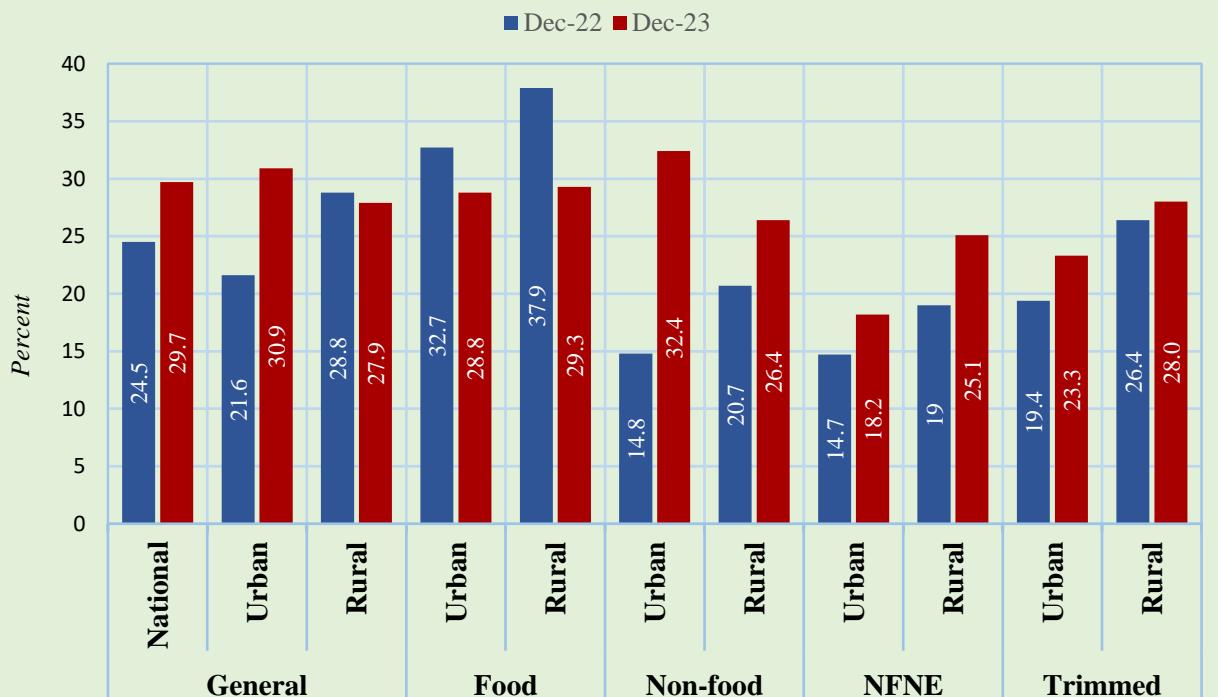




Inflation Monitor

December 2023

Inflation Indicators (YoY)



Data Services and Innovations Department

State Bank of Pakistan State Bank of Pakistan State Bank of Pakistan

State Bank of Pakistan, I.I. Chundrigar Road, Karachi.

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The analysis in this document is based on data:

- provided by Pakistan Bureau of Statistics (PBS) for domestic inflation
- retrieved from websites of Bloomberg, Trading Economics and World Bank for global inflation

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Pakistan Bureau of Statistics (PBS)

1. Inflation in Brief

Key developments are presented in the table below:

Table S-1. Inflation Summary	YoY			MoM		
	Dec-23	Nov-23	Dec-22	Dec-23	Nov-23	Dec-22
CPI Inflation						
National	29.7	29.2	24.5	0.8	2.7	0.5
Urban	30.9	30.4	21.6	0.7	4.3	0.3
Rural	27.9	27.5	28.8	1.0	0.4	0.7
Core Inflation						
Urban (NFNE)	18.2	18.6	14.7	0.8	0.9	1.2
Rural (NFNE)	25.1	25.9	19.0	0.9	1.4	1.5
Urban (Trimmed)	23.3	22.9	19.4	0.3	0.1	0.8
Rural (Trimmed)	28.0	27.9	26.4	0.7	0.5	1.5
WPI Inflation	27.3	26.4	27.1	0.0	1.4	-0.7
SPI Inflation	43.0	34.7	29.7	6.4	4.4	0.3

- I. National CPI Inflation (YoY) increased to 29.7 percent in December 2023 from 29.2 percent in the previous month. It stood at 24.5 percent in December 2022. On MoM basis, it decreased to 0.8 percent in December 2023 from 2.7 percent in the previous month. It was recorded at 0.5 percent in the corresponding month of the previous year.
- II. Urban CPI Inflation (YoY) increased to 30.9 percent in December 2023 from 30.4 percent in the previous month. It stood at 21.6 percent in December 2022. On MoM basis, it decreased to 0.7 percent in December 2023 from 4.3 percent in the previous month. It was recorded at 0.3 percent in the corresponding month of the previous year.
- III. Rural CPI Inflation (YoY) increased to 27.9 percent in December 2023 from 27.5 percent in the previous month. It stood at 28.8 percent in December 2022. On MoM basis, it increased to 1.0 percent in December 2023 from 0.4 percent in the previous month. It was recorded at 0.7 percent in the corresponding month of the previous year.
- IV. Urban Core (NFNE) Inflation (YoY) decreased to 18.2 percent in December 2023 from 18.6 percent in the previous month. It stood at 14.7 percent in the corresponding month of the previous year. On MoM basis, it decreased to 0.8 percent in December 2023 from 0.9 percent in the previous month. It stood at 1.2 percent in the corresponding month of the previous year.
- V. Rural Core (NFNE) Inflation (YoY) decreased to 25.1 percent in December 2023 from 25.9 percent in the previous month. It stood at 19.0 percent in December 2022. On MoM basis, it decreased to 0.9 percent in December 2023 from 1.4 percent in the previous month. It was recorded at 1.5 percent in the corresponding month of the previous year.
- VI. Urban Core (trimmed) Inflation (YoY) increased to 23.3 percent in December 2023 from 22.9 percent in the previous month. It stood at 19.4 percent in the corresponding month of the previous year. On MoM basis, it increased to 0.3 percent in December 2023 from 0.1 percent in the previous month. It stood at 0.8 percent in the corresponding month of the previous year.
- VII. Rural Core (trimmed) Inflation (YoY) increased to 28.0 percent in December 2023 from 27.9 percent in the previous month. It was recorded at 26.4 percent in the corresponding month of the

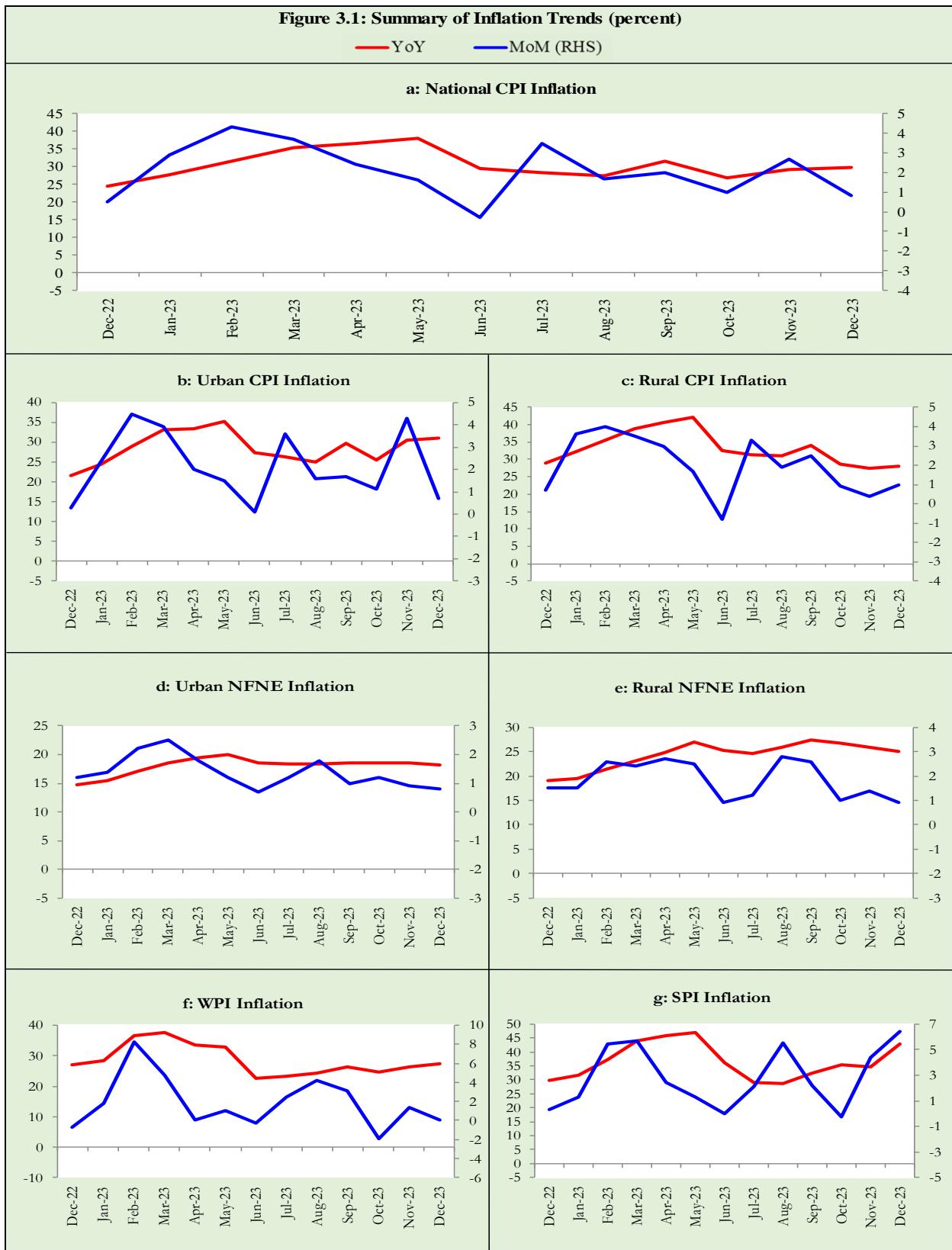
previous year. On MoM basis, it increased to 0.7 percent in December 2023 from 0.5 percent in the previous month. It stood at 1.5 percent in the corresponding month of the previous year.

- VIII. WPI Inflation (YoY) increased to 27.3 percent in December 2023 from 26.4 percent in the previous month. It stood at 27.1 percent in the corresponding month of the previous year. On MoM basis, a deflation of 0.02 percent was recorded in December 2023 compared to an inflation of 1.4 percent in the previous month. A deflation of 0.7 percent was recorded during the corresponding month of the previous year.
- IX. SPI (combined) Inflation (YoY) increased to 43.0 percent in December 2023 from 34.7 percent in the previous month. It stood at 29.7 percent in the corresponding month of the previous year. On MoM basis, it increased to 6.4 percent in December 2023 compared to 4.4 percent in the previous month. It stood at 0.3 percent in the corresponding month of the previous year.

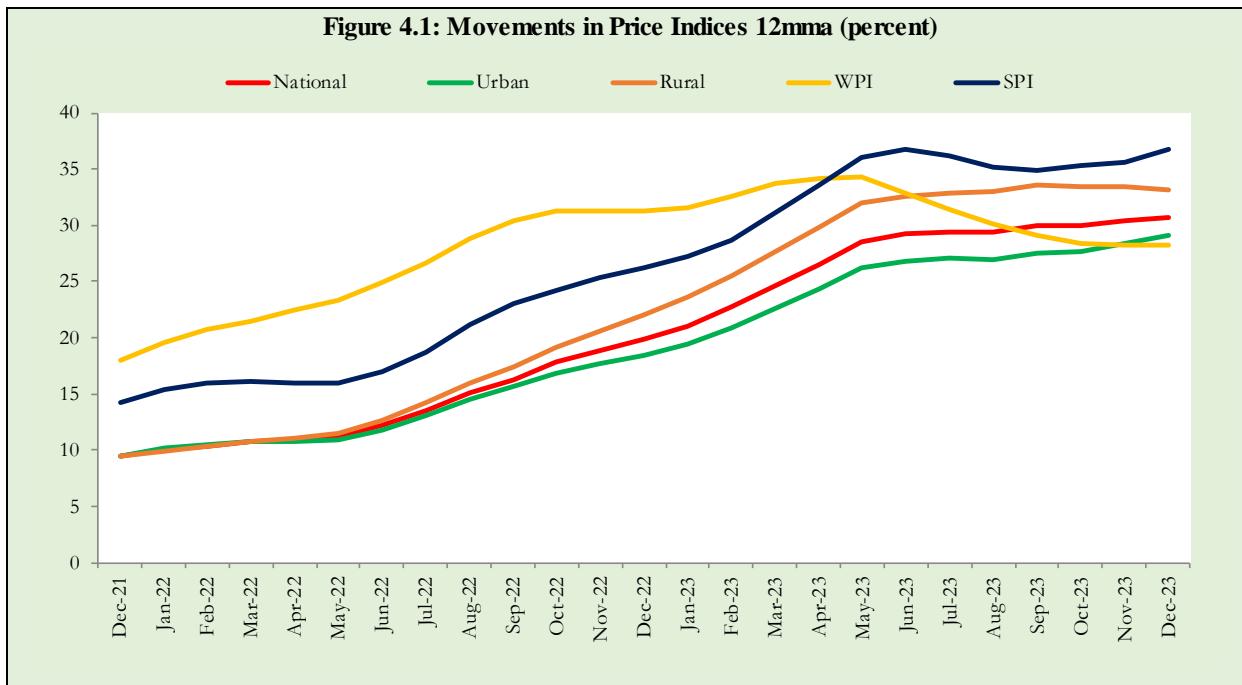
Urban CPI Inflation (MoM)														
	Weights	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Urban	100.00	0.3	2.4	4.5	3.9	2.0	1.5	0.1	3.6	1.6	1.7	1.1	4.3	0.7
Food	36.80	0.0	3.9	4.3	5.6	3.4	1.9	0.1	3.7	0.6	1.5	0.6	0.8	-0.7
Non-perishable	32.34	2.2	5.0	4.4	4.6	4.3	2.7	-0.2	4.0	1.8	0.7	-1.1	0.0	-0.3
Perishable	4.46	-12.0	-1.4	2.9	3.5	2.5	-7.0	0.1	6.5	-8.9	8.1	12.7	6.2	-5.3
Non Food	63.20	0.6	1.2	4.7	2.7	1.0	1.2	0.1	3.5	2.4	1.8	1.4	7.0	1.8
Energy	9.47	-1.9	0.4	15.2	3.1	-2.2	1.1	-2.1	12.7	4.3	4.5	1.9	27.5	4.2
NFNE (Core)	53.73	1.2	1.4	2.2	2.5	1.8	1.2	0.7	1.2	1.8	1.0	1.2	0.9	0.8
HRI	19.26	0.0	1.7	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.5	0.0	0.0
Core Excl HRI	34.47	1.7	1.3	3.3	3.7	2.1	1.7	1.0	1.1	2.6	1.5	1.1	1.3	1.2



