-1.5	8.7	-3.3	6.6	0.8	11.5	-1.4	9.2	-3.3	7.7	0.7	11.0
8 Sargodha	-2.0	7.9	-4.3	2.2	0.8	15.1	-1.8	8.6	-4.0	2.8	0.5	15.0
9 Bahawalpur	0.6	11.3	0.1	8.9	1.3	14.4	0.7	11.6	0.5	9.9	1.0	13.5
10 Karachi	-1.2	8.2	-2.6	7.0	0.8	9.8	-1.0	8.8	-2.3	8.4	0.6	9.3
11 Hyderabad	-1.8	7.1	-3.1	6.6	0.0	7.7	-1.6	7.6	-3.0	7.3	0.0	8.0
12 Sukkur	-1.7	7.8	-2.8	6.3	-0.3	9.8	-1.4	8.7	-2.5	7.9	-0.3	9.6
13 Larkana	-2.0	14.6	-3.7	13.3	0.2	16.3	-1.6	15.3	-3.2	13.8	0.2	17.1
14 Peshawar	-1.9	6.9	-2.9	5.8	-0.7	8.3	-1.5	7.2	-2.6	6.4	-0.4	8.0
15 Bannu	-0.7	7.6	-2.3	2.4	1.4	14.4	-0.2	7.9	-1.7	3.7	1.6	12.9
16 Quetta	-0.3	5.9	-1.1	3.0	0.8	10.1	-0.2	6.6	-1.1	3.9	0.9	9.9
17 Khuzdar	-1.0	6.3	-2.2	2.5	0.5	11.4	-0.9	6.9	-2.2	2.5	0.5	12.0
	Rs 12001-18000						Rs 18001-35000					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-1.8	8.5	-3.6	7.9	0.0	9.1	-1.5	9.2	-3.3	9.2	0.1	9.3
2 Islamabad	-1.2	7.4	-2.5	7.0	0.2	7.8	-1.1	7.5	-2.8	7.6	0.3	7.4
3 Lahore	-1.4	8.3	-2.9	8.7	0.4	8.0	-1.1	8.3	-2.6	9.4	0.4	7.3
4 Gujranwala	-1.8	10.6	-3.2	10.9	-0.2	10.3	-1.5	10.6	-3.1	11.6	-0.2	9.8
5 Sialkot	-1.3	5.6	-2.4	4.7	-0.1	6.6	-1.1	5.8	-2.2	4.9	-0.1	6.6
6 Faisalabad	-2.3	7.0	-4.4	4.7	-0.1	9.4	-1.9	7.3	-4.1	5.1	0.0	9.1
7 Multan	-1.3	9.9	-3.0	8.5	0.4	11.4	-1.2	9.9	-3.0	9.3	0.5	10.4
8 Sargodha	-1.6	9.5	-3.6	3.6	0.3	15.3	-1.5	9.8	-3.5	4.3	0.1	14.3
9 Bahawalpur	1.0	12.4	0.6	10.3	1.4	14.4	1.1	12.4	0.9	10.9	1.2	13.6
10 Karachi	-1.0	9.3	-2.2	8.9	0.3	9.6	-0.8	9.1	-2.1	9.2	0.3	9.1
11 Hyderabad	-1.6	8.4	-2.9	8.0	-0.2	8.8	-1.3	8.7	-2.7	8.8	-0.1	8.6
12 Sukkur	-1.3	9.5	-2.3	8.8	-0.3	10.1	-1.2	9.7	-2.2	9.4	-0.3	10.0
13 Larkana	-1.4	16.1	-3.0	14.3	0.2	18.0	-0.9	16.7	-2.5	15.2	0.4	17.9
14 Peshawar	-1.5	7.4	-2.8	6.2	-0.3	8.6	-1.1	7.8	-2.7	7.0	0.4	8.5
15 Bannu	-0.2	8.4	-1.6	4.0	1.2	13.1	0.0	8.6	-1.3	5.1	1.1	11.7
16 Quetta	-0.2	7.5	-1.1	4.9	0.8	10.3	-0.1	8.1	-1.0	5.5	0.7	10.4
17 Khuzdar	-0.8	7.9	-2.1	3.2	0.4	12.8	-0.8	7.7	-2.0	3.4	0.3	11.6
	Above Rs 35000						Combined					
	General		Food		Non-Food		General		Food		Non-Food	
	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY	MoM	YoY
1 Rawalpindi	-0.7	10.1	-2.6	10.3	0.3	10.0	-1.0	9.6	-3.0	9.5	0.4	9.6
2 Islamabad	-0.2	8.5	-2.2	10.0	0.9	7.7	-0.3	8.3	-2.3	9.5	1.3	7.5
3 Lahore	-0.5	8.6	-1.9	11.5	0.2	7.1	-0.9	8.3	-2.5	9.9	0.4	7.1
4 Gujranwala	-1.1	11.0	-2.8	12.5	-0.2	10.2	-1.5	10.4	-3.1	11.2	-0.3	9.9
5 Sialkot	-0.7	6.4	-1.8	5.8	-0.2	6.6	-1.0	5.9	-2.2	5.1	-0.2	6.4
6 Faisalabad	-1.0	9.5	-3.5	6.7	0.2	11.0	-1.9	7.7	-4.3	4.9	-0.1	9.6
7 Multan	-0.5	10.5	-2.5	10.8	0.5	10.4	-1.0	9.9	-2.9	9.2	0.4	10.4
8 Sargodha	-1.1	11.6	-3.1	5.9	-0.2	14.3	-1.5	9.7	-3.6	4.0	-0.1	13.7
9 Bahawalpur	1.0	12.6	1.1	11.7	1.0	13.0	0.9	12.1	0.7	10.3	1.1	13.3
10 Karachi	-0.4	9.2	-1.7	10.7	0.3	8.5	-0.6	9.1	-1.9	9.8	0.4	8.6
11 Hyderabad	-1.0	9.7	-2.5	10.1	-0.2	9.5	-1.3	8.6	-2.8	8.6	-0.2	8.7
12 Sukkur	-0.9	10.6	-2.0	10.2	-0.3	10.8	-1.2	9.4	-2.3	8.8	-0.5	9.8
13 Larkana	-0.5	17.9	-1.9	16.8	0.3	18.5	-1.3	16.0	-2.9	14.5	-0.1	17.0
14 Peshawar	-0.5	8.7	-2.7	8.2	0.6	8.9	-1.0	7.9	-2.7	7.0	0.2	8.6
15 Bannu	0.1	10.4	-1.2	6.6	0.7	12.3	-0.2	8.5	-1.6	4.3	0.8	11.6
16 Quetta	0.1	8.9	-0.5	6.3	0.4	10.3	-0.1	7.8	-0.9	5.2	0.5	9.9
17 Khuzdar	-0.4	10.2	-1.6	5.4	0.2	12.7	-0.8	7.3	-2.1	3.0	0.0	10.5