3. Inflation Trends



4. Movements in Price Indices (12-Month Moving Averages)



5. Movements in Price Indices (MoM)

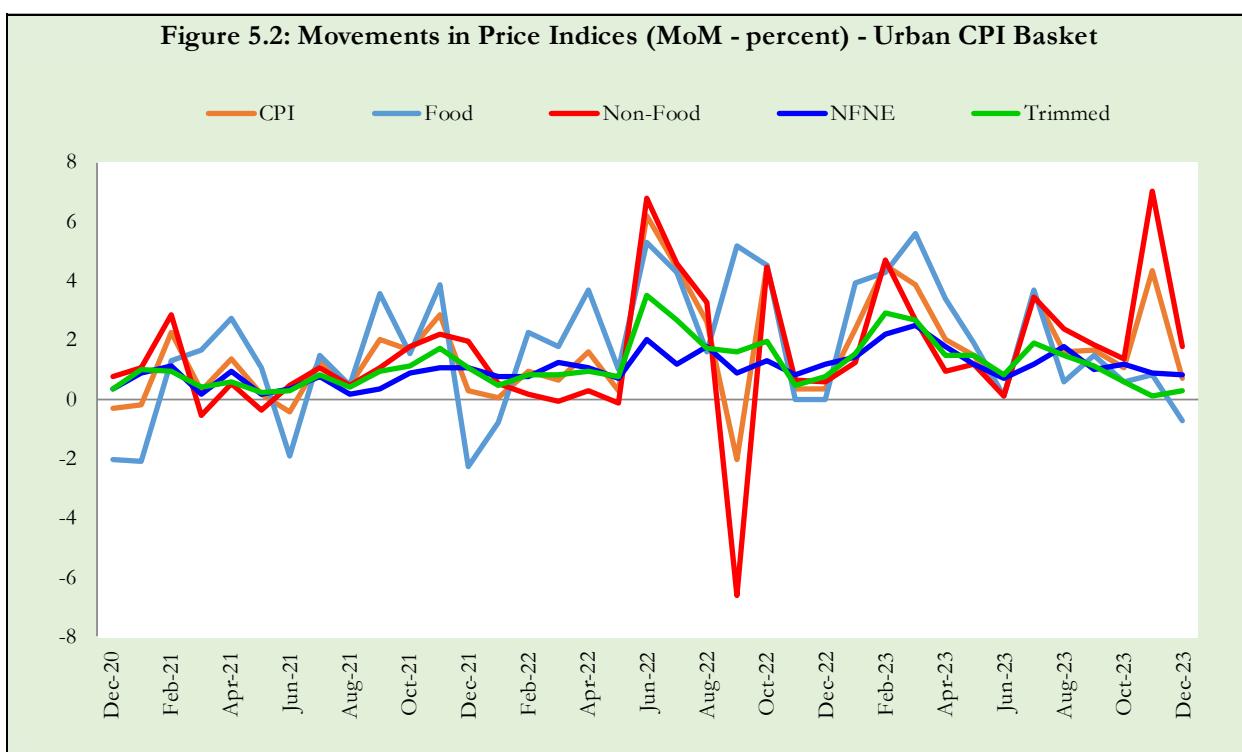
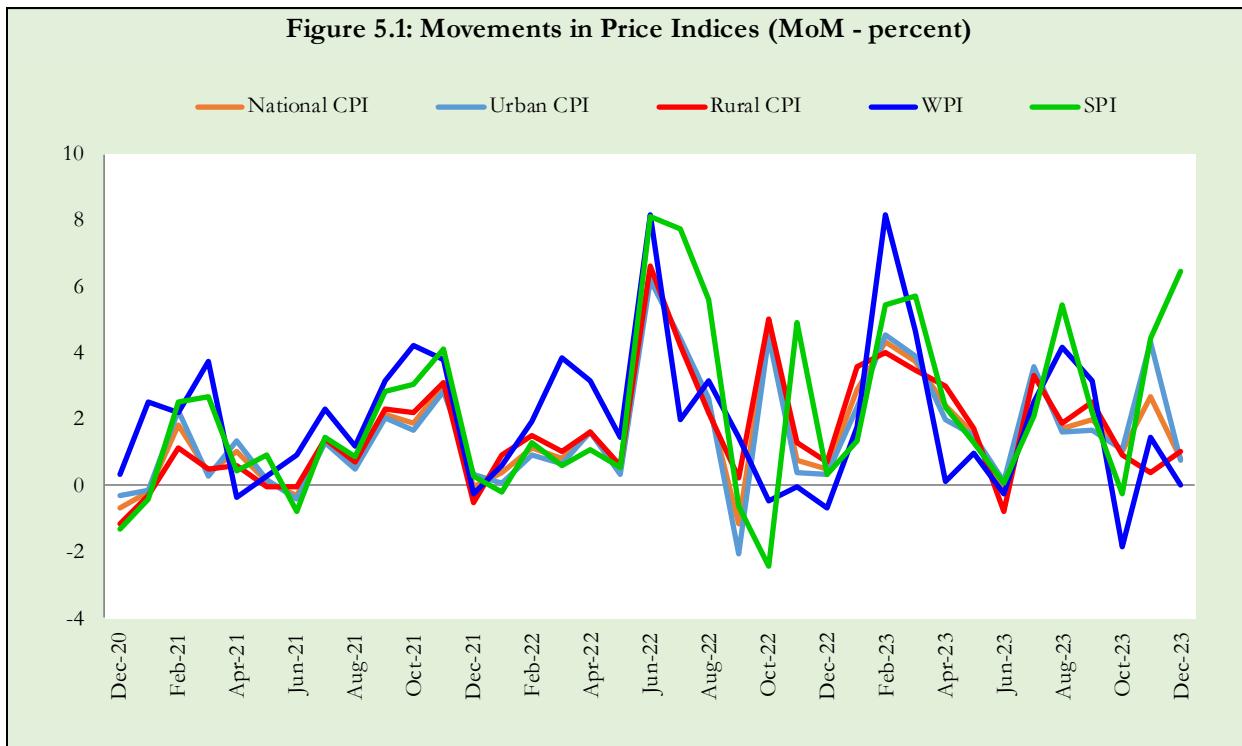
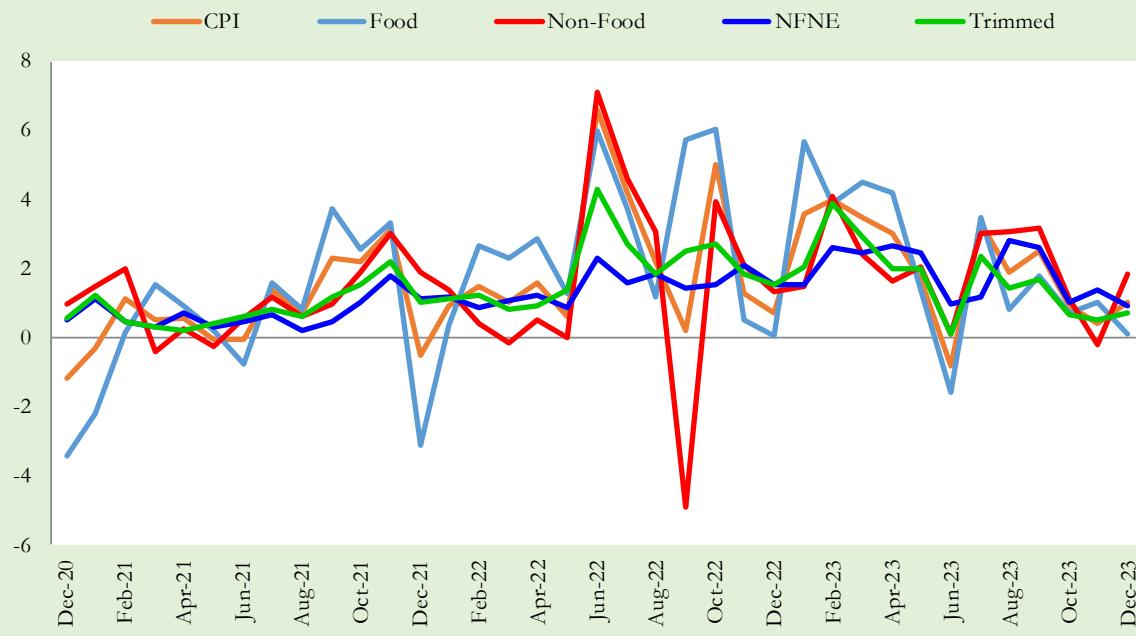
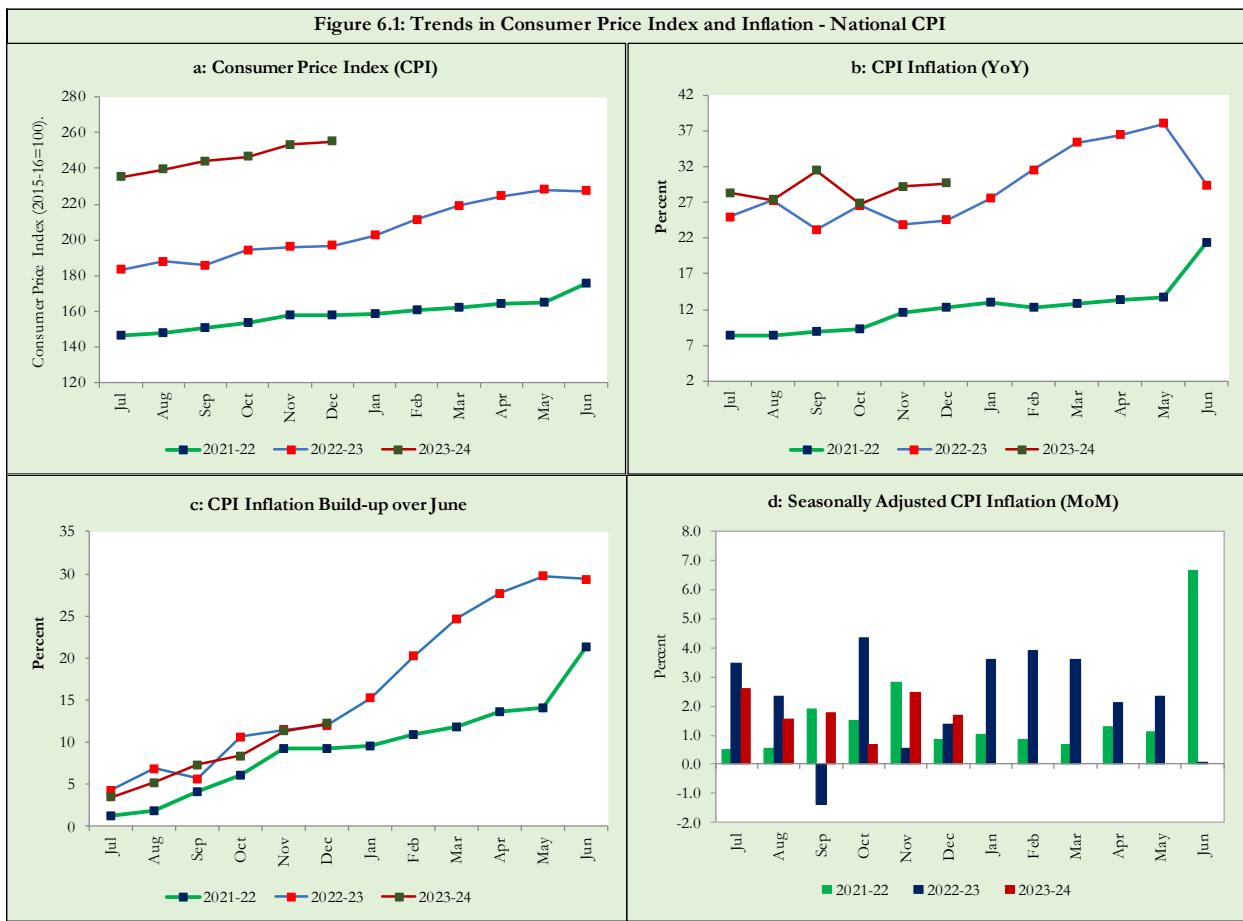
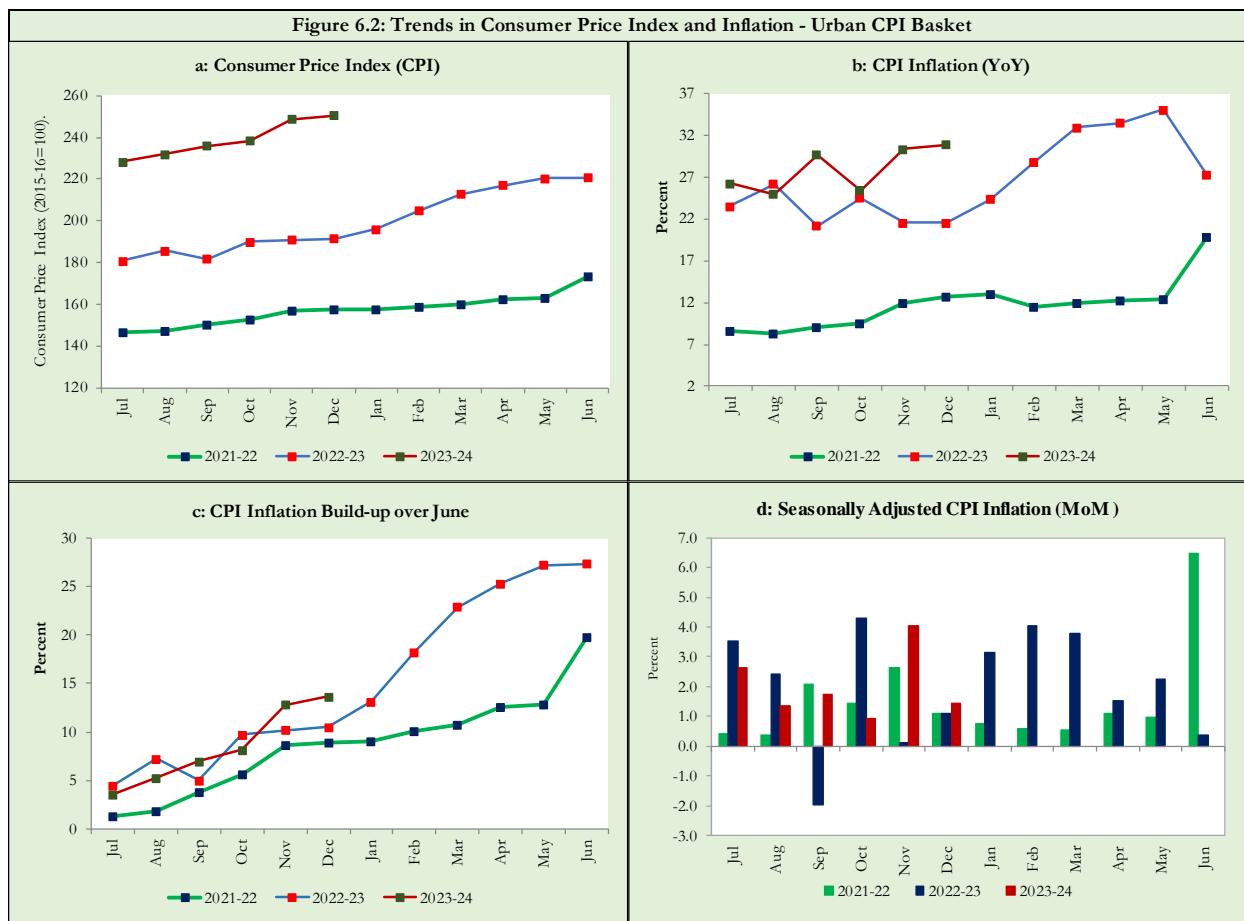


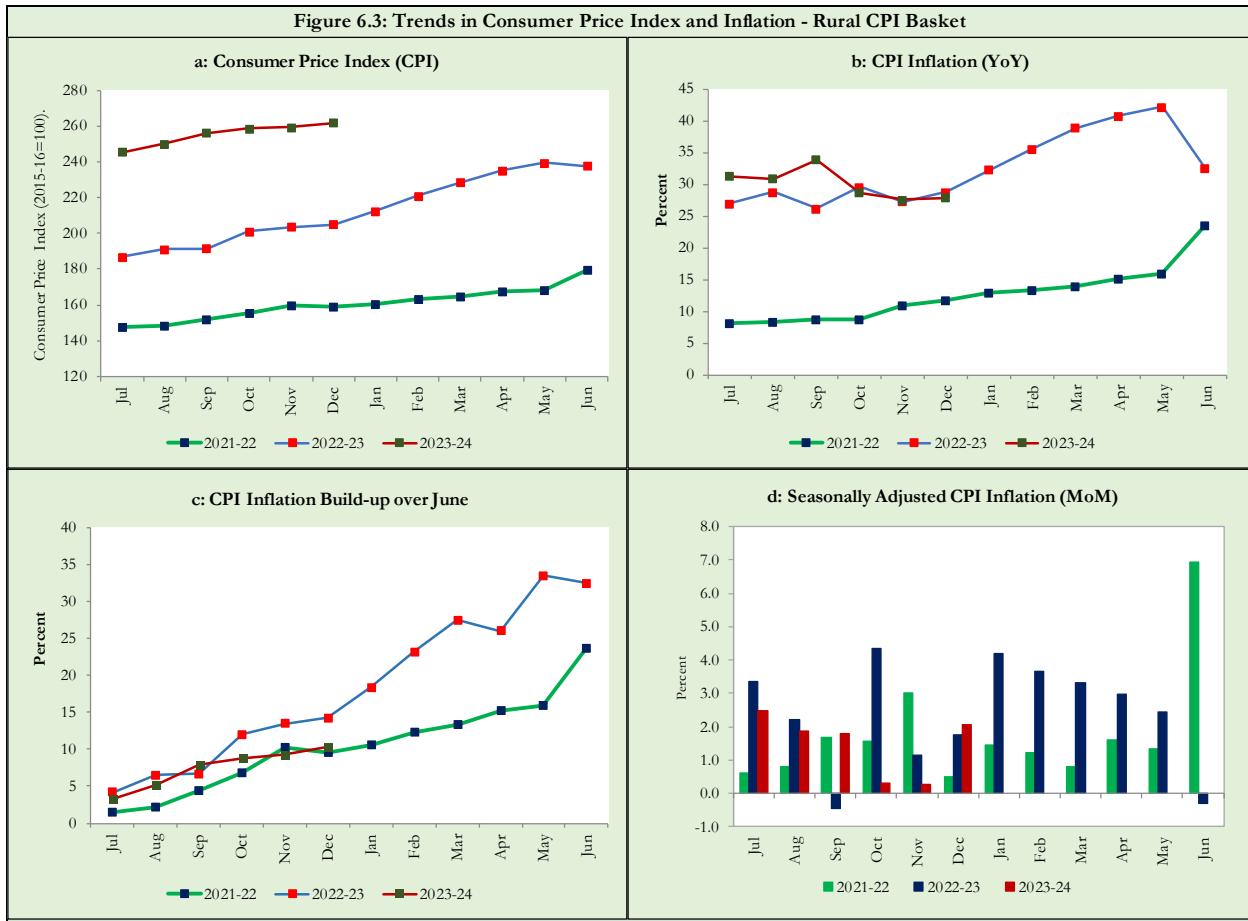
Figure 5.3: Movements in Price Indices (MoM - percent) - Rural CPI Basket

6. Consumer Price Indices and Inflation

Monthly CPI, Inflation (YoY) and seasonally adjusted CPI (MoM) are summarized in the following graphs (**Figure 6.1 to 6.3**).







7. Weighted Contribution

In overall Urban CPI Inflation, the weighted contribution of:

- Food group decreased to 38.5 percent during December 2023 from 40.6 percent in previous month.
It was 57.3 percent during the corresponding month of the previous year.
- Non-food group increased to 61.5 percent in December 2023 from 59.4 percent in previous month.
It was 42.7 percent during the corresponding month of the previous year (**Table 7.1**).

Period	CPI	Food Group			Non-food Group				NFNE excl. HRI
		Overall	Perishable	Non- Perishable	Overall	Energy	Core Inflation (NFNE)	HRI	
		a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h
Dec-22	100.0	57.3	10.0	47.3	42.7	8.5	34.2	4.2	30.0
Jan-23	100.0	60.0	9.4	50.6	40.0	7.9	32.1	3.9	28.1
Feb-23	100.0	55.2	6.6	48.6	44.8	14.8	30.0	3.3	26.7
Mar-23	100.0	54.9	6.5	48.4	45.0	16.3	28.7	2.9	25.9
Apr-23	100.0	54.7	4.1	50.6	45.3	15.8	29.4	2.8	26.7
May-23	100.0	54.2	4.2	50.0	45.8	16.9	28.9	2.6	26.3
Jun-23	100.0	58.5	4.3	54.2	41.5	8.5	33.0	3.2	29.8
Jul-23	100.0	59.7	4.4	55.3	40.3	7.1	33.1	3.1	30.0
Aug-23	100.0	60.0	2.0	58.0	40.0	5.4	34.6	3.2	31.4
Sep-23	100.0	47.3	0.9	46.4	52.7	22.6	30.1	2.8	27.4
Oct-23	100.0	47.1	-0.1	47.1	52.9	19.0	33.9	3.4	30.6
Nov-23	100.0	40.6	2.1	38.5	59.4	30.7	28.7	2.8	25.9
Dec-23	100.0	38.5	3.2	35.2	61.5	33.6	27.9	2.7	25.2

Note: The weighted contribution of sub-indices may not exactly tally with the weighted contribution of overall CPI index due to rounding off

In overall Rural CPI Inflation, the weighted contribution of:

- Food group decreased to 52.9 percent during December 2023 from 53.6 percent in previous month.
It was 61.9 percent during the corresponding month of the previous year.
- Non-food group increased to 47.1 percent in December 2023 from 46.4 percent in previous month.
It was 38.1 percent during the corresponding month of the previous year (**Table 7.2**).

Table 7.2. Weighted Contributions (percent) to Rural CPI Inflation (YoY)									
Period	CPI	Food Group			Non-food Group				NFNE excl. HRI
		Overall	Perishable	Non-Perishable	Overall	Energy	Core Inflation (NFNE)	HRI	
		a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h
Dec-22	100.0	61.9	10.9	50.9	38.1	11.6	26.5	1.6	25.0
Jan-23	100.0	65.5	9.9	55.6	34.5	10.3	24.2	1.7	22.6
Feb-23	100.0	62.5	8.3	54.3	37.5	13.3	24.2	1.5	22.7
Mar-23	100.0	61.8	7.7	54.1	38.2	14.3	23.9	1.3	22.5
Apr-23	100.0	62.1	5.1	57.0	37.8	13.4	24.4	1.3	23.1
May-23	100.0	60.6	4.8	55.7	39.4	13.9	25.5	1.3	24.3
Jun-23	100.0	62.2	4.2	57.9	37.9	8.0	29.9	1.5	28.3
Jul-23	100.0	63.7	4.1	59.6	36.3	6.8	29.5	1.6	27.9
Aug-23	100.0	62.9	2.9	60.0	37.1	5.7	31.3	1.6	29.7
Sep-23	100.0	52.8	0.8	52.0	47.3	16.7	30.5	1.5	29.1
Oct-23	100.0	50.9	-1.0	51.9	49.2	15.1	34.1	1.8	32.3
Nov-23	100.0	53.6	2.3	51.4	46.4	11.7	34.7	1.8	32.9
Dec-23	100.0	52.9	5.2	47.6	47.1	13.7	33.5	1.8	31.7

Note: The weighted contribution of sub-indices may not exactly tally with the weighted contribution of overall CPI index due to rounding off

9. Domestic Food Commodity Prices (Growth)

Growth in domestic food commodity prices for selected essential food items covering both urban and rural CPI baskets is given in **Table 9.1**.

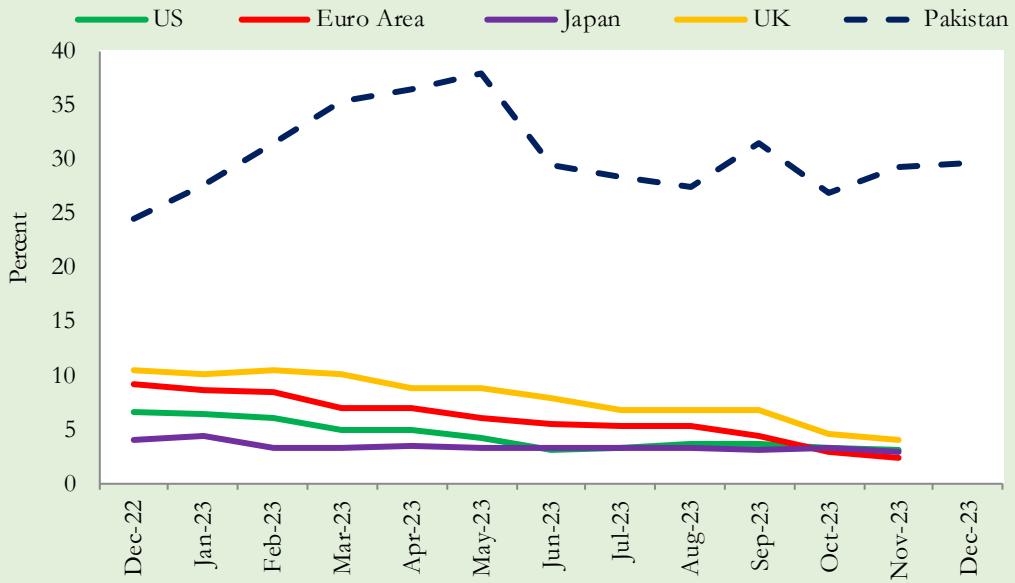
S. No	Item	Unit	Urban CPI		Rural CPI	
			YoY	MoM	YoY	MoM
1	Wheat	10 Kg	29.0	2.2	29.5	1.1
2	Wheat Flour Bag	20 Kg	73.4	0.7	64.3	0.2
3	Rice Basmati Broken (Superior/Average Quality)*	1 Kg	17.9	-2.8	62.2	-0.5
4	Beef With Bone (Average Quality)	1 Kg	17.4	0.3	22.3	1.3
5	Mutton (Average Quality)	1 Kg	17.5	0.1	23.3	0.5
6	Chicken Farm Broiler (Live)	1 Kg	17.1	-4.2	20.6	-1.5
7	Milk Fresh (Un-Boiled)	1 Liter	21.3	0.0	24.6	0.9
8	Eggs Farm	Dozen	26.8	4.7	22.9	5.0
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	-1.1	-1.3	-6.0	-1.8
10	Pulse Masoor (Washed)	1 Kg	32.3	5.1	23.4	4.3
11	Pulse Moong (Washed)	1 Kg	12.8	2.0	14.6	2.3
12	Pulse Mash (Washed)	1 Kg	43.7	1.2	45.1	3.3
13	Pulse Gram	1 Kg	3.9	3.7	2.5	0.9
14	Potatoes	1 Kg	47.5	-19.0	51.6	-18.4
15	Onions	1 Kg	-17.7	30.8	-26.9	27.8
16	Tomatoes	1 Kg	21.0	-42.3	12.7	-34.9
17	Sugar Refined	1 Kg	49.0	2.5	48.7	0.7
18	Garlic (Lehsun)	1 Kg	63.0	9.1	74.1	12.6
19	Ginger (Adrak)	500 Gm	34.2	-21.2	59.2	-13.0
20	Tea Lipton Yellow Label 190 Gm Packet	Each	37.8	-8.6	49.4	1.1

* Superior Quality for Urban CPI Basket and Average Quality for Rural CPI Basket

10. Inflation in Global Context

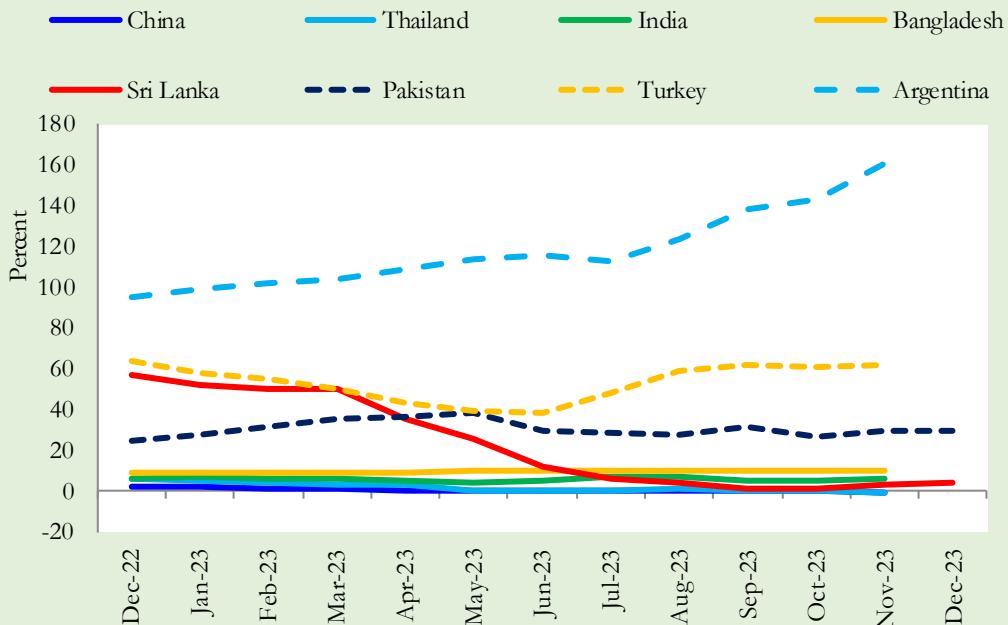
Inflation trends in selected developed and emerging economies is given in **Figures 10.1 & 10.2.**

Figure 10.1: Pakistan Inflation in comparison with Developed Economies



Sources: Bloomberg, Havor Analytics, Trading Economics

Figure 10.2: Pakistan Inflation in comparison with Inflation in Emerging Economies



Sources: Bloomberg, Havor Analytics, Trading Economics

11. Global Commodity Inflation

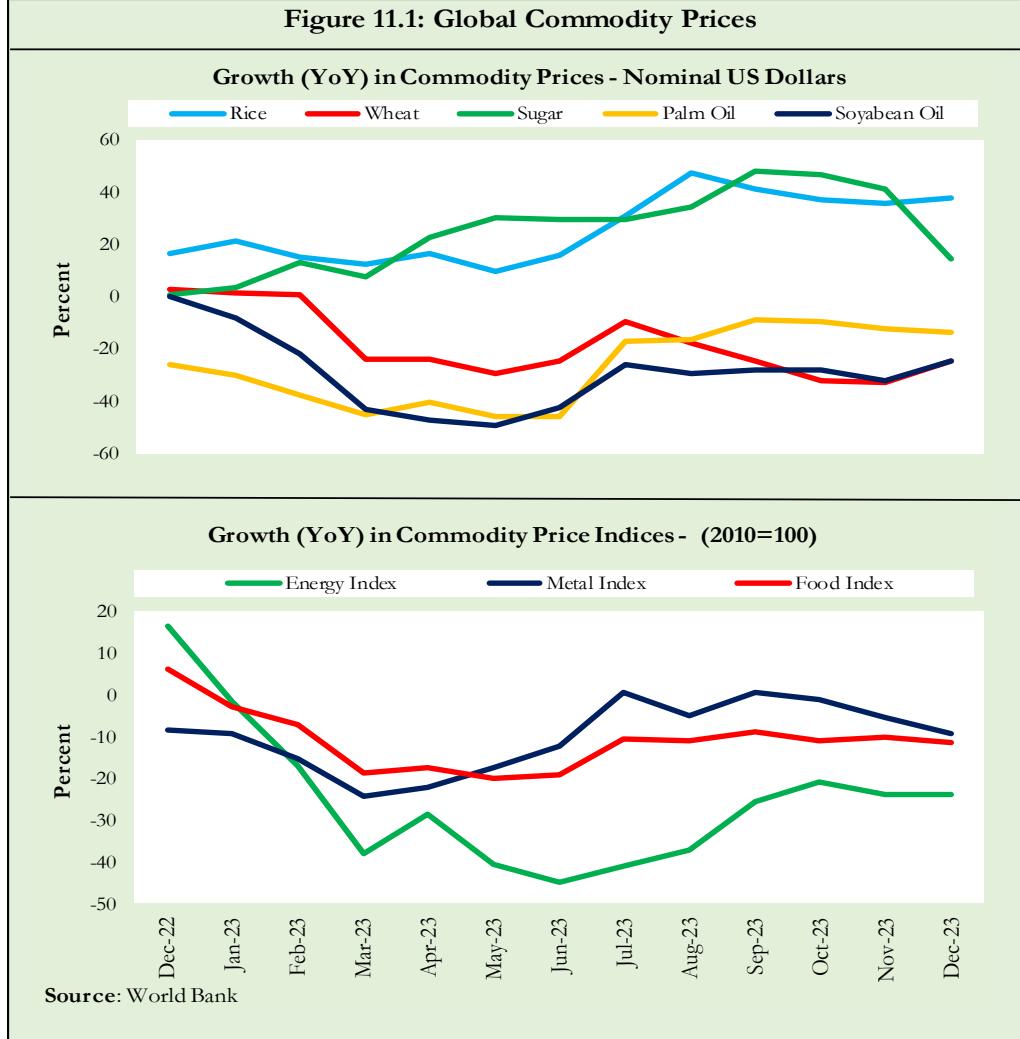
Global commodity prices may influence domestic inflation. In this context, changes in major global commodity prices and indices along with price trends are given in **Table 11.1** and **Figure 11.1**.