Table A6: City- wise CPI Inflation (YoY) December, 2011							
	High inflation cities				Low inflation cities		
	General	Food	Non-food		General	Food	Non-food
Larkana	16.0	14.5	17.0	Rawalpindi	9.6	9.5	9.6
Dera Mrd.Jamali	12.3	13.2	11.7	D.I.Khan	9.6	9.1	9.9
Bahawalpur	12.1	10.3	13.3	Sukkur	9.4	8.8	9.8
Nawabshah	12.0	10.1	13.3	Attock	9.4	10.1	8.9
Sahiwal	11.5	9.9	12.7	Karachi	9.1	9.8	8.6
Bahawalnagar	11.3	8.4	13.3	Turbat	9.0	8.0	9.7
Mithi	11.2	10.0	12.1	Hyderabad	8.6	8.6	8.7
Abbotabad	11.0	7.9	13.1	Bannu	8.5	4.3	11.6
Rahim Yar Khan	10.9	10.4	11.3	Islamabad	8.3	9.5	7.5
Gawadar	10.9	9.0	12.2	Lahore	8.3	9.9	7.1
Dadu	10.8	10.6	10.9	Wazirabad	8.1	6.7	9.1
D.G. Khan	10.8	11.6	10.2	Peshawar	7.9	7.0	8.6
Muzaffargarh	10.6	11.1	10.2	Quetta	7.8	5.2	9.9
Loralai & Cantt	10.6	10.5	10.6	Faisalabad	7.7	4.9	9.6
Jehlum	10.5	10.4	10.5	Khuzdar	7.3	3.0	10.5
Gujranwala	10.4	11.2	9.9	Mianwali	6.9	4.0	9.0
Mingora	10.2	10.0	10.3	Vehari	6.6	4.7	8.0
MirPur Khas	10.2	12.3	8.7	Sialkot	5.9	5.1	6.4
Jhang	10.1	8.7	11.1				
Mardan	10.0	5.6	13.0				
Multan	9.9	9.2	10.4				
Sargodha	9.7	4.0	13.7				
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		
	Dec-10	Nov-11	Dec-11	Dec-10	Nov-11	Dec-11
<u>Up to Rs. 8000</u>						
General	-1.1	0.2	-1.3	16.7	8.6	8.4
Food	-2.5	0.0	-2.7	20.6	7.4	7.1
Non-food	0.7	0.4	0.5	11.8	10.4	10.2
<u>Rs. 8001- 12000</u>						
General	-0.9	0.2	-1.2	16.1	9.3	9.0
Food	-2.2	0.0	-2.6	20.7	8.3	8.0
Non-food	0.7	0.4	0.4	11.3	10.4	10.1
<u>Rs. 12001- 18000</u>						
General	-0.7	0.2	-1.0	14.7	9.6	9.2
Food	-2.0	0.0	-2.4	20.6	9.1	8.6
Non-food	0.6	0.4	0.4	9.2	10.1	9.8
<u>Rs. 18001- 35000</u>						
General	-0.5	0.2	-0.9	16.4	9.9	9.5
Food	-1.8	0.1	-2.3	20.6	9.9	9.3
Non-food	0.6	0.3	0.4	13.1	9.9	9.7
<u>Above Rs. 35000</u>						
General	-0.1	0.4	-0.4	15.0	10.8	10.6
Food	-1.3	0.2	-1.9	20.4	11.5	10.9
Non-food	0.5	0.5	0.4	12.4	10.5	10.4
<u>All income groups</u>						
General	-0.3	0.3	-0.7	15.5	10.2	9.7
Food	-1.7	0.1	-2.2	20.5	10.0	9.5
Non-food	0.8	0.4	0.4	12.0	10.3	9.9