Table 11.1: Changes in Major Global Indices (percent)

Item/Group	Dec-23		Nov-23		Dec-22	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	-11.4	-3.0	-10.1	0.9	6.3	-1.5
Metals	-9.1	0.5	-5.2	1.4	-8.3	4.8
Energy	-24.0	-6.3	-23.8	-8.2	16.5	-6.1
Agricultural	-5.5	-1.2	-5.0	0.8	1.2	-0.6
Cotton	-10.3	0.1	-10.4	-5.3	-16.0	-0.1

Data Source: World Bank

Figure 11.1: Global Commodity Prices

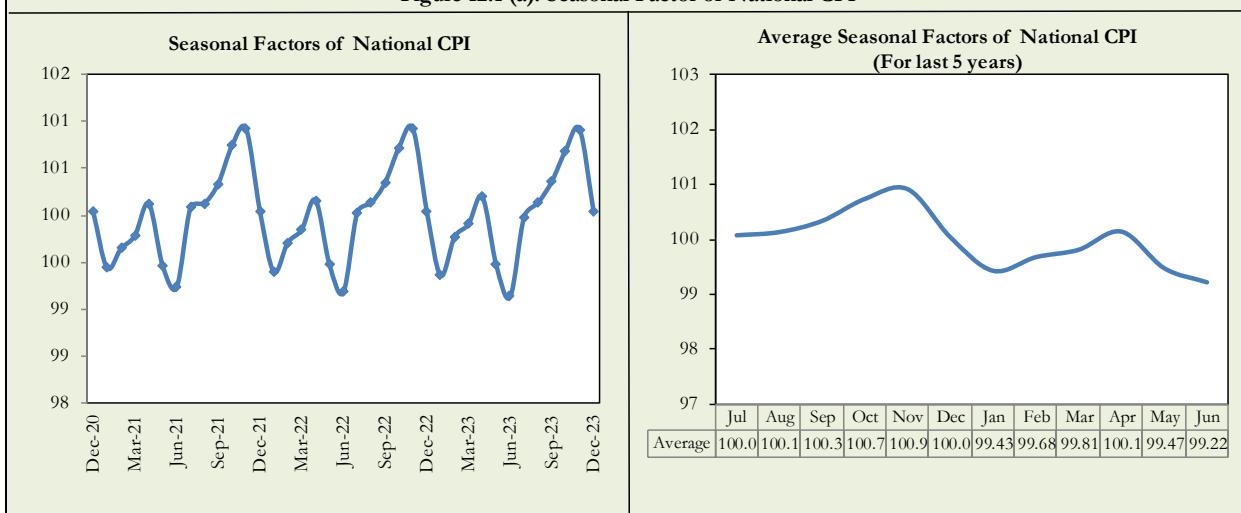
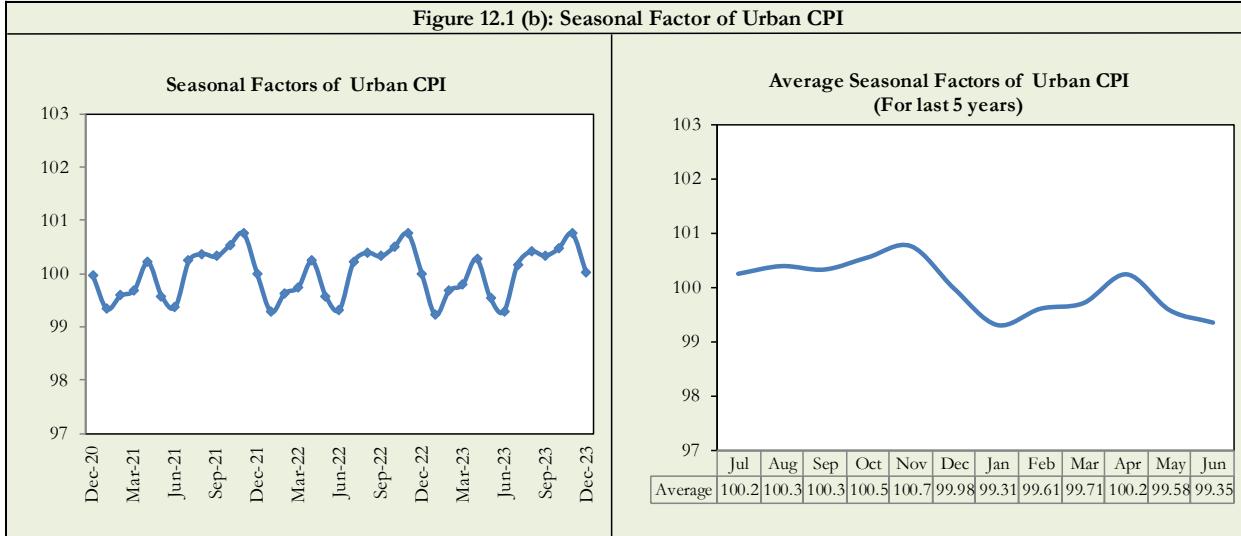
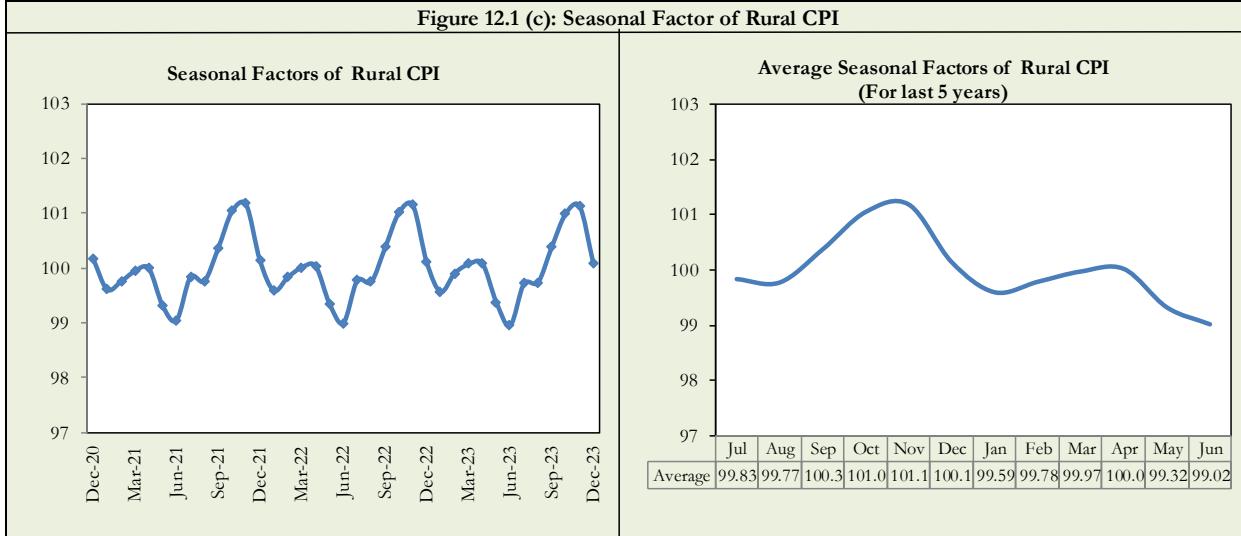


12. Seasonal Adjustment in CPI

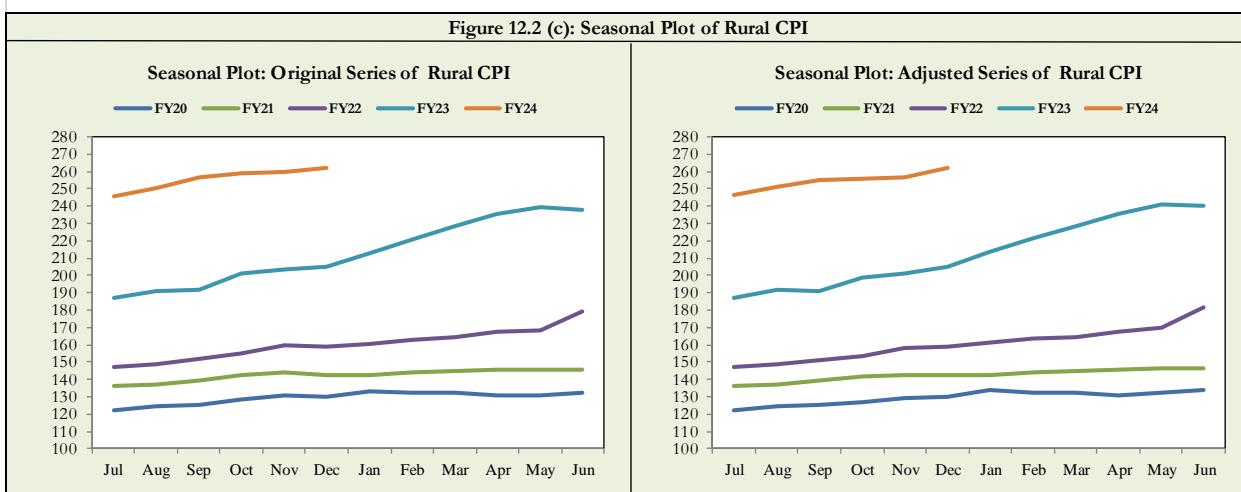
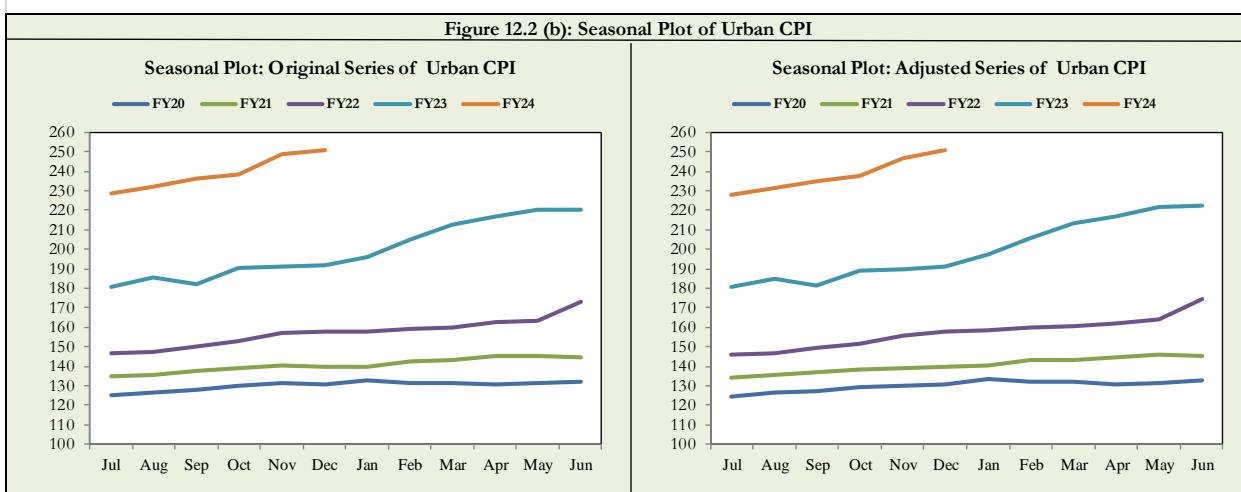
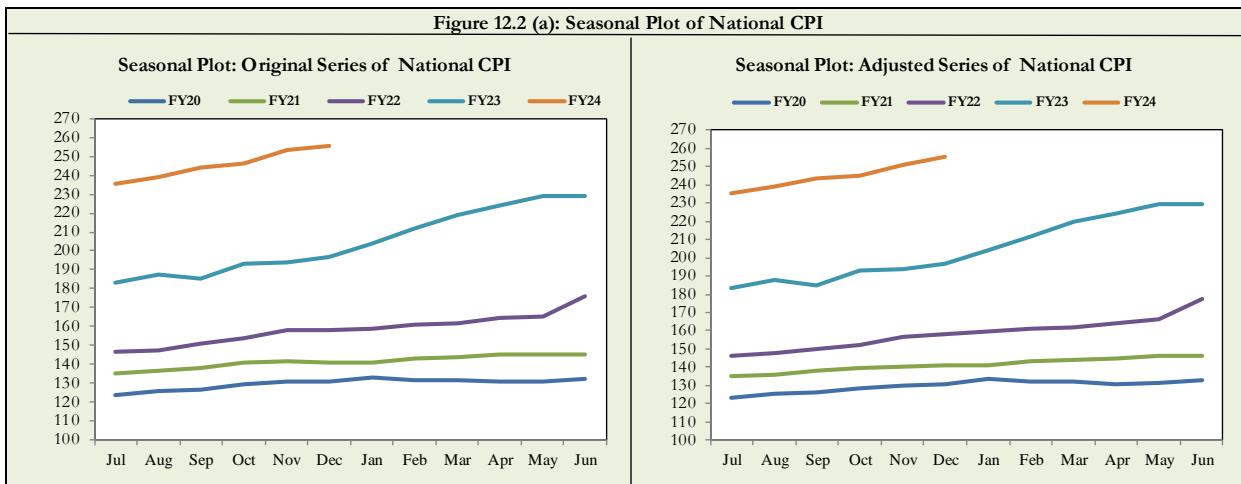
Seasonal adjustment is the process of removing seasonality effects in a time series data through decomposing it into seasonal, trend, cycle and irregular components. The purpose is to get clear picture of price movements. Various statistical methods are available to decompose a time series into its constituent 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 YoY and MoM basis. Seasonal adjustment is particularly useful for analyzing MoM changes. The monthly data series of CPI from July 2008 to December 2023 has been used for this analysis.

Figures 12.1(a to c) show that the seasonality in all CPI series has been increasing over the period. Average seasonal factors reveal strong seasonality during the calendar year. There is an upward seasonality during Jul-Dec while downward seasonality in the remaining months.

Figure 12.1 (a): Seasonal Factor of National CPI**Figure 12.1 (b): Seasonal Factor of Urban CPI****Figure 12.1 (c): Seasonal Factor of Rural CPI**

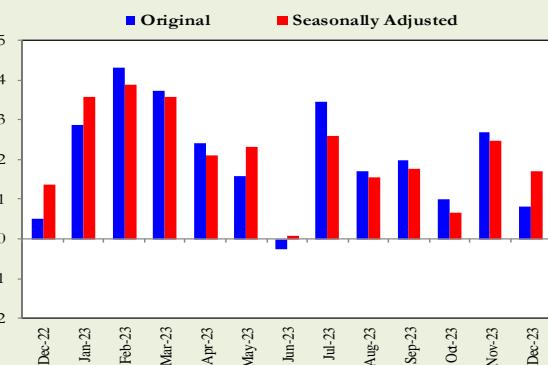
Figures 12.2(a to c) show seasonally adjusted series. The trend follows the long-term movement in original series.



Seasonally adjusted Index of

- National CPI for December 2023 stood at 255.12 against 255.24 in original series showing a decrease of 0.12.
- Urban CPI for December 2023 stood at 250.61 against 250.68 in original series showing a decrease of 0.07.
- Rural CPI for December 2023 stood at 261.93 against 262.11 in original series showing a decrease of 0.18.

Figure 12.3 (a): MoM Changes in National CPI



Month-on-month change of seasonally adjusted

- National CPI series showed an inflation of 1.69 percent during December 2023 over previous month against an inflation of 0.82 percent in original series.
- Urban CPI series showed an inflation of 1.46 percent during December 2023 over previous month against an inflation of 0.73 percent in original series.
- Rural CPI series showed an inflation of 2.04 percent during December 2023 over previous month against an inflation of 0.96 percent in original series.

Figure 12.3 (b): MoM % Changes in Urban CPI

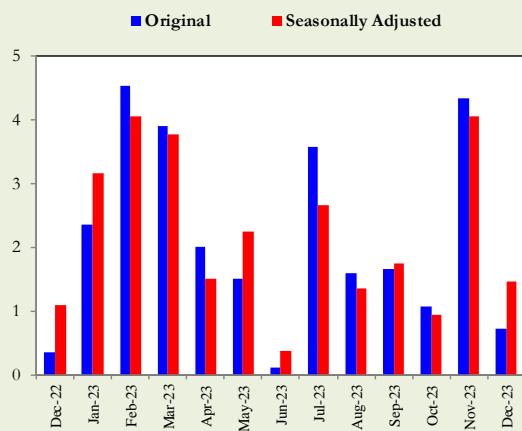


Figure 12.3 (c): MoM % Changes in Rural CPI

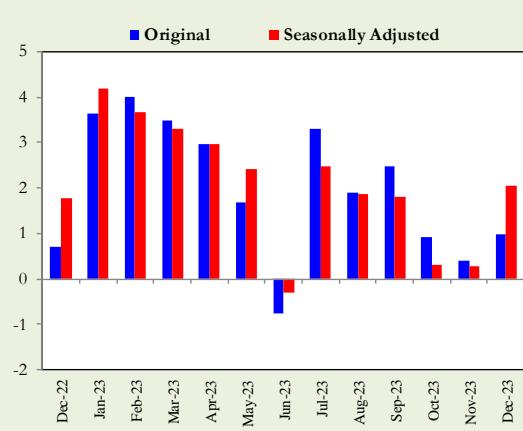


Table A2: National CPI Inflation by Groups (YoY and MoM in percent)

Groups	Weights	MoM Change			YoY Change		
		Dec-22	Nov-23	Dec-23	Dec-22	Nov-23	Dec-23
Food and Non-Alcoholic Beverages	34.6	-0.1	1.0	-0.5	35.5	28.0	27.5
Alcoholic Beverages, Tobacco	1.0	0.5	0.2	0.5	36.2	82.8	82.8
Clothing and Footwear	8.6	0.7	2.4	0.6	17.1	20.9	20.7
Housing, Water, Elec., Gas and Other Fuels	23.6	0.0	11.0	3.6	7.0	33.0	37.7
Furnishing and Household Equip. Maintenance	4.1	2.4	0.9	0.9	29.2	34.5	32.5
Health	2.8	1.9	1.7	0.7	17.5	24.9	23.4
Transport	5.9	-0.8	-2.8	0.8	41.2	26.5	28.6
Communication	2.2	0.1	0.1	0.0	1.7	7.4	7.4
Recreation and Culture	1.6	10.9	0.1	0.0	38.5	53.6	38.5
Education	3.8	0.3	1.0	0.2	10.9	13.6	13.5
Restaurants and Hotels	6.9	1.3	0.7	0.7	27.4	31.5	30.7
Miscellaneous	4.9	3.0	1.6	1.0	25.8	34.3	31.6
National CPI	100.0	0.5	2.7	0.8	24.5	29.2	29.7

Table A3: Urban CPI Inflation by Groups (YoY and MoM in percent)

Groups	Weights	MoM Change			YoY Change		
		Dec-22	Nov-23	Dec-23	Dec-22	Nov-23	Dec-23
I. Food Group	36.8	0.0	0.8	-0.7	32.7	29.8	28.8
Food and Non-Alcoholic Beverages	30.4	-0.3	0.8	-1.0	32.6	28.4	27.4
Alcoholic Beverages, Tobacco	0.9	0.2	0.0	0.8	37.3	79.8	80.9
Restaurants and Hotels (Food Component)	5.5	1.6	0.5	0.5	32.6	30.1	28.7
II. Non-Food Group	63.2	0.6	7.0	1.8	14.8	30.9	32.4
Clothing and Footwear	8.0	0.7	2.0	0.4	17.0	18.3	18.0
Housing, Water, Elec., Gas and Other Fuels	27.0	-0.5	17.6	3.1	4.1	40.2	45.3
Furnishing and Household Equip. Maintenance	4.1	2.3	0.7	0.8	29.7	31.9	30.0
Health	2.3	1.1	1.1	0.9	13.5	27.5	27.3
Transport	6.1	-0.7	-2.6	1.2	39.2	23.5	25.8
Communication	2.4	0.1	0.1	0.0	1.8	9.3	9.2
Recreation and Culture	1.7	13.4	0.0	0.0	38.0	54.7	36.4
Education	4.9	0.2	1.3	0.3	10.8	12.6	12.7
Restaurants and Hotels (Non-Food Component)	1.9	1.6	1.0	1.8	16.4	34.2	34.4
Miscellaneous	4.8	2.4	1.5	0.9	25.9	32.4	30.5
Urban CPI	100.0	0.3	4.3	0.7	21.6	30.4	30.9

Table A4: Rural CPI Inflation by Groups (YoY and MoM in percent)

Groups	Weights	MoM Change			YoY Change		
		Dec-22	Nov-23	Dec-23	Dec-22	Nov-23	Dec-23
I. Food Group	45.9	0.1	1.0	0.1	37.9	29.2	29.3
Food and Non-Alcoholic Beverages	40.9	0.0	1.1	0.1	38.7	27.5	27.6
Alcoholic Beverages, Tobacco	1.3	0.9	0.4	0.2	35.0	86.4	85.1
Restaurants and Hotels (Food Component)	3.8	0.9	0.3	0.9	29.6	32.0	32.1
II. Non-Food Group	54.1	1.4	-0.2	1.8	20.7	25.9	26.4
Clothing and Footwear	9.5	0.8	2.8	0.8	17.2	24.1	24.1
Housing, Water, Elec., Gas and Other Fuels	18.5	1.1	-2.4	4.6	13.2	18.2	22.3
Furnishing and Household Equip. Maintenance	4.1	2.6	1.1	1.0	28.6	38.3	36.2
Health	3.5	2.8	2.2	0.5	21.4	22.3	19.7
Transport	5.6	-0.9	-3.0	0.3	44.6	31.7	33.3
Communication	2.0	0.0	0.0	0.0	1.4	3.9	3.9
Recreation and Culture	1.4	6.8	0.4	0.0	39.4	51.7	42.1
Education	2.1	0.4	0.0	0.0	11.3	17.2	16.7
Restaurants and Hotels (Non-Food Component)	2.4	0.2	2.0	0.0	16.6	32.7	32.4
Miscellaneous	5.0	3.9	1.7	1.0	25.6	36.9	33.1
Rural CPI	100.0	0.7	0.4	1.0	28.8	27.5	27.9

Table A8: Top Ten Contributors to Urban CPI Inflation (YoY)

Sr. No.	Items/Contributors	Weights	YoY Change		Weighted Contribution (%)
			Dec-22	Dec-23	
A. Ranked by Weighted Contribution					
1	Gas Charges	1.08	0.00	519.61	20.57
2	Electricity Charges	4.56	-2.69	61.60	8.82
3	Wheat Flour	3.01	40.58	59.03	6.76
4	Readymade Food	5.52	32.61	28.65	5.56
5	Milk Fresh	7.11	26.00	21.77	5.06
6	Motor Fuel	2.91	49.45	22.50	3.34
7	Appliances/Articles/Products For Personal	2.98	25.74	33.95	3.23
8	House Rent	19.26	5.27	5.64	2.74
9	Fresh Vegetables	1.53	7.00	65.41	2.68
10	Condiments And Spices	1.33	-8.05	61.74	2.66
Total		49.29			61.42
B. Ranked by Percentage Change					
1	Gas Charges	1.08	0.00	519.61	20.57
2	Cigarettes	0.72	37.53	98.22	2.31
3	Fresh Vegetables	1.53	7.00	65.41	2.68
4	Condiments And Spices	1.33	-8.05	61.74	2.66
5	Electricity Charges	4.56	-2.69	61.60	8.82
6	Wheat Flour	3.01	40.58	59.03	6.76
7	Beans	0.04	23.55	53.28	0.08
8	Sugar	1.11	2.36	49.00	1.39
9	Text Books	0.67	59.20	47.37	1.14
10	Potatoes	0.45	24.72	46.76	0.87
Total		14.50			47.28
C. Ranked by Weights					
1	House Rent	19.26	5.27	5.64	2.74
2	Milk Fresh	7.11	26.00	21.77	5.06
3	Readymade Food	5.52	32.61	28.65	5.56
4	Education	4.88	10.82	12.66	1.73
5	Electricity Charges	4.56	-2.69	61.60	8.82
6	Wheat Flour	3.01	40.58	59.03	6.76
7	Appliances/Articles/Products For Personal	2.98	25.74	33.95	3.23
8	Motor Fuel	2.91	49.45	22.50	3.34
9	Cotton Cloth	2.22	21.36	29.01	2.07
10	Meat	2.04	22.03	17.42	1.37
Total		54.49			40.68

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 Urban CPI, which is 30.9 percent in December-2023.

Table A9: Top Ten Contributors to Urban CPI Inflation (MoM)

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)
			Nov-23	Dec-23	
A. Ranked by Weighted Contribution					
1	Electricity Charges	4.56	-10.71	15.76	103.08
2	Onions	0.59	12.32	30.83	30.42
3	Transport Services	1.75	5.11	11.95	26.32
4	Eggs	0.51	7.15	4.73	5.13
5	Wheat Flour	3.01	-0.94	0.82	4.85
6	Appliances/Articles/Products For Personal	2.98	0.51	1.11	4.59
7	Marriage Hall Charges	1.75	1.04	1.85	4.28
8	Readymade Food	5.52	0.53	0.50	4.09
9	Sugar	1.11	-8.53	2.50	3.38
10	Wheat	0.61	-0.24	2.16	2.60
Total		22.39			188.74
B. Ranked by Percentage Change					
1	Onions	0.59	12.32	30.83	30.42
2	Electricity Charges	4.56	-10.71	15.76	103.08
3	Transport Services	1.75	5.11	11.95	26.32
4	Dry Fruits	0.33	7.91	5.16	2.41
5	Pulse Masoor	0.16	-3.85	5.05	0.98
6	Eggs	0.51	7.15	4.73	5.13
7	Pan Prepared	0.14	0.00	4.41	1.25
8	Woolen Readymade Garments	0.43	8.16	4.02	1.98
9	Furniture And Furnishing	0.48	0.82	3.96	2.34
10	Pulse Gram	0.17	-4.09	3.73	0.65
Total		9.12			174.56
C. Ranked by Weights					
1	House Rent	19.26	0.00	0.00	0.00
2	Milk Fresh	7.11	0.16	0.00	0.04
3	Readymade Food	5.52	0.53	0.50	4.09
4	Education	4.88	1.31	0.29	1.48
5	Electricity Charges	4.56	-10.71	15.76	103.08
6	Wheat Flour	3.01	-0.94	0.82	4.85
7	Appliances/Articles/Products For Personal	2.98	0.51	1.11	4.59
8	Motor Fuel	2.91	-5.80	-2.39	-14.59
9	Cotton Cloth	2.22	3.46	0.09	0.26
10	Meat	2.04	0.36	0.20	0.60
Total		54.49			104.40

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 Urban CPI, which is 0.7 percent in December-2023.

Table A10: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY)

Sr. No.	Items/Contributors	Weights	YoY Change		Weighted Contribution (%)			
			Dec-22	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Gas Charges	1.08	0.00	519.61	20.57			
2	Electricity Charges	4.56	-2.69	61.60	8.82			
3	Wheat Flour	3.01	40.58	59.03	6.76			
4	Readymade Food	5.52	32.61	28.65	5.56			
5	Milk Fresh	7.11	26.00	21.77	5.06			
6	Motor Fuel	2.91	49.45	22.50	3.34			
7	Appliances/Articles/Products For Personal	2.98	25.74	33.95	3.23			
8	House Rent	19.26	5.27	5.64	2.74			
9	Fresh Vegetables	1.53	7.00	65.41	2.68			
10	Condiments And Spices	1.33	-8.05	61.74	2.66			
11	Cigarettes	0.72	37.53	98.22	2.31			
12	Transport Services	1.75	28.42	38.25	2.08			
13	Cotton Cloth	2.22	21.36	29.01	2.07			
14	Washing Soap/Detergents/Match Box	1.41	46.65	37.24	2.05			
15	Rice	1.18	46.61	45.60	2.03			
Total		56.57			71.96			
Bottom 15 Contributors								
1	Onions	0.59	414.98	-17.71	-0.85			
2	Vegetable Ghee	1.03	30.07	-1.17	-0.06			
3	Mustard Oil	0.01	41.48	-4.18	0.00			
4	Communication Services	1.88	0.52	0.00	0.00			
5	Motor Vehicle Tax	0.05	8.92	0.00	0.00			
6	Therapeutic Appliances And Equipment	0.01	6.02	15.71	0.00			
7	Major Tools & Equipment	0.01	18.08	26.24	0.01			
8	Postal Services	0.02	13.85	11.46	0.01			
9	Dental Services	0.02	13.59	17.99	0.01			
10	Carpets	0.03	8.63	11.72	0.01			
11	Honey	0.10	10.50	4.39	0.01			
12	Electrical Appliances For Personal	0.05	10.94	11.83	0.01			
13	Besan	0.08	46.41	7.02	0.02			
14	Pulse Gram	0.17	45.20	3.90	0.02			
15	Plastic Products	0.05	21.61	24.94	0.04			
Total		4.10			-0.77			

Table A11: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM)

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Electricity Charges	4.56	-10.71	15.76	103.08			
2	Onions	0.59	12.32	30.83	30.42			
3	Transport Services	1.75	5.11	11.95	26.32			
4	Eggs	0.51	7.15	4.73	5.13			
5	Wheat Flour	3.01	-0.94	0.82	4.85			
6	Appliances/Articles/Products For Personal	2.98	0.51	1.11	4.59			
7	Marriage Hall Charges	1.75	1.04	1.85	4.28			
8	Readymade Food	5.52	0.53	0.50	4.09			
9	Sugar	1.11	-8.53	2.50	3.38			
10	Wheat	0.61	-0.24	2.16	2.60			
11	Dry Fruits	0.33	7.91	5.16	2.41			
12	Liquefied Hydrocarbons	0.51	-3.14	2.66	2.40			
13	Furniture And Furnishing	0.48	0.82	3.96	2.34			
14	Hospitals Services	0.57	1.64	3.72	2.13			
15	Woolen Readymade Garments	0.43	8.16	4.02	1.98			
Total		24.71			200.00			
Bottom 15 Contributors								
1	Tomatoes	0.35	60.42	-42.26	-33.56			
2	Potatoes	0.45	14.92	-18.59	-20.41			
3	Tea	0.84	12.95	-8.55	-15.01			
4	Motor Fuel	2.91	-5.80	-2.39	-14.59			
5	Chicken	1.36	-2.58	-4.20	-7.88			
6	Rice	1.18	-1.46	-2.65	-5.77			
7	Fresh Vegetables	1.53	4.47	-2.17	-4.91			
8	Vegetable Ghee	1.03	-2.44	-2.70	-4.88			
9	Condiments And Spices	1.33	-7.93	-1.45	-3.35			
10	Cooking Oil	1.10	-3.70	-1.55	-3.02			
11	Fresh Fruits	1.44	-0.30	-1.65	-2.47			
12	Milk Products	0.64	-0.02	-0.27	-0.23			
13	Gur	0.04	-10.44	-3.49	-0.17			
14	Gram Whole	0.09	-4.32	-0.76	-0.10			
15	Mustard Oil	0.01	-3.26	-0.11	0.00			
Total		14.30			-116.35			