Table A8: SPI Item-wise Price Movements

Sr.No.	Items	Unit	Prices Dec-11	Percentage change	
				YoY	MoM
1	Wheat	10Kg.	273.4	1.6	2.5
2	Wheat Flour Bag	10Kg.	306.6	0.4	1.5
3	Rice Basmati Broken	Kg.	59.7	20.5	-0.3
4	Rice Irri-6/9	Kg.	45.0	19.9	-0.5
5	Bread Plain Med. Size (340-400 Gm.)	Each	31.3	11.5	0.3
6	Beef	Kg.	252.1	16.8	0.0
7	Mutton	Kg.	479.5	16.5	0.5
8	Chicken Live (Farm)	Kg.	130.7	15.7	2.8
9	Milk Fresh	Litr	57.6	15.8	0.9
10	Curd	Kg.	67.3	16.6	0.6
11	Milk Powdered Nido	500G	245.0	22.5	0.0
12	Egg Hen (Farm)	Doz.	99.1	15.5	12.0
13	Mustard Oil	Kg.	178.6	14.5	0.6
14	Cooking Oil (Tin)	2.5Ltr	495.0	16.9	0.0
15	Veg. Ghee (Tin)	2.5Kg.	495.0	16.9	0.0
16	Veg. Ghee Loose	Kg.	160.4	4.7	-0.3
17	Bananas	Doz.	50.0	17.3	3.5
18	Masoor Pulse Washed	Kg.	101.8	-15.2	-2.7
19	Moong Pulse Washed	Kg.	124.9	-9.9	-3.6
20	Mash Pulse Washed	Kg.	145.4	-10.8	-1.3
21	Gram Pulse Washed	Kg.	71.4	-1.5	-0.2
22	Potatoes	Kg.	22.4	-11.0	-21.3
23	Onions	Kg.	37.3	-34.5	-29.8
24	Tomatoes	Kg.	60.5	-5.9	-22.5
25	Sugar	Kg.	54.8	-25.5	-15.9
26	Gur	Kg.	77.7	-10.8	-7.5
27	Salt Powdered Loose (Lahori)	Kg.	8.1	12.5	0.9
28	Red Chilies Powder Loose	Kg.	318.7	32.9	-0.3
29	Garlic	Kg.	96.5	-55.3	-6.9
30	Tea (Yellow Label 200 Gm.)	200Gm.	131.6	11.6	0.0
31	Cooked Beef Plate	Each	59.9	13.4	0.4
32	Cooked Dal Plate	Each	36.5	8.0	0.1
33	Tea Prepared (Sada)	Cup	14.1	8.5	1.6
34	Cigarettes K-2 (20'S)	20'S	28.7	5.2	0.0
35	Long Cloth (Coarse Latha)	Mtr.	96.4	-37.4	0.0
36	Shirting	Mtr.	108.1	25.7	0.5
37	Lawn	Mtr.	103.5	-31.6	1.6
38	Georgette (Voil Printed)	Mtr.	86.2	21.9	1.4
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	0.0	0.0
43	Gas Charges	Mmbtu	125.1	13.5	0.0
44	Kerosene	Litr	102.9	24.4	4.3
45	Firewood	40Kg	441.1	27.0	3.4
46	Energy Savor 14 Watts	Each	139.9	14.4	0.7
47	Washing Soap (200-250 Gm.)	Cake	18.0	22.0	0.1
48	Match Box	Each	1.1	6.0	0.0
49	Petrol	Litr	89.0	20.7	0.6
50	Diesel	Litr	99.8	26.2	4.9
51	L.P.G. (11 Kg Cylinder.)	Each	1369.6	1.9	4.4
52	Tele. Local Call	Call	3.6	0.0	0.0
53	Bath Soap Lifebuoy (Standard)	Cake	30.0	25.0	0.0
Maximum				32.9	12.0
Median				11.6	0.0
Minimum				-55.3	-29.8

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

Table A10: Consumer Price Index Numbers by Major Groups and Selected Commodities				
Items and specification	Weights	Index		
		Dec-10	Nov-11	Dec-11
General	100.00	145.90	161.24	160.12
Food & Non-Alcoholic Beverages.	34.83	164.14	184.17	179.79
1 Wheat	0.35	159.36	156.86	161.39
2 Wheat Flour	4.16	164.32	164.29	165.72
3 Wheat Product	0.10	158.08	161.67	161.94
4 Besan	0.15	161.87	165.36	163.91
5 Rice	1.58	129.04	152.32	151.97
6 Cereals	0.16	163.16	187.46	187.52
7 Bakery & Confectionary	1.16	148.07	161.20	161.89
8 Nimco	0.46	158.52	177.99	178.46
9 Meat	2.43	174.06	204.34	204.89
10 Chicken	1.36	140.72	155.91	150.61
11 Fish	0.30	162.21	175.02	179.60
12 Milk Fresh	6.68	162.87	194.40	195.47
13 Milk Product	0.63	158.88	190.31	191.77
14 Milk Powder	0.11	137.31	159.01	161.37
15 Egg	0.46	172.20	183.90	196.47
16 Mustard Oil	0.10	134.50	152.21	153.30
17 Cooking Oil	1.75	126.80	145.48	145.49
18 Vegetable Ghee	2.07	138.10	155.12	155.28
19 Dry Fruits	0.25	169.70	193.54	195.24
20 Fresh Fruits	1.86	138.04	183.09	176.41
21 Pulse Masoor	0.27	170.84	152.29	152.48
22 Pulse Moong	0.23	265.95	247.82	246.18
23 Pulse Mash (Washed)	0.21	238.44	212.55	212.94
24 Pulse Gram	0.24	162.31	161.66	160.05
25 Gram Whole	0.16	163.19	200.26	199.93
26 Beans	0.03	158.93	177.36	178.55
27 Potatoes	0.47	176.16	193.36	150.55
28 Onion	0.53	330.70	331.44	239.95
29 Tomatoes	0.44	201.46	224.42	201.23
30 Fresh Vegetable	1.69	178.32	209.00	185.99
31 Sugar	1.04	262.67	240.01	198.14
32 Gur	0.02	265.78	264.16	240.72
33 Honey	0.04	189.92	204.13	205.26
34 Sweet Meet	0.25	169.43	191.34	194.84
35 Beverages	1.20	134.74	160.53	159.46
36 Jam, Tomato Ketchup & Pickle	0.25	150.56	169.65	170.93
37 Condiments	0.27	157.43	191.83	193.39
38 Spices	0.54	189.99	248.34	249.24
39 Tea	0.84	177.87	200.77	201.02
Alcoholic Beverages, Tobacco	1.41	151.31	161.67	161.68
40 Cigarette	1.39	151.53	161.51	161.50
41 Betel Leaves & Nuts	0.02	137.56	170.94	172.89
Clothing & Footwear	7.57	132.00	150.36	151.61
42 Cotton Cloth	1.73	127.31	148.82	149.68
43 Woolen Cloth	0.88	137.02	168.02	168.48
44 Ready Made Garment	0.97	129.29	148.22	150.19
45 Woolen Readymade Garments	0.40	132.92	142.85	146.26
46 Hosiery	0.51	135.43	160.52	162.36
47 Dopatta	0.44	130.34	157.87	159.86
48 Cleaning & Laundering	0.21	142.36	163.04	164.99