Table A12: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Onions	0.59	12.32	30.83	30.42			
2	Eggs	0.51	7.15	4.73	5.13			
3	Wheat flour	3.01	-0.94	0.82	4.85			
4	Readymade food	5.52	0.53	0.50	4.09			
5	Sugar	1.11	-8.53	2.50	3.38			
6	Wheat	0.61	-0.24	2.16	2.60			
7	Dry fruits	0.33	7.91	5.16	2.41			
8	Pan prepared	0.14	0.00	4.41	1.25			
9	Fish	0.39	7.75	3.17	1.14			
10	Pulse masoor	0.16	-3.85	5.05	0.98			
11	Pulse gram	0.17	-4.09	3.73	0.65			
12	Meat	2.04	0.36	0.20	0.60			
13	Pulse moong	0.17	-1.28	2.01	0.33			
14	Sweetmeat	0.35	0.28	0.52	0.29			
15	Cigarettes	0.72	-0.03	0.14	0.22			
Total		15.82			58.31			
Bottom 15 Contributors								
1	Tomatoes	0.35	60.42	-42.26	-33.56			
2	Potatoes	0.45	14.92	-18.59	-20.41			
3	Tea	0.84	12.95	-8.55	-15.01			
4	Chicken	1.36	-2.58	-4.20	-7.88			
5	Rice	1.18	-1.46	-2.65	-5.77			
6	Fresh vegetables	1.53	4.47	-2.17	-4.91			
7	Vegetable ghee	1.03	-2.44	-2.70	-4.88			
8	Condiments and Spices	1.33	-7.93	-1.45	-3.35			
9	Cooking oil	1.10	-3.70	-1.55	-3.02			
10	Fresh fruits	1.44	-0.30	-1.65	-2.47			
11	Milk products	0.64	-0.02	-0.27	-0.23			
12	Gur	0.04	-10.44	-3.49	-0.17			
13	Gram whole	0.09	-4.32	-0.76	-0.10			
14	Mustard oil	0.01	-3.26	-0.11	0.00			
15	Ice cream	0.10	-0.40	0.00	0.00			
Total		11.50			-101.78			

Table A13: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Electricity charges	4.56	-10.71	15.76	103.08			
2	Transport services	1.75	5.11	11.95	26.32			
3	Appliances/Articles/Products for Personal	2.98	0.51	1.11	4.59			
4	Marriage Hall Charges	1.75	1.04	1.85	4.28			
5	Liquefied Hydrocarbons	0.51	-3.14	2.66	2.40			
6	Furniture and furnishing	0.48	0.82	3.96	2.34			
7	Hospitals services	0.57	1.64	3.72	2.13			
8	Woolen readymade garments	0.43	8.16	4.02	1.98			
9	Personal Effects n.e.c.	0.94	4.17	0.85	1.49			
10	Education	4.88	1.31	0.29	1.48			
11	Solid Fuel	0.42	3.52	2.43	1.09			
12	Household equipment	1.00	0.29	0.62	0.85			
13	Woolen cloth	0.84	3.33	0.78	0.76			
14	Household textiles	0.34	2.60	2.00	0.67			
15	Washing soap/detergents/match Box	1.41	0.44	0.25	0.62			
Total		22.86			154.08			
Bottom 15 Contributors								
1	Motor fuel	2.91	-5.80	-2.39	-14.59			
2	Motor vehicles	0.81	-0.75	0.00	0.00			
3	Text books	0.67	0.00	0.00	0.00			
4	Communication Services	1.88	0.00	0.00	0.00			
5	Motor vehicle tax	0.05	0.00	0.00	0.00			
6	Newspapers	0.07	0.00	0.00	0.00			
7	House rent	19.26	0.00	0.00	0.00			
8	Accommodation Services	0.13	0.02	0.00	0.00			
9	Garbage collection	0.11	0.07	0.00	0.00			
10	Postal services	0.02	0.79	0.00	0.00			
11	Water supply	0.53	0.47	0.00	0.00			
12	Gas charges	1.08	280.55	0.00	0.00			
13	Therapeutic Appliances and Equipment	0.01	1.62	0.16	0.00			
14	Electrical Appliances for Personal	0.05	0.79	0.06	0.00			
15	Cleaning and laundering	0.07	0.17	0.08	0.01			
Total		27.62			-14.58			

Table A14: Top Ten Contributors to Rural CPI Inflation (YoY)

Sr. No.	Items/Contributors	Weights	YoY Change		Weighted Contribution (%)
			Dec-22	Dec-23	
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	29.75	24.58	8.41
2	Wheat Flour	3.43	38.27	59.53	8.23
3	Electricity Charges	3.44	-2.69	61.60	6.91
4	Wheat	3.47	58.62	29.53	5.10
5	Readymade Food	3.80	29.61	32.05	4.66
6	Fresh Vegetables	2.09	10.78	77.64	4.54
7	Rice	1.55	48.86	50.68	3.94
8	Transport Services	1.80	51.17	58.18	3.91
9	Cigarettes	1.24	34.96	87.95	3.49
10	Motor Fuels	2.49	51.66	24.44	3.20
Total		33.69			52.39
B. Ranked by Percentage Change					
1	Cigarettes	1.24	34.96	87.95	3.49
2	Fresh Vegetables	2.09	10.78	77.64	4.54
3	Text Books	0.50	49.33	74.05	1.23
4	Electricity Charges	3.44	-2.69	61.60	6.91
5	Wheat Flour	3.43	38.27	59.53	8.23
6	Transport Services	1.80	51.17	58.18	3.91
7	Potatoes	0.74	15.34	51.24	1.70
8	Rice	1.55	48.86	50.68	3.94
9	Tea	1.26	58.09	49.42	2.58
10	Dessert Preparation	0.01	34.55	49.20	0.02
Total		16.06			36.55
C. Ranked by Weights					
1	Milk Fresh	10.38	29.75	24.58	8.41
2	House Rent	8.61	5.86	7.83	1.77
3	Solid Fuel	4.48	37.66	15.00	2.45
4	Readymade Food	3.80	29.61	32.05	4.66
5	Wheat	3.47	58.62	29.53	5.10
6	Electricity Charges	3.44	-2.69	61.60	6.91
7	Wheat Flour	3.43	38.27	59.53	8.23
8	Cotton Cloth	2.84	15.42	22.68	2.27
9	Motor Fuels	2.49	51.66	24.44	3.20
10	Vegetable Ghee	2.38	33.89	-4.98	-0.72
Total		45.32			42.28

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 Urban CPI, which is 27.9 percent in December-2023.

Table A15: Top Ten Contributors to Rural CPI Inflation (MoM)

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)
			Nov-23	Dec-23	
A. Ranked by Weighted Contribution					
1	Electricity Charges	3.44	-10.71	15.76	56.40
2	Onions	0.90	12.83	27.76	27.48
3	Fresh Vegetables	2.09	-3.37	6.96	15.44
4	Transport Services	1.80	1.28	5.25	12.11
5	Solid Fuel	4.48	1.37	2.85	11.89
6	Milk Fresh	10.38	0.57	0.88	8.51
7	Wheat	3.47	2.38	1.10	5.56
8	Eggs	0.57	8.87	4.95	4.14
9	Readymade Food	3.80	0.29	0.87	3.80
10	Appliances/Articles/Products For Personal Care	2.27	1.04	1.66	3.52
Total		33.20			148.85
B. Ranked by Percentage Change					
1	Onions	0.90	12.83	27.76	27.48
2	Electricity Charges	3.44	-10.71	15.76	56.40
3	Fresh Vegetables	2.09	-3.37	6.96	15.44
4	Woolen Readymade Garments	0.54	22.02	6.39	3.32
5	Transport Services	1.80	1.28	5.25	12.11
6	Water Supply	0.06	0.00	5.18	0.37
7	Eggs	0.57	8.87	4.95	4.14
8	Pulse Masoor	0.21	-1.70	4.29	0.82
9	Dry Fruits	0.25	5.95	4.08	1.25
10	Pulse Mash	0.15	-3.67	3.25	0.43
Total		10.01			121.76
C. Ranked by Weights					
1	Milk Fresh	10.38	0.57	0.88	8.51
2	House Rent	8.61	0.00	0.00	0.00
3	Solid Fuel	4.48	1.37	2.85	11.89
4	Readymade Food	3.80	0.29	0.87	3.80
5	Wheat	3.47	2.38	1.10	5.56
6	Electricity Charges	3.44	-10.71	15.76	56.40
7	Wheat Flour	3.43	1.46	0.03	0.16
8	Cotton Cloth	2.84	0.75	0.00	0.00
9	Motor Fuels	2.49	-6.17	-2.63	-10.07
10	Vegetable Ghee	2.38	-1.43	-2.41	-7.73
Total		45.32			68.52

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 Urban CPI, which is 1.0 percent in December-2023.

Table A16: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY)

Sr. No.	Items/Contributors	Weights	YoY Change		Weighted Contribution (%)			
			Dec-22	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Milk Fresh	10.38	29.75	24.58	8.41			
2	Wheat Flour	3.43	38.27	59.53	8.23			
3	Electricity Charges	3.44	-2.69	61.60	6.91			
4	Wheat	3.47	58.62	29.53	5.10			
5	Readymade Food	3.80	29.61	32.05	4.66			
6	Fresh Vegetables	2.09	10.78	77.64	4.54			
7	Rice	1.55	48.86	50.68	3.94			
8	Transport Services	1.80	51.17	58.18	3.91			
9	Cigarettes	1.24	34.96	87.95	3.49			
10	Motor Fuels	2.49	51.66	24.44	3.20			
11	Appliances/Articles/Products For Personal Care	2.27	17.70	44.00	2.88			
12	Washing Soaps, Detergents And Match Box	1.70	37.90	43.45	2.73			
13	Sugar	2.03	3.84	48.69	2.66			
14	Tea	1.26	58.09	49.42	2.58			
15	Solid Fuel	4.48	37.66	15.00	2.45			
Total		45.43			65.69			
Bottom 15 Contributors								
1	Onions	0.90	463.50	-26.94	-2.04			
2	Vegetable Ghee	2.38	33.89	-4.98	-0.72			
3	Cooking Oil	0.60	35.22	-5.21	-0.19			
4	Mustard Oil	0.01	41.19	-1.93	0.00			
5	Communication Services	1.65	0.16	0.00	0.00			
6	Motor Vehicle Tax	0.02	24.88	0.00	0.00			
7	Garbage Collection	0.01	7.13	11.74	0.00			
8	Postal Services	0.01	0.00	20.00	0.00			
9	Honey	0.03	8.55	5.30	0.00			
10	Dental Services	0.02	19.73	12.48	0.01			
11	Accommodation Services	0.14	7.08	3.05	0.01			
12	Besan	0.07	54.08	4.42	0.01			
13	Cleaning And Laundering	0.02	23.84	25.93	0.02			
14	Dessert Preparation	0.01	34.55	49.20	0.02			
15	Major Tools And Equipment	0.03	31.89	20.82	0.02			
Total		5.90			-2.86			

Table A17: Top and Bottom Fifteen Contributors to Rural CPI Inflation (MoM)

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Electricity Charges	3.44	-10.71	15.76	56.40			
2	Onions	0.90	12.83	27.76	27.48			
3	Fresh Vegetables	2.09	-3.37	6.96	15.44			
4	Transport Services	1.80	1.28	5.25	12.11			
5	Solid Fuel	4.48	1.37	2.85	11.89			
6	Milk Fresh	10.38	0.57	0.88	8.51			
7	Wheat	3.47	2.38	1.10	5.56			
8	Eggs	0.57	8.87	4.95	4.14			
9	Readymade Food	3.80	0.29	0.87	3.80			
10	Appliances/Articles/Products For Personal Care	2.27	1.04	1.66	3.52			
11	Woolen Readymade Garments	0.54	22.02	6.39	3.32			
12	Footwear	1.92	4.18	1.63	2.59			
13	Personal Effects N.E.C.	1.21	3.57	1.29	2.13			
14	Meat	1.71	0.53	1.07	2.02			
15	Tea	1.26	6.06	1.15	2.02			
Total		39.84			160.93			
Bottom 15 Contributors								
1	Tomatoes	0.51	57.67	-34.89	-25.95			
2	Potatoes	0.74	12.53	-18.18	-25.44			
3	Motor Fuels	2.49	-6.17	-2.63	-10.07			
4	Vegetable Ghee	2.38	-1.43	-2.41	-7.73			
5	Cooking Oil	0.60	-1.39	-3.12	-2.52			
6	Fresh Fruits	1.45	7.52	-1.94	-2.28			
7	Chicken	1.46	-4.13	-1.51	-2.26			
8	Condiments And Spices	1.49	-8.06	-1.10	-1.84			
9	Gur	0.15	-7.61	-2.33	-0.33			
10	Rice	1.55	-1.44	-0.08	-0.22			
11	Gram Whole	0.11	-2.82	-0.97	-0.12			
12	Mustard Oil	0.01	-2.08	-0.78	-0.01			
13	Milk Powder	0.11	-0.24	0.00	0.00			
14	Text Books	0.50	0.00	0.00	0.00			
15	Communication Services	1.65	0.00	0.00	0.00			
Total		15.20			-78.77			

Table A18: Top and Bottom Fifteen Contributors to Rural CPI Food Inflation (MoM)

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Onions	0.90	12.83	27.76	27.48			
2	Fresh Vegetables	2.09	-3.37	6.96	15.44			
3	Milk fresh	10.38	0.57	0.88	8.51			
4	Wheat	3.47	2.38	1.10	5.56			
5	Eggs	0.57	8.87	4.95	4.14			
6	Readymade Food	3.80	0.29	0.87	3.80			
7	Meat	1.71	0.53	1.07	2.02			
8	Tea	1.26	6.06	1.15	2.02			
9	Sugar	2.03	-8.11	0.74	1.37			
10	Dry fruits	0.25	5.95	4.08	1.25			
11	Pulse Masoor	0.21	-1.70	4.29	0.82			
12	Fish	0.26	3.52	3.11	0.62			
13	Milk products	0.96	0.46	0.52	0.47			
14	Pulse Mash	0.15	-3.67	3.25	0.43			
15	Pulse Moong	0.25	-0.74	2.33	0.43			
Total		28.29			74.35			
Bottom 15 Contributors								
1	Tomatoes	0.51	57.67	-34.89	-25.95			
2	Potatoes	0.74	12.53	-18.18	-25.44			
3	Vegetable ghee	2.38	-1.43	-2.41	-7.73			
4	Cooking oil	0.60	-1.39	-3.12	-2.52			
5	Fresh fruits	1.45	7.52	-1.94	-2.28			
6	Chicken	1.46	-4.13	-1.51	-2.26			
7	Condiments and Spices	1.49	-8.06	-1.10	-1.84			
8	Gur	0.15	-7.61	-2.33	-0.33			
9	Rice	1.55	-1.44	-0.08	-0.22			
10	Gram Whole	0.11	-2.82	-0.97	-0.12			
11	Mustard oil	0.01	-2.08	-0.78	-0.01			
12	Milk powder	0.11	-0.24	0.00	0.00			
13	Ice Cream	0.06	0.11	0.00	0.00			
14	Honey	0.03	0.87	0.00	0.00			
15	Dessert Preparation	0.01	3.23	0.00	0.00			
Total		10.67			-68.70			

Table A19: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation

Sr. No.	Items/Contributors	Weights	MoM Change		Weighted Contribution (%)			
			Nov-23	Dec-23				
Ranked by Weighted Contribution								
Top 15 Contributors								
1	Electricity Charges	3.44	-10.71	15.76	56.40			
2	Transport Services	1.80	1.28	5.25	12.11			
3	Solid Fuel	4.48	1.37	2.85	11.89			
4	Appliances/Articles/Products for Personal Care	2.27	1.04	1.66	3.52			
5	Woolen Readymade Garments	0.54	22.02	6.39	3.32			
6	Footwear	1.92	4.18	1.63	2.59			
7	Personal Effects n.e.c.	1.21	3.57	1.29	2.13			
8	Washing Soaps, Detergents and Match Box	1.70	0.94	0.78	1.60			
9	Construction Input Items	0.63	1.11	2.12	1.20			
10	Furniture and Furnishing	0.58	0.28	2.11	1.18			
11	Liquefied Hydrocarbons	1.00	-1.10	0.94	1.14			
12	Drugs and Medicines	1.58	1.90	0.62	1.04			
13	Household Textiles	0.44	5.94	2.63	0.97			
14	Household Equipment	1.28	0.39	0.53	0.71			
15	Hospitals Services	1.01	3.83	1.04	0.70			
Total		23.86			100.50			
Bottom 15 Contributors								
1	Motor Fuels	2.49	-6.17	-2.63	-10.07			
2	Text Books	0.50	0.00	0.00	0.00			
3	Newspapers	0.02	0.00	0.00	0.00			
4	Communication Services	1.65	0.00	0.00	0.00			
5	Motor Vehicle Tax	0.02	0.00	0.00	0.00			
6	Postal Services	0.01	0.00	0.00	0.00			
7	Garbage Collection	0.01	0.00	0.00	0.00			
8	Accommodation Services	0.14	0.00	0.00	0.00			
9	Mechanical Services	0.36	0.00	0.00	0.00			
10	Cleaning and Laundering	0.02	0.00	0.00	0.00			
11	Education	2.13	0.00	0.00	0.00			
12	House Rent	8.61	0.00	0.00	0.00			
13	Dental Services	0.02	0.81	0.00	0.00			
14	Medical Tests	0.40	0.33	0.00	0.00			
15	Dupatta	0.21	1.15	0.00	0.00			
Total		16.59			-10.07			

Table A20: Distribution of Price Changes (YoY) - Selected Urban CPI Item

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Onions, Kinnu (Average Quality), Chilies (Green), Mustard Oil (Average Quality), Bananas (Kela) Local, Lemon, Vegetable Ghee Dalda/Habib 2.5 Kg Tin,	Cooking Oil Dalda Or Other Similar Brand (Sn), 5 Litre Tin, Pulse Gram, Honey Marhaba Bottle 500 Gm,	Apple (Average Quality), Gram Whole Black (Average Quality), Besan, Cardamom Small (Average Quality),	Pulse Moong (Washed), Butter Local Packed 50 Gm, Ice Cream Walls Cup (Large Size), Gram Whole Yellow (Average Quality), Chicken Farm Broiler (Live), Beef
Alcoholic Beverages & Tobacco				Pan Prepared (Sweet With Beetle Nuts), Cigarettes Capstan 20'S Packet, Cigarettes Gold Leaf 20'S Packet
Clothing & Footwear	Cheetah 50 Size 3-5 Servis, Gents Shoes Servis, Children Shoes Power Lite Bata, Ladies Sandal Bata, Ladies Sponge Chappal Bata, Gents Shoes Paul Bata,		Awami Suit Gents Wash & Wear (Average Quality), Women Shalwar Kameez (Average Quality),	Pant Cloth Wash & Wear (Average Quality), Dopatta Georgette (Average Quality), Gents Sandal Bata, Chaddar (Wash-N-Wear) (2X2.5 Meter), Socks Nylon Local (Average Quality), Pullover Gents (Average Quality), Tailoring Charges Simple Suit (Female), Tailoring Charges Awami Suit (Male), Linen, Ladies
Housing, Water, Elec, Gas & other Fuels			House Rent Combined, Cement Blocks (6"X8"X12"), Electricity Charges Upto 50 Units,	Mason Wage Rate, Unskilled Labor Wage Rate, Plumber Wage Rate, Bajri, Painter Wage Rate, Electrician Charges, Charges For Refuse/Waste Collection, Water Charges Per House, Bricks New 1St Class, Firewood Whole, Electricity Charges
Furnishing & Household Equip. Maintenance etc			Bed Sheet Double With Two Pillow Covers (Superior Quality),	Blanket Single (Sn), Towel Medium Size (3' X 2'), Plain Carpet, Household Servant Female Part Time, Bed Sheet Single (Superior Quality), Air Cooler Super Asia Ecm-4000/Jc-1000, Geyser Super Asia Large Size 30 Gallons (Gas),
Health		Ventolin Tablets 2 Mg.	Sugar Test (Random/Fasting) Charges Of Both,	Urine Test (Dr) Charges, Glucometer, Cac 1000 Tablets Sandoz Bottle, Ecg Charges, Betnovate-N Ointment 10 Gm Tube, Amoxil Capsule 250 Mg, Physiotherapist Fee Per Visit, Dental Surgeon Fee Per Visit, X-Ray
Transport	Car Suzuki 800 Cc Without Ac, Car Tax 800 Cc To 1500 Cc,	Car Toyota 1300 Cc Xli,	Cng, Mini Bus Fare Minimum Within City,	Car Service Charges, Suzuki Fare Minimum Within City, Bus Fare Minimum Within City, Motorcycle Service Charges, Mobil Oil (Havoline 20W-50), Bicycle, Auto Rickshaw Fare, Suzuki Fare
Communication	Mobile Call Charges, Telephone Call Charges, Internet Charges (Dsl) 1 Mb (Unlimited),			Courier Charges Minimum Within Zone Outside City (Tcs), Mobile Set With Rear Camera And Without
Recreation & Culture	Newspaper Daily Dawn,		English Book Ba/B.Sc, Cable Charges, Akhbar-E-Jehan Weekly, Recreational Park Charges (Minimum Playland Ticket),	Urdu Book Ba/B.Sc, Photostat Paper 70 Gm, Mag The Weekly (Magazine), Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Lead Pencil Goldfish, Laptop Dell/Hp/Acer Core I5, Display (14"-15'), Urdu Book
Education		Government University Fee M.S.C / M.A.,	Tuition Fee Private University M.Sc./M.A, Government Engineering University Tuition Fee For Be (1St Year), Private School Fee English	Private School Fee English Medium Average Standard (Class X), Coaching Fee For Class Xi/Xii Science Group, Private School Fee English Medium Average Standard
Restaurant & Hotels				Pizza Chicken Medium Size (Average Quality), Private Hostel Accommodation Fee For Intermediate College Per Student, Cooked Beef At Average Hotel, Cooked Daal At Average Hotel,
Miscellaneous				Purse Ladies Medium Size (Average Quality), Hair Oil (Kala Kola Hair Tonic), Electric Hair Straightener (Philips), Toilet Soap Lux 75 Gm, Hair Cut Charges For Men, Hair Removing Cream (Eu-Cream) 30Ml Tube, Hair Color (Kala Kola), Wall

Table A21: Distribution of Price Changes (YoY) - Selected Rural CPI Items

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Onions, Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch, Cooking Oil (Pouch), Vegetable Ghee Dalda/Habib 2.5 Kg Tin, Mustard Oil (Average Quality), Lady	Bananas (Kela) Local, Pulse Gram, Lemon, Chilies (Green), Besan,	Kinnu (Average Quality), Gram Whole Black (Average Quality), Honey Marhaba Bottle 500 Gm, Chilies Powder Loose,	Tomatoes, Pulse Moong (Washed), Apple (Average Quality), Gram Whole Yellow (Average Quality), Chicken Farm Broiler (Live), Beef With Bone (Average Quality), Fish Fresh, Ice Cream Walls Cup (Large
Alcoholic Beverages & Tobacco				Pan Prepared (Sweet With Beetle Nuts), Chewing Tobacco (Niswar), Tobacco Hukka Twisted, Cigarettes Capstan 20'S Packet, Cigarettes Gold
Clothing & Footwear				Socks Nylon Local (Average Quality), Full Pant Boy Length 24"/26", Shirt Boy Length 24"/26", Chaddar (Wash-N-Wear) (2X2.5 Meter), Tailoring Charges Simple Suit (Female), Lawn Printed (Average Quality), Tailoring Charges <i>Amarsi Suit (Male), Frockwara Coat</i>
Housing, Water, Elec, Gas & other Fuels			House Rent Combined, Electricity Charges Upto 50 Units,	Bajri, Charges For Refuse/Waste Collection, Unskilled Labor Wage Rate, Firewood Whole, Carpenter Wage Rate, Mason Wage Rate, Coal, Painter Wage Rate, Bricks New 1St
Furnishing & Household Equip. Maintenance etc				Towel Medium Size (2' X 3'), Blanket Single (Sn), Readymade Quilt (3 Kg), Water Pump Golden Monoblock/Donkey 0.5 H.P, Dinner Set Plastic 72 Pieces Super Quality,
Health				Cost Of Surgery (C-Section), Dental Surgeon Fee Per Visit, Cac 1000 Tablets Sandoz Bottle, Amoxil Capsule 250 Mg, Panadol Tablets <i>Paracetamol 500 mg</i>
Transport	Car Suzuki 800 Cc Without Ac, Car Tax 800 Cc To 1500 Cc,			Cng, Bicycle, Motorcycle Service Charges, Mobil Oil (Havoline 20W-50), Hi-Speed Diesel, Train Fare Economy Per Person, Tire Cycle, Petrol Super, Tire Car Mehran
Communication	Mobile Call Charges, Telephone Call Charges, Internet Charges (Dsl) 1 Mb (Unlimited),			Mobile Set With Rear Camera And Without Touch Screen, Postal Registration Charges,
Recreation & Culture				Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Cable Charges, Pets Feed, Led Sony/Samsung 32" Colored, Exercise Book (With Lines) 80 To 100 Pages, <i>Lead Pencil Goldfish Newspaper</i>
Education		Vocational Training Basic Computer Short Course Fee (3 Months),		Coaching Fee For Class Ix/X Science Group, Private School Fee English Medium Average Standard (Class Vi), Private School Fee English Medium Average Standard (Class V), Private School Fee English Medium
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student,			Private Hostel Accommodation Fee For Intermediate College Per Student, Pizza Chicken Medium Size (Average Quality), Marriage Hall Charges With Furniture, Cooked Beef
Miscellaneous				Tooth Brush (Shield), Hair Color (Kala Kola), Toilet Soap Lux 75 Gm, Artificial Jewelry (Locket Set) (Average Quality), Shaving Charges, Hair Cut Charges For Men, Gold Tezabi 24 Carett, Hair Removing Cream (Eu-Cream) 30ML Tube

Table A22: Distribution of Price Changes (YoY) - WPI Items

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Agriculture Forestry & Fisher Product	Maize, Other Oil Seeds,	Fresh Fruits, Fiber Crops, Millet / Bajra,	Cotton Seeds, Fuel Wood in Logs, Sorghum / Jowar,	Hides, Skins & Fur Skins, Raw, Poultry, Fish Live Fresh or Chilled, Stimulant & Spice Crops, Raw Milk from Bovine Animals, Pulses, Raw Animal Materials / Wool, Wheat, Eggs, Vegetables, Sugar Crops, Rice, Dry Fruits,
Ores/Minerals, Elec., Gas & Water				Coal not Agglomerated, Electrical Energy, Salt & Pure Sodium Chloride, Natural Gas Liquified,
Food, Beverages, Tobacco, Textile, Apparel and Leather Product	Vegetable Ghee, Nylon Yarn, Cotton Yarn, Blended Yarn,	Vegetable Oils Refined,	Other Leather N.E.C,	Footwears, Hosiery Products, Blankets, Towels, Synthetic Carpets, Oil Cakes, Other Cereal Flour, Sugar Confectionary, Woolen Carpets, Ice Cream, Other Fabrics, Readymade Garments, Meat of Animals,
Other Transportable Goods except Metal Products, Machinery and Equipments			Diesel Oil,	Kerosene Oil, Chemicals, Mobil Oil, Bricks, Blocks & Tiles, Timber, Cement, Pesticides, Bed Foam, Motor Spirit, Ceramics & Sanitary Fixture, Paints & Varnishes, Medicines, Other Glass Articles,
Metal Product, Machinery & Equipment	Vacuum Pumps,			Lighting Equipments, Motor Vehicles, Steel Bar & Sheets, Lathe Machines, Motorcycles, Bicycles, Chuff Cutter, Electric Wires, Tractors, Concrete Mixture, Fridge, WashM, SewM, Fans, Iron, Pipe Fittings, Engines & Motors,

Table A23: International Commodity Prices/Indices

Items	Jun-23	Dec-22	Nov-23	Dec-23
Energy				
Crude Oil (US\$ per barrel)	73.3	78.1	81.4	75.7
WB Energy Index (2010 = 100)	95.2	130.9	106.2	99.5
Food				
Rice (\$/MT)	514.0	467.0	598.0	644.0
Wheat (\$/MT)	345.5	386.3	283.6	291.1
Sugar (US cent/ pound)^	0.5	0.4	0.6	0.5
Palm Oil (\$/MT)	817.0	940.4	830.5	813.5
Soybean Oil (\$/MT)	1,007.1	1,409.2	1,118.4	1,062.5
Non-Food Non-Energy				
Cotton Outlook 'A' Index (\$/KG) #	2.0	2.2	2.0	2.0
Metal Price Index (2010 = 100)	106.7	114.8	103.8	104.3
Copper (\$/MT)	8,396.5	8,375.4	8,189.6	8,399.9
Aluminum (\$/MT)	2,184.8	2,401.7	2,202.3	2,182.4
Iron Ore (\$ cents/dry MT)	113.5	111.8	131.1	137.1
Tin (\$/MT)	27,216.7	24,172.4	24,167.9	24,600.3
Nickle (\$/MT)	21,233.3	28,946.8	17,027.4	16,460.8
Zinc (\$/MT)	2,375.5	3,129.5	2,543.6	2,502.4
Lead (\$/MT)	2,122.9	2,216.5	2,188.5	2,026.9
Uranium (\$/MT)	56.1	47.7	81.3	91.0
DAP (\$/MT)	454.6	625.0	535.6	563.8
Urea (\$/MT)	287.5	519.4	385.5	354.0

Source: World Bank for all variables / indices except Uranium which is taken from Cameco (World Largest Uranium Producer)

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

* 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

Table A24: National CPI Data Series - Original and Seasonally Adjusted

Original Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	123.86	135.38	146.76	183.34	235.23
Aug	125.89	136.23	147.61	187.84	239.27
Sep	126.86	138.32	150.74	185.68	244.05
Oct	129.16	140.67	153.61	194.42	246.50
Nov	130.90	141.83	158.18	195.89	253.15
Dec	130.45	140.86	158.16	196.86	255.24
Jan	133.04	140.56	158.78	202.53	
Feb	131.64	143.09	160.61	211.28	
Mar	131.69	143.61	161.88	219.14	
Apr	130.59	145.09	164.50	224.41	
May	131.01	145.24	165.23	227.96	
Jun	132.08	144.82	175.71	227.37	
Seasonally Adjusted Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	123.65	135.22	146.64	183.30	235.28
Aug	125.69	136.05	147.42	187.60	238.96
Sep	126.44	137.87	150.23	185.04	243.18
Oct	128.14	139.59	152.48	193.04	244.81
Nov	129.70	140.52	156.74	194.11	250.87
Dec	130.43	140.80	158.09	196.76	255.12
Jan	133.72	141.34	159.74	203.83	
Feb	132.20	143.59	161.07	211.76	
Mar	132.08	143.92	162.13	219.35	
Apr	130.47	144.91	164.23	223.97	
May	131.71	146.02	166.09	229.16	
Jun	133.01	145.94	177.15	229.35	

Table A25: Urban CPI Data Series - Original and Seasonally Adjusted

Month	Original Series				
	FY20	FY21	FY22	FY23	FY24
Jul	124.95	134.73	146.41	180.95	228.47
Aug	126.77	135.82	147.12	185.72	232.12
Sep	127.72	137.53	150.08	181.90	235.99
Oct	129.75	139.27	152.59	190.08	238.51
Nov	131.05	140.16	156.96	190.80	248.87
Dec	130.57	139.67	157.46	191.46	250.68
Jan	132.77	139.45	157.56	195.97	
Feb	131.32	142.61	159.03	204.87	
Mar	131.49	142.99	160.07	212.85	
Apr	130.60	144.91	162.63	217.11	
May	130.99	145.19	163.13	220.37	
Jun	131.89	144.55	173.23	220.59	
Seasonally Adjusted Series					
Jul	124.55	134.36	146.05	180.59	228.08
Aug	126.31	135.33	146.57	184.98	231.15
Sep	127.32	137.10	149.60	181.31	235.19
Oct	128.95	138.47	151.77	189.13	237.39
Nov	130.09	139.12	155.79	189.37	247.01
Dec	130.69	139.74	157.49	191.45	250.61
Jan	133.58	140.38	158.70	197.50	
Feb	131.95	143.20	159.62	205.53	
Mar	132.00	143.44	160.48	213.29	
Apr	130.35	144.59	162.23	216.50	
May	131.51	145.80	163.83	221.36	
Jun	132.64	145.46	174.41	222.18	