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

Items and specification	Weights	Index		
		Dec-10	Nov-11	Dec-11
49 Tailoring	0.88	153.81	176.63	178.74
50 Footwear	1.55	121.35	123.20	123.31
Housing, Water, Elect, Gas & Other Fuel	29.41	135.43	144.03	144.17
51 House Rent	21.81	123.72	131.37	131.37
52 Construction Input Item	0.56	155.24	184.15	186.35
53 Construction Wage Rate	0.33	138.97	151.37	153.46
54 Water Supply	0.50	118.21	128.32	128.32
55 Electricity	4.40	166.67	168.71	168.71
56 Gas	1.58	204.32	232.00	232.00
57 Kerosene Oil	0.01	190.09	228.18	239.70
58 Fire Wood Whole	0.23	158.97	194.34	202.66
Furnished H.Hold Equip. & Maint. Etc	4.21	134.27	157.52	160.35
59 Furniture	0.33	133.45	149.28	150.16
60 Household Textile	0.65	131.93	153.13	155.71
61 Household Equipment	0.59	136.49	148.25	148.58
62 Utensils	0.32	131.82	147.06	148.48
63 Plastic Products	0.25	145.11	163.36	164.46
64 Washing Soap & Detergent	0.79	146.37	173.59	176.15
65 Sewing Needle & Dry Cell	0.15	121.79	136.48	138.02
66 Household Servant	1.04	124.90	160.08	166.33
67 Marriage Hall Charges	0.08	141.84	167.43	170.33
Health	2.19	124.02	135.85	137.16
68 Drug Medicine	1.27	115.56	124.15	124.24
69 Medical Equipment	0.01	135.94	171.01	174.48
70 Doctor (MBBS) Clinic Fee	0.59	140.62	158.46	162.29
71 Medical Test	0.32	126.51	139.52	140.99
Transport	7.20	146.26	165.16	166.18
72 Motor Vehicle	0.66	133.32	140.39	141.05
73 Motor Vehicle Accessories	0.24	157.74	185.04	186.03
74 Motor Fuel	3.03	136.91	160.84	162.24
75 Mechanical Service	0.46	138.79	154.55	156.41
76 Motor Vehicle Tax	0.11	100.00	119.48	119.48
77 Transport Services	2.70	162.01	177.93	178.50
Communication	3.22	122.15	123.19	123.10
78 Postal Services	0.07	160.31	164.71	164.82
79 Communication & Apparatus	3.15	121.35	122.32	122.22
Recreation & Culture	2.02	134.04	140.74	141.43
80 Recreation & Culture	0.86	111.04	115.32	116.79
81 Text Books	0.57	159.16	164.45	164.41
82 News Papers	0.19	137.66	149.97	149.97
83 Stationery	0.40	146.23	157.52	157.89
Education	3.94	126.55	140.91	140.80
84 Education	3.94	126.55	140.91	140.80
Restaurants And Hotels	1.23	165.03	182.32	182.94
85 Ready Made Food	1.23	165.03	182.32	182.94
Miscellaneous Goods And Services	2.76	152.12	179.71	180.79
86 Personal Care	1.49	138.09	162.39	163.53
87 Cosmetics	0.39	125.95	138.81	141.04
88 Blades	0.03	127.55	158.20	159.76
89 Personal Equipments	0.84	189.84	229.83	230.29

Table A11: Wholesale Price Index Numbers by Major Groups and Selected Commodities			
Items and Specifications	Index		
	Dec-10	Nov-11	Dec-11
General	162.43	178.39	176.01
Agriculture Forestry & Fishery	183.81	184.98	178.32
1 Wheat	164.43	162.51	167.12
2 Maize	141.77	151.51	147.58
3 Rice	119.51	151.90	150.30
4 Sorghum/Jowar	197.09	177.59	185.14
5 Millet/Bajra	116.51	147.59	144.74
6 Vegetables	170.82	282.06	235.64
7 Fresh Fruits	111.11	112.52	127.26
8 Dry Fruits	160.84	188.14	187.65
9 Cotton Seeds	169.92	196.11	202.55
10 Other Oil Seeds	143.57	169.50	169.82
11 Edible Roots/ Potatoes	180.74	217.20	174.44
12 Stimulant And Spice Crops	225.89	200.38	187.38
13 Pulses	165.28	207.67	205.76
14 Sugar Crops	296.35	291.82	291.82
15 Fibre Crops	293.16	194.74	170.80
16 Unmanufactured Tobacco	149.35	167.91	167.91
17 Poultry	145.56	163.25	147.79
18 Milk From Bovine Animals	154.86	188.73	188.73
19 Eggs	171.53	185.18	201.26
20 Raw Animal Material/Wool	112.35	130.85	131.99
21 Hides And Fur Skins, Raw	103.84	130.50	133.44
22 Fuel Wood In Logs	139.93	185.80	188.09
23 Fishes Live Fresh Or Chilled	141.75	140.23	140.41
Ores/Minerals, Gas & Elect.	160.78	170.09	170.51
24 Coal Not Agglomerated	125.49	125.49	130.20
25 Natural Gas Liquefied	156.86	179.87	180.13
26 Salt & Pure Sodium Chloride	122.28	153.67	154.20
27 Electrical Energy	170.12	166.13	166.13
Food, Beverages, Tobacco, Textiles	165.42	175.63	170.36
28 Meat Of Animals	170.58	213.36	215.47
29 Vegetables & Fruit Juices	145.07	176.10	177.14
30 Dried Fruits & Nuts	170.14	199.99	201.89
31 Fruit Juices	126.89	156.09	155.01
32 Vegetable Oil Refined	121.03	151.99	150.85
33 Vegetable Ghee	107.46	139.88	138.76
34 Oil Cakes	148.25	158.08	151.98
35 Processed Liquid Milk	152.14	180.23	181.63
36 Milk And Cream In Solid Form	187.93	165.95	165.54
37 Ice Cream	136.87	154.15	154.15
38 Dairy Products N.E.C	139.46	176.66	182.91
39 Wheat Flour	148.99	151.63	153.41
40 Other Cereal Flour	136.74	144.91	143.79
41 Sugar Refined	249.40	247.60	204.30
42 Chocolate	99.72	100.00	100.00
43 Sugar Confectionary	102.28	100.40	100.40
44 Coffee And Tea	156.60	188.78	191.69
45 Spices	140.73	276.42	290.49
46 Other Food Products	230.03	305.83	318.59
47 Mineral Water	120.30	162.93	164.64
48 Beverages	115.04	132.43	133.04
49 Tobacco Products	159.24	170.46	166.13
50 Cotton Yarn	246.80	192.84	174.87
51 Nylon Yarn	184.32	196.85	176.23
52 Blended Yarn	192.43	200.48	191.22
53 Woven Fabrics	122.42	162.80	165.01
54 Cotton Fabrics	134.10	164.49	165.72
55 Other Fabrics	122.39	151.58	153.88
56 Silk And Rayon Fabrics	127.33	138.37	138.37

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

Items and Specifications	Index		
	Dec-10	Nov-11	Dec-11
57 Towels	133.31	178.07	178.07
58 Blankets	121.07	146.17	149.14
59 Bed Sheets	127.00	160.30	164.70
60 Quilts	129.68	142.42	147.05
61 Woolen Carpets	103.57	105.95	103.57
62 Synthetic Carpets	138.58	150.34	148.31
63 Hosiery Products	122.13	150.62	152.82
64 Ready Made Garments	111.73	125.59	126.24
65 Leather With Out Hairs	105.18	109.34	109.34
66 Other Leather N.E.C	110.61	120.85	120.85
67 Footwear's	101.48	101.48	101.48
Other Transportable Goods	148.47	189.50	192.97
68 Timber	125.56	135.95	135.73
69 Printing Paper	104.17	118.38	120.47
70 Hard Board	104.17	141.67	143.75
71 Coke	136.21	155.28	155.82
72 Motor Sprit	123.21	147.65	148.46
73 Diesel Oil	185.47	225.86	238.13
74 Kerosene Oil	189.08	228.62	237.92
75 Furnace Oil	143.38	196.81	197.56
76 Mobil Oil	147.50	170.52	171.42
77 Chemicals	120.82	145.01	146.14
78 Dying Materials	107.04	106.14	108.04
79 Fertilizers	160.24	263.77	262.61
80 Pesticides	128.24	164.77	165.03
81 Insecticides	127.69	130.07	130.07
82 Paints & Varnishes	149.69	180.34	180.34
83 Medicines	116.05	113.92	113.92
84 Soaps & Detergent	127.55	148.10	152.08
85 Auto Tyres	144.07	172.02	172.05
86 Plastic Products	128.29	178.54	179.97
87 Glass Sheets	153.68	169.06	171.03
88 Other Glass Articles	157.91	203.99	206.71
89 Ceramics And Sanitary	129.00	132.70	132.70
90 Bricks Blocks And Tiles	143.00	166.88	169.63
91 Cement	138.52	155.21	155.70
92 Bed Foams	111.00	123.67	125.50
93 Matches	111.00	117.72	120.39
Metal Product Machinery & Equip	126.70	151.66	153.46
94 Pig Iron	128.97	128.97	128.97
95 Steel Bars & Sheets	113.25	132.89	133.20
96 Pipe Fittings	126.29	140.22	140.49
97 Steel Products	126.28	150.72	157.56
98 Engines And Motors	105.28	109.07	109.07
99 Vacuum Pumps	111.45	115.39	115.39
100 Air Conditioners	147.41	163.43	163.59
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	131.42	162.72	163.41
107 Electrical Wires	140.41	158.89	163.22
108 Lighting Equipments	110.88	142.37	142.85
109 Radio And Television	120.18	131.33	131.33
110 Motor Vehicles	138.41	154.47	154.47
111 Motor Cycles	116.06	121.72	121.72
112 Bicycles	137.32	164.21	167.39

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	138.86	120.37	132.41	134.07	131.36	137.06
	Dec	126.37	135.81	120.71	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	145.68	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	163.90	133.51	155.40	156.03	155.00	163.01
	Nov	146.34	166.59	134.20	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	136.37	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	168.76	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	142.68	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
	Dec	160.12	179.21	148.67	176.01	178.29	174.57	175.04

*: all groups combined

*: all groups combined

Table A13: International Commodity Prices/ Indices

	Sep-11	Oct-11	Nov-11	Dec-11
Energy				
Crude Oil (US\$ per barrel) *	100.8	99.9	105.4	103.4
IMF Energy Index (2005 = 100)	189.8	189.3	197.1	196.2
WB Energy Index (2005 = 100) @	183.5	181.8	189.8	187.6
Food				
Rice (\$/MT)	615.6	602.1	609.1	580.9
Wheat (\$/MT)	315.9	289.0	281.0	269.0
Sugar (US cent/ pound)	26.6	26.3	24.5	23.4
Palm Oil (\$/MT)	995.2	914.4	985.8	969.1
Soybean Oil (\$/MT)	1,218.9	1,126.8	1,118.3	1,103.0
Non-Food Non-Energy				
Cotton Outlook 'A' Index #	116.7	110.6	104.7	95.5
IMF Metal Price Index (2005 = 100)	224.1	200.9	193.3	192.1
Copper (\$/MT)	8,300.1	7,394.2	7,581.0	7,558.9
Aluminum (\$/MT)	2,293.5	2,180.7	2,080.0	2,024.4
Iron Ore (\$ cents/dry MT)	177.2	150.4	135.5	136.5
Tin (\$/MT)	22,526.6	21,868.6	21,291.7	19,386.9
Nickle (\$/MT)	20,377.6	19,039.1	17,873.0	18,246.0
Zinc (\$/MT)	2,075.2	1,871.4	1,935.3	1,911.2
Lead (\$/MT)	2,287.7	1,960.4	1,994.2	2,024.6
Uranium (\$/MT)	52.0	52.3	53.2	52.2
DAP (\$/MT)	642.5	630.9	611.3	575.0
Urea (\$/MT)	503.8	487.1	470.9	353.8

Source: IMF and World Bank

\$/MT = US\$ per metric ton.