Table A26: Rural CPI Data Series - Original and Seasonally Adjusted

Month	Original Series				
	FY20	FY21	FY22	FY23	FY24
Jul	122.22	136.36	147.28	186.94	245.44
Aug	124.56	136.84	148.34	191.04	250.06
Sep	125.55	139.51	151.74	191.38	256.21
Oct	128.28	142.79	155.15	200.96	258.57
Nov	130.67	144.34	160.03	203.57	259.61
Dec	130.28	142.65	159.21	205.00	262.11
Jan	133.44	142.23	160.62	212.43	
Feb	132.13	143.82	162.99	220.95	
Mar	132.00	144.55	164.62	228.63	
Apr	130.58	145.37	167.31	235.43	
May	131.03	145.32	168.39	239.42	
Jun	132.36	145.24	179.45	237.61	
Seasonally Adjusted Series					
	FY20	FY21	FY22	FY23	FY24
Jul	122.28	136.52	147.53	187.37	246.14
Aug	124.76	137.13	148.71	191.54	250.74
Sep	125.10	139.02	151.20	190.68	255.23
Oct	126.91	141.29	153.55	198.94	256.02
Nov	129.11	142.63	158.18	201.25	256.70
Dec	130.03	142.41	158.99	204.79	261.93
Jan	133.92	142.80	161.29	213.37	
Feb	132.58	144.18	163.28	221.18	
Mar	132.19	144.64	164.61	228.48	
Apr	130.65	145.38	167.25	235.24	
May	132.00	146.34	169.50	240.93	
Jun	133.55	146.65	181.29	240.16	

Table A27: National CPI Monthly & Average Seasonal Factors

Month	FY20	FY21	FY22	FY23	FY24	Average
Jul	100.17	100.12	100.08	100.03	99.98	100.08
Aug	100.16	100.13	100.13	100.13	100.13	100.14
Sep	100.34	100.33	100.34	100.34	100.36	100.34
Oct	100.80	100.77	100.74	100.72	100.69	100.74
Nov	100.93	100.93	100.92	100.92	100.91	100.92
Dec	100.02	100.04	100.05	100.05	100.05	100.04
Jan	99.49	99.45	99.40	99.36		99.43
Feb	99.58	99.65	99.71	99.77		99.68
Mar	99.71	99.79	99.85	99.91		99.81
Apr	100.09	100.12	100.16	100.20		100.14
May	99.47	99.47	99.48	99.48		99.47
Jun	99.30	99.24	99.19	99.14		99.22

Table A28: Urban CPI Monthly & Average Seasonal Factors

Month	FY20	FY21	FY22	FY23	FY24	Average
Jul	100.32	100.28	100.25	100.21	100.17	100.24
Aug	100.36	100.36	100.37	100.40	100.42	100.38
Sep	100.31	100.31	100.32	100.33	100.34	100.32
Oct	100.62	100.58	100.54	100.50	100.47	100.54
Nov	100.74	100.75	100.75	100.75	100.75	100.75
Dec	99.91	99.95	99.98	100.01	100.03	99.98
Jan	99.40	99.34	99.28	99.22		99.31
Feb	99.52	99.58	99.63	99.68		99.61
Mar	99.61	99.69	99.74	99.79		99.71
Apr	100.19	100.22	100.24	100.28		100.23
May	99.60	99.58	99.57	99.55		99.58
Jun	99.43	99.37	99.32	99.28		99.35

Table A29: Rural CPI Monthly & Average Seasonal Factors

Month	FY20	FY21	FY22	FY23	FY24	Average
Jul	99.95	99.88	99.83	99.77	99.71	99.95
Aug	99.84	99.79	99.75	99.74	99.73	99.84
Sep	100.36	100.35	100.36	100.37	100.38	100.36
Oct	101.08	101.06	101.04	101.01	101.00	101.08
Nov	101.21	101.20	101.17	101.15	101.13	101.21
Dec	100.19	100.17	100.14	100.10	100.07	100.19
Jan	99.62	99.60	99.58	99.56		99.62
Feb	99.66	99.75	99.83	99.90		99.66
Mar	99.86	99.94	100.01	100.06		99.86
Apr	99.94	99.99	100.03	100.08		99.94
May	99.26	99.30	99.34	99.37		99.26
Jun	99.11	99.04	98.99	98.94		99.11

Table A30: National CPI MoM - Original and Seasonally Adjusted

Original Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	1.83	2.50	1.34	4.34	3.46
Aug	1.64	0.63	0.58	2.45	1.72
Sep	0.77	1.53	2.12	-1.15	2.00
Oct	1.81	1.70	1.90	4.71	1.00
Nov	1.35	0.82	2.98	0.76	2.70
Dec	-0.34	-0.68	-0.01	0.50	0.82
Jan	1.99	-0.21	0.39	2.88	
Feb	-1.05	1.80	1.15	4.32	
Mar	0.04	0.36	0.79	3.72	
Apr	-0.84	1.03	1.62	2.40	
May	0.32	0.10	0.44	1.58	
Jun	0.82	-0.29	6.34	-0.26	
Seasonally Adjusted Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	1.00	1.66	0.48	3.47	2.59
Aug	1.65	0.61	0.53	2.35	1.57
Sep	0.59	1.34	1.91	-1.36	1.77
Oct	1.35	1.25	1.50	4.32	0.67
Nov	1.22	0.66	2.80	0.55	2.48
Dec	0.56	0.20	0.86	1.37	1.69
Jan	2.52	0.39	1.04	3.59	
Feb	-1.13	1.59	0.84	3.89	
Mar	-0.10	0.22	0.65	3.58	
Apr	-1.22	0.69	1.30	2.11	
May	0.95	0.76	1.13	2.32	
Jun	0.99	-0.06	6.66	0.08	

Table A31: Urban CPI MoM - Original and Seasonally Adjusted

Original Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	1.98	2.15	1.29	4.46	3.57
Aug	1.46	0.81	0.48	2.64	1.60
Sep	0.75	1.26	2.01	-2.06	1.67
Oct	1.59	1.27	1.67	4.50	1.07
Nov	1.00	0.64	2.86	0.38	4.34
Dec	-0.37	-0.35	0.32	0.35	0.73
Jan	1.68	-0.16	0.06	2.36	
Feb	-1.09	2.27	0.93	4.54	
Mar	0.13	0.27	0.65	3.90	
Apr	-0.68	1.34	1.60	2.00	
May	0.30	0.19	0.31	1.50	
Jun	0.69	-0.44	6.19	0.10	
Seasonally Adjusted Series					
Month	FY20	FY21	FY22	FY23	FY24
Jul	1.13	1.29	0.41	3.54	2.65
Aug	1.41	0.72	0.36	2.43	1.35
Sep	0.80	1.31	2.06	-1.98	1.75
Oct	1.28	1.00	1.45	4.31	0.93
Nov	0.88	0.47	2.65	0.13	4.05
Dec	0.46	0.44	1.09	1.09	1.46
Jan	2.21	0.46	0.77	3.16	
Feb	-1.22	2.01	0.57	4.06	
Mar	0.04	0.16	0.54	3.78	
Apr	-1.25	0.81	1.09	1.51	
May	0.89	0.84	0.98	2.24	
Jun	0.86	-0.23	6.46	0.37	

Table A32: Rural CPI MoM - Original and Seasonally Adjusted

Month	Original Series				
	FY20	FY21	FY22	FY23	FY24
Jul	1.60	3.02	1.40	4.17	3.30
Aug	1.91	0.35	0.72	2.19	1.88
Sep	0.79	1.95	2.29	0.18	2.46
Oct	2.17	2.35	2.25	5.01	0.92
Nov	1.86	1.09	3.15	1.30	0.40
Dec	-0.30	-1.17	-0.51	0.70	0.96
Jan	2.43	-0.29	0.89	3.62	
Feb	-0.98	1.12	1.48	4.01	
Mar	-0.10	0.51	1.00	3.48	
Apr	-1.08	0.57	1.63	2.97	
May	0.34	-0.03	0.65	1.69	
Jun	1.02	-0.06	6.57	-0.76	
	Seasonally Adjusted Series				
	FY20	FY21	FY22	FY23	FY24
Jul	0.81	2.22	0.60	3.36	2.49
Aug	2.03	0.45	0.80	2.23	1.87
Sep	0.27	1.38	1.67	-0.45	1.79
Oct	1.45	1.64	1.56	4.33	0.31
Nov	1.73	0.95	3.02	1.16	0.27
Dec	0.72	-0.16	0.51	1.76	2.04
Jan	2.99	0.27	1.45	4.19	
Feb	-1.00	0.97	1.23	3.66	
Mar	-0.30	0.32	0.82	3.30	
Apr	-1.16	0.51	1.60	2.96	
May	1.03	0.66	1.34	2.42	
Jun	1.17	0.21	6.95	-0.32	

Figures

Figure A1: National CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent)

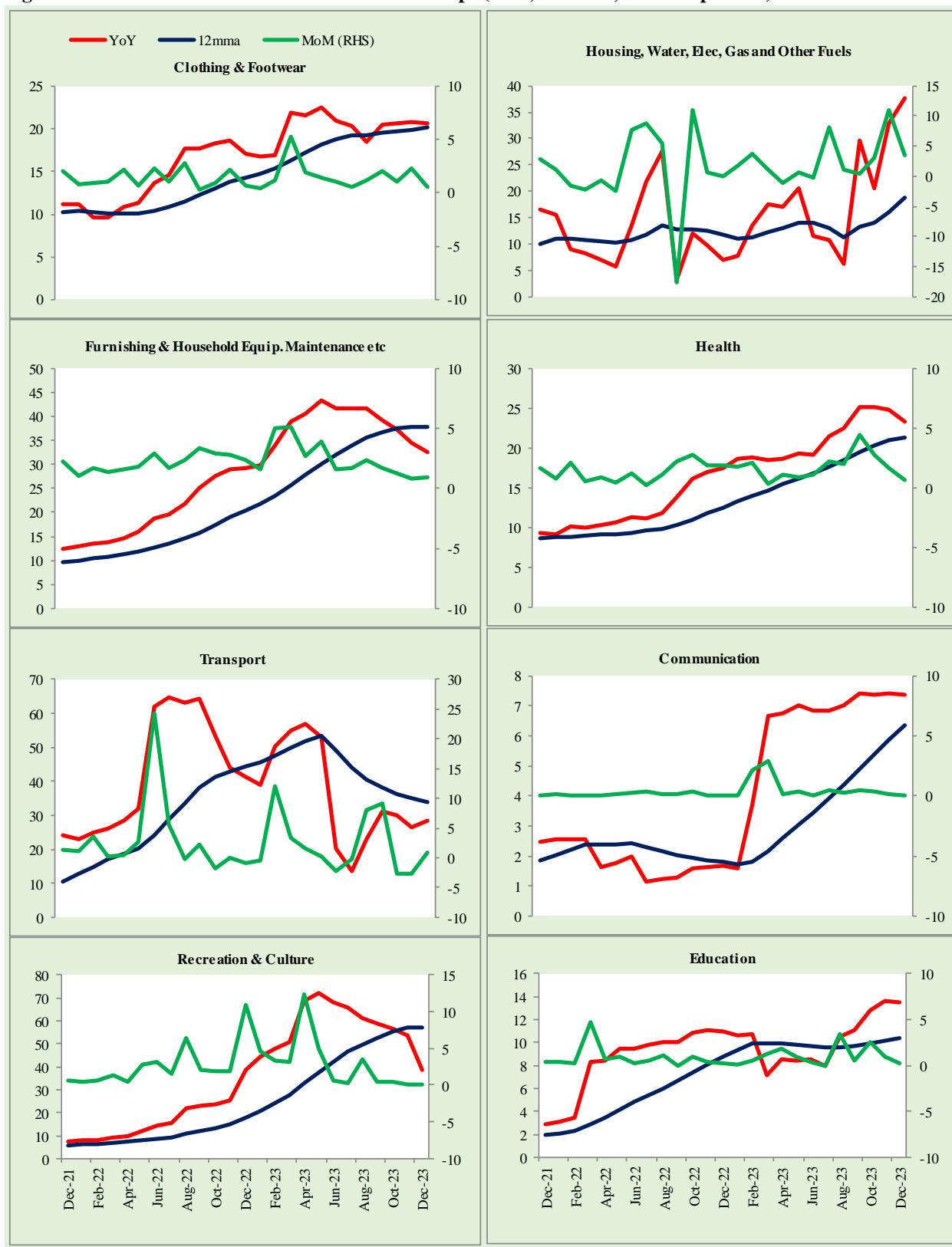


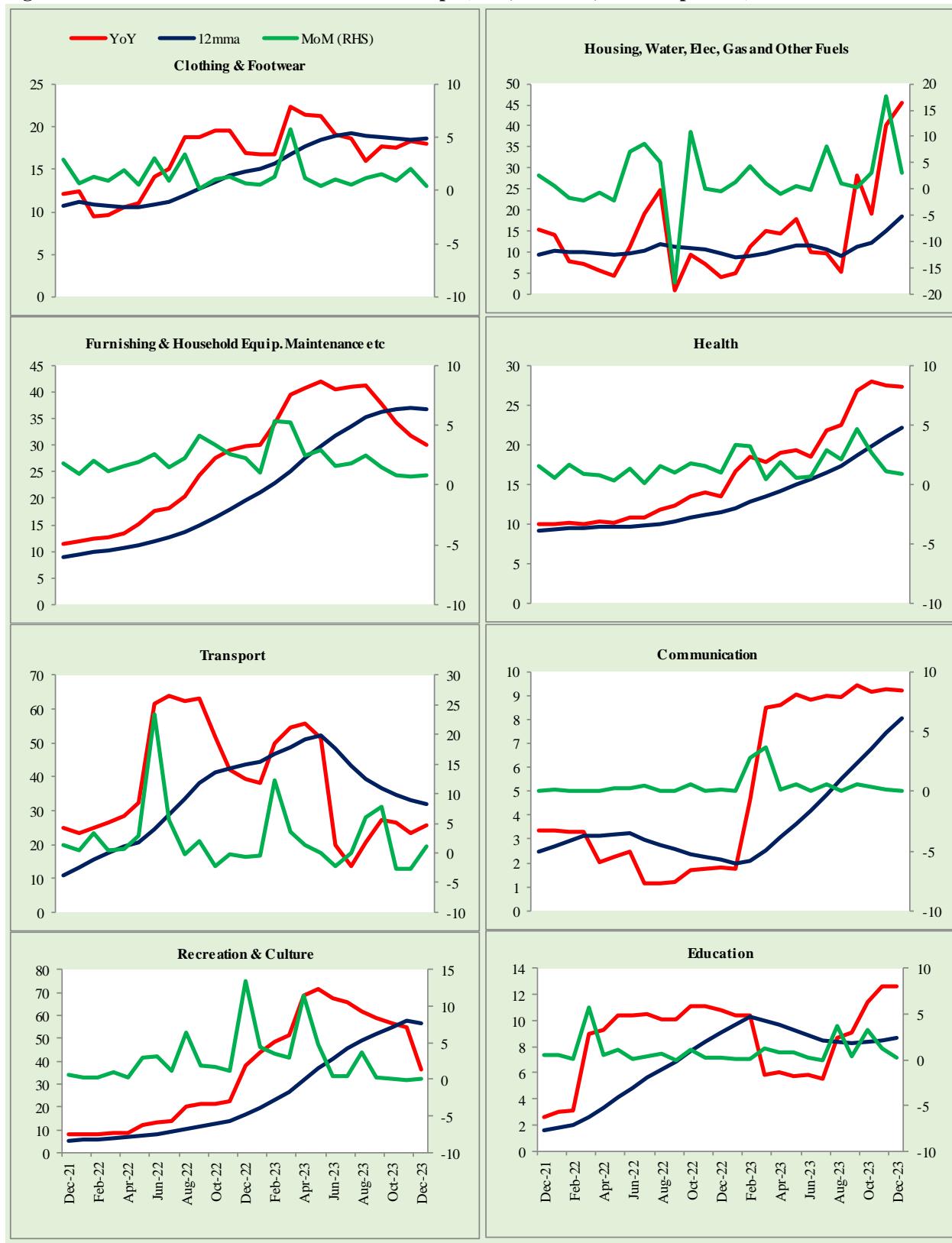
Figure A2: Urban CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent)