* Crude Oil (Petroleum), simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai fateh

Middling 1-3/32 inch staple, Liverpool Index "A", average of the cheapest Cts/lb five of fourteen styles, CIF Liverpool (Cotton Outlook, Liverpool). From January 1968 to May 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16.2/

DAP: Diammonium Phosphate

@ World Bank commodity index for low and middle income countries

Table 14. CPI Data Series Original and Seasonally Adjusted

CPI 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	160.12
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 Seasonally Adjusted Series				
Jul	112.19	122.31	137.50	154.60
Aug	113.66	123.91	139.74	155.87
Sep	114.63	124.18	142.62	157.51
Oct	115.75	124.42	143.42	159.09
Nov	115.80	126.55	145.45	160.23
Dec	116.79	127.05	146.68	160.99
Jan	116.64	129.84	147.90	
Feb	118.65	130.81	147.66	
Mar	119.17	132.56	149.87	
Apr	119.84	134.34	151.18	
May	120.17	135.02	152.14	
Jun	121.21	135.47	153.51	

Table 15. CPI Food Data Series Original and Seasonally Adjusted

CPI 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	179.21
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 Seasonally Adjusted Series				
Jul	117.12	130.43	148.63	173.87
Aug	119.40	133.19	154.69	175.01
Sep	120.68	133.04	161.15	177.00
Oct	123.85	133.51	160.72	179.42
Nov	121.45	136.43	163.40	179.58
Dec	123.25	137.07	165.26	180.96
Jan	120.27	139.18	167.44	
Feb	124.94	141.55	166.69	
Mar	125.69	143.52	169.21	
Apr	126.62	145.99	170.00	
May	126.51	147.20	170.75	
Jun	128.26	148.55	172.27	

Table 16: CPI Monthly & Average Seasonal Factors

CPI – Seasonal Factors					
Period	FY09	FY10	FY11	FY12	Average
Jul	100.1	100.12	100.0	100.0	100.1
Aug	100.5	100.62	100.6	100.6	100.6
Sep	100.5	100.57	100.6	100.6	100.6
Oct	100.9	100.98	101.0	101.0	101.0
Nov	100.5	100.59	100.6	100.6	100.6
Dec	99.48	99.47	99.47	99.46	99.5
Jan	99.85	99.85	99.84		99.9
Feb	99.50	99.48	99.45		99.5
Mar	99.43	99.39	99.36		99.4
Apr	99.87	99.87	99.88		99.9
May	99.53	99.50	99.47		99.5
Jun	99.53	99.52	99.53		99.5

Table 17: CPI Food Monthly & Average Seasonal Factors

CPI Food – Seasonal Factors					
Period	FY09	FY10	FY11	FY12	Average
Jul	100.3	100.41	100.4	100.5	100.5
Aug	101.2	101.32	101.3	101.3	101.3
Sep	101.4	101.62	101.7	101.7	101.6
Oct	101.6	101.85	101.9	102.0	101.9
Nov	101.6	101.79	101.9	102.0	101.9
Dec	99.11	99.08	99.05	99.03	99.1
Jan	99.61	99.54	99.45		99.5
Feb	98.45	98.24	98.12		98.3
Mar	98.72	98.74	98.75		98.7
Apr	99.44	99.49	99.56		99.5
May	99.14	98.98	98.84		99.0
Jun	98.84	98.71	98.62		98.7

Table 18: CPI Month-on-Month Change Original & Seasonally Adjusted Series				
CPI 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	-0.70
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		0.91	1.49	0.72
Aug	1.31	1.31	1.63	0.82
Sep	0.86	0.22	2.06	1.05
Oct	0.97	0.19	0.56	1.01
Nov	0.04	1.71	1.41	0.72
Dec	0.86	0.39	0.85	0.47
Jan	-0.13	2.20	0.83	
Feb	1.73	0.75	-0.16	
Mar	0.44	1.33	1.49	
Apr	0.56	1.34	0.87	
May	0.27	0.51	0.63	
Jun	0.87	0.34	0.90	

Table 19: CPI Food Month-on-Month Change Original & Seasonally Adjusted				
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	-2.21
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		1.70	0.05	0.93
Aug	1.94	2.12	4.08	0.66
Sep	1.08	-0.11	4.18	1.13
Oct	2.62	0.35	-0.27	1.37
Nov	-1.93	2.19	1.67	0.09
Dec	1.49	0.47	1.14	0.77
Jan	-2.42	1.53	1.32	
Feb	3.88	1.70	-0.45	
Mar	0.59	1.39	1.51	
Apr	0.75	1.72	0.46	
May	-0.09	0.83	0.44	
Jun	1.38	0.92	0.89	

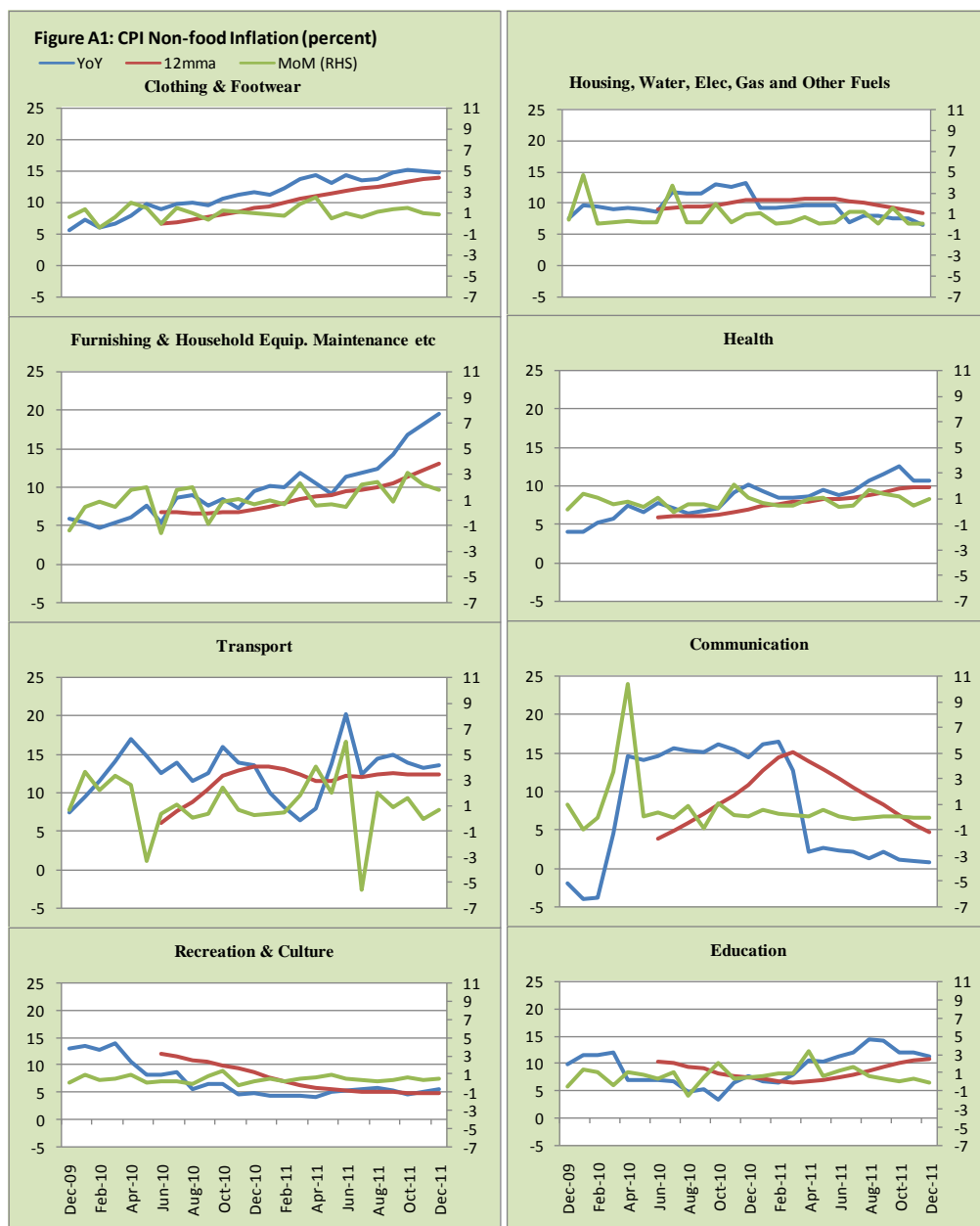


Figure A2: Frequency distribution of price changes of CPI items, December 2011

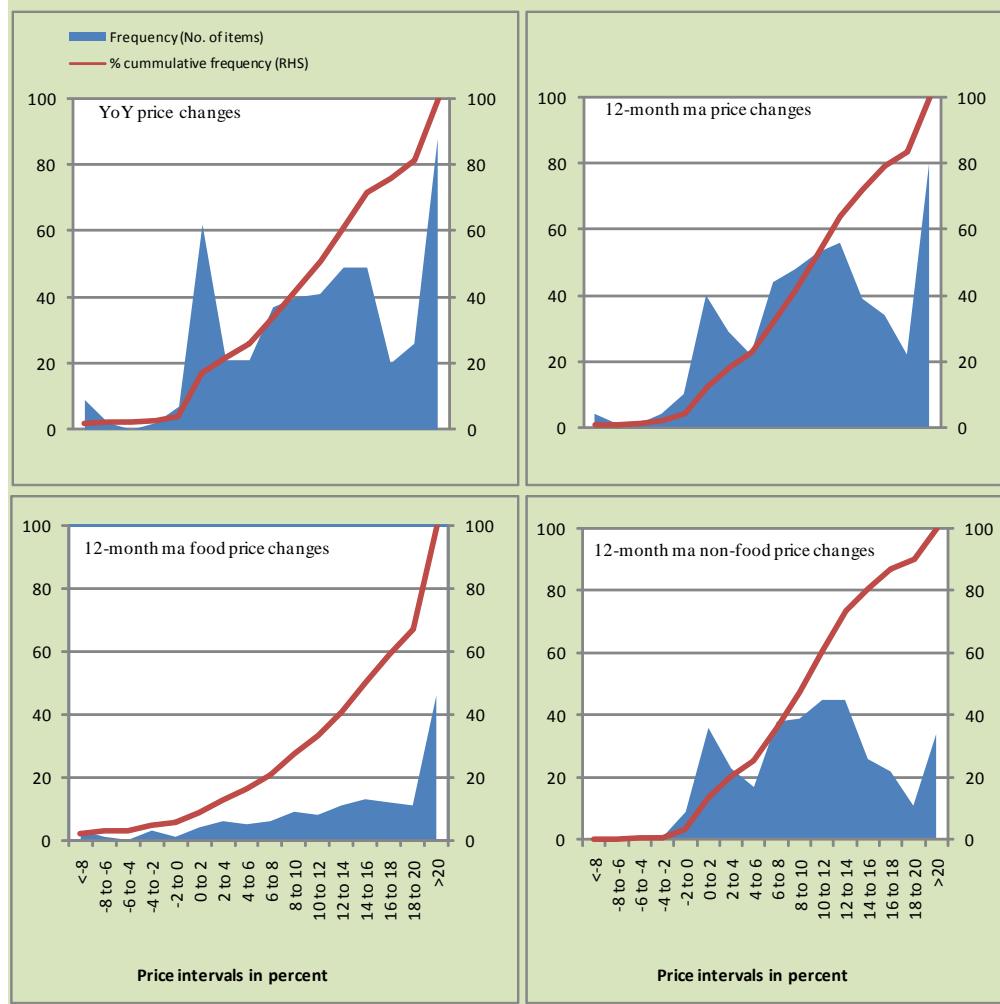


Figure A3: Frequency distribution of price changes of WPI commodities, December 2011

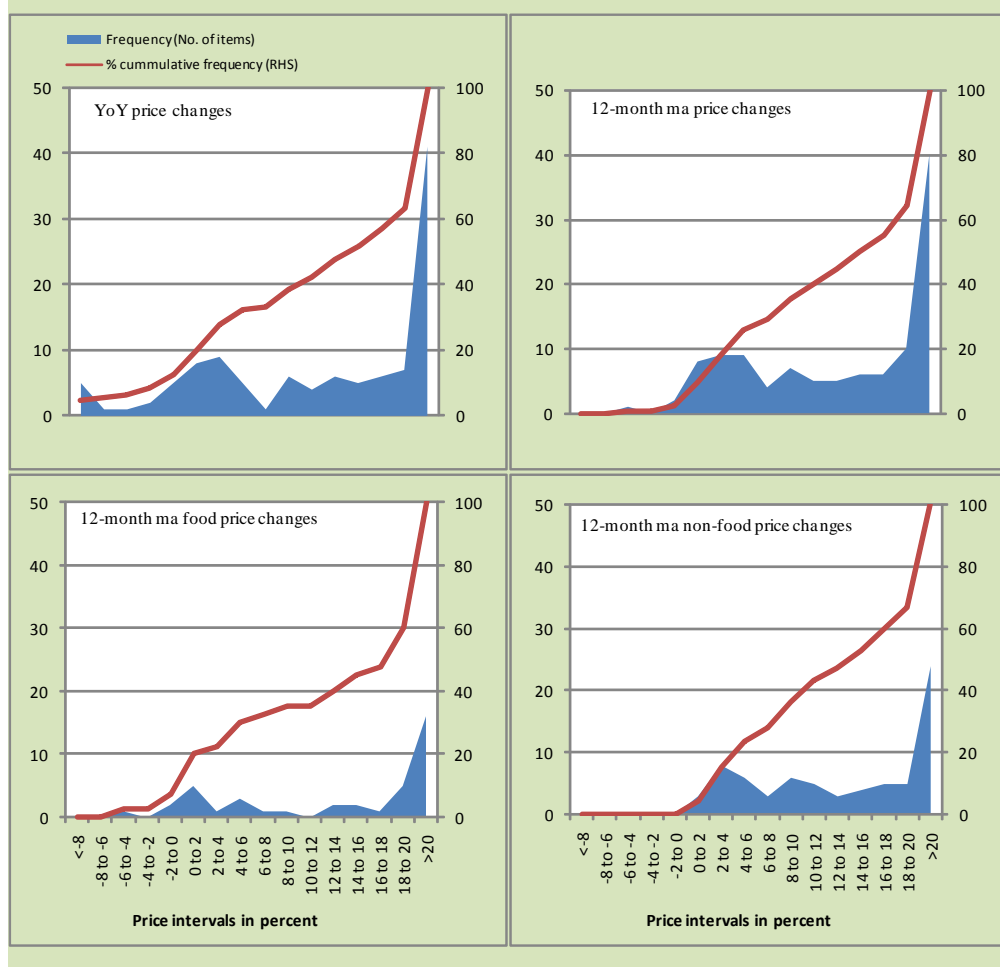
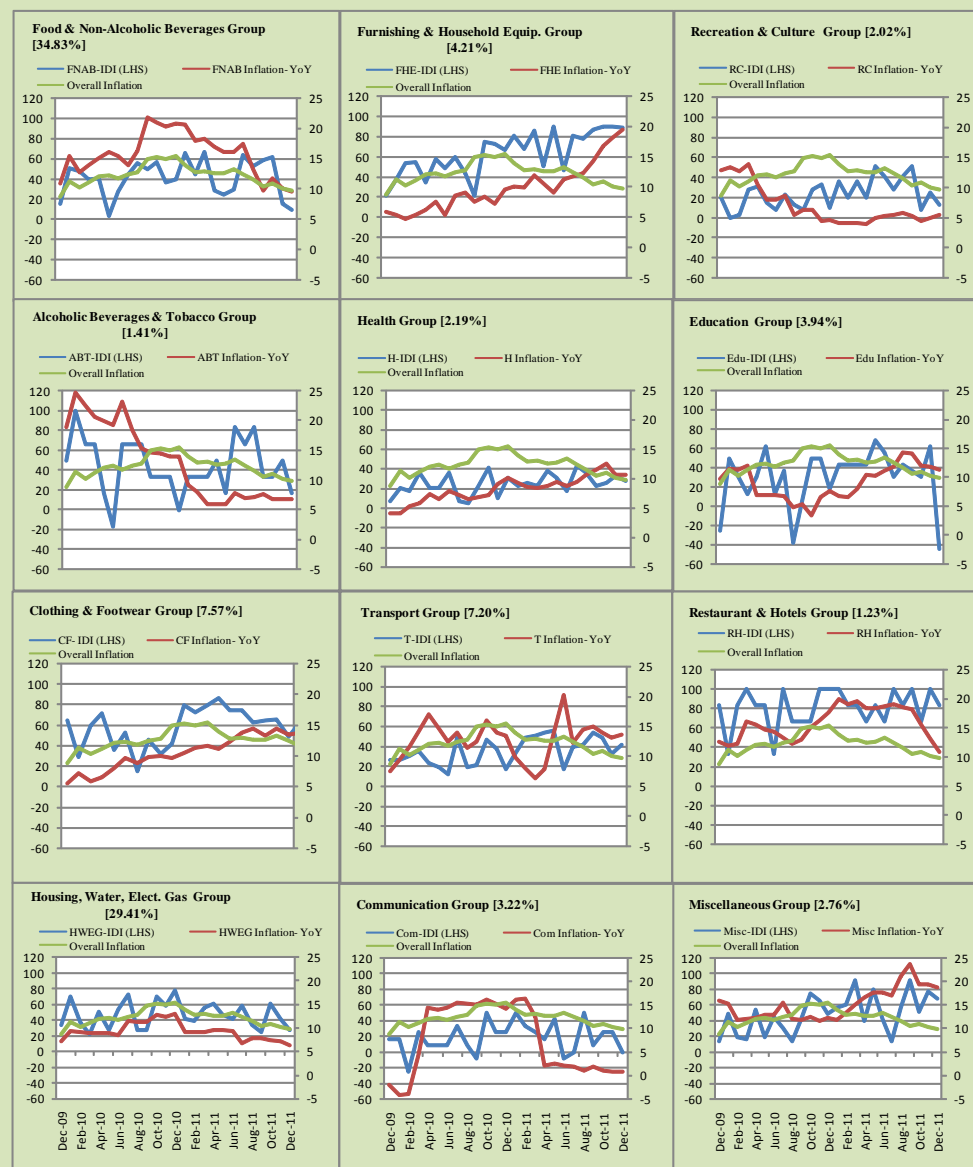


Figure A4: Group-wise Inflation Diffusion Index (IDI) and Respective/ Overall YoY Inflation (percent)



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.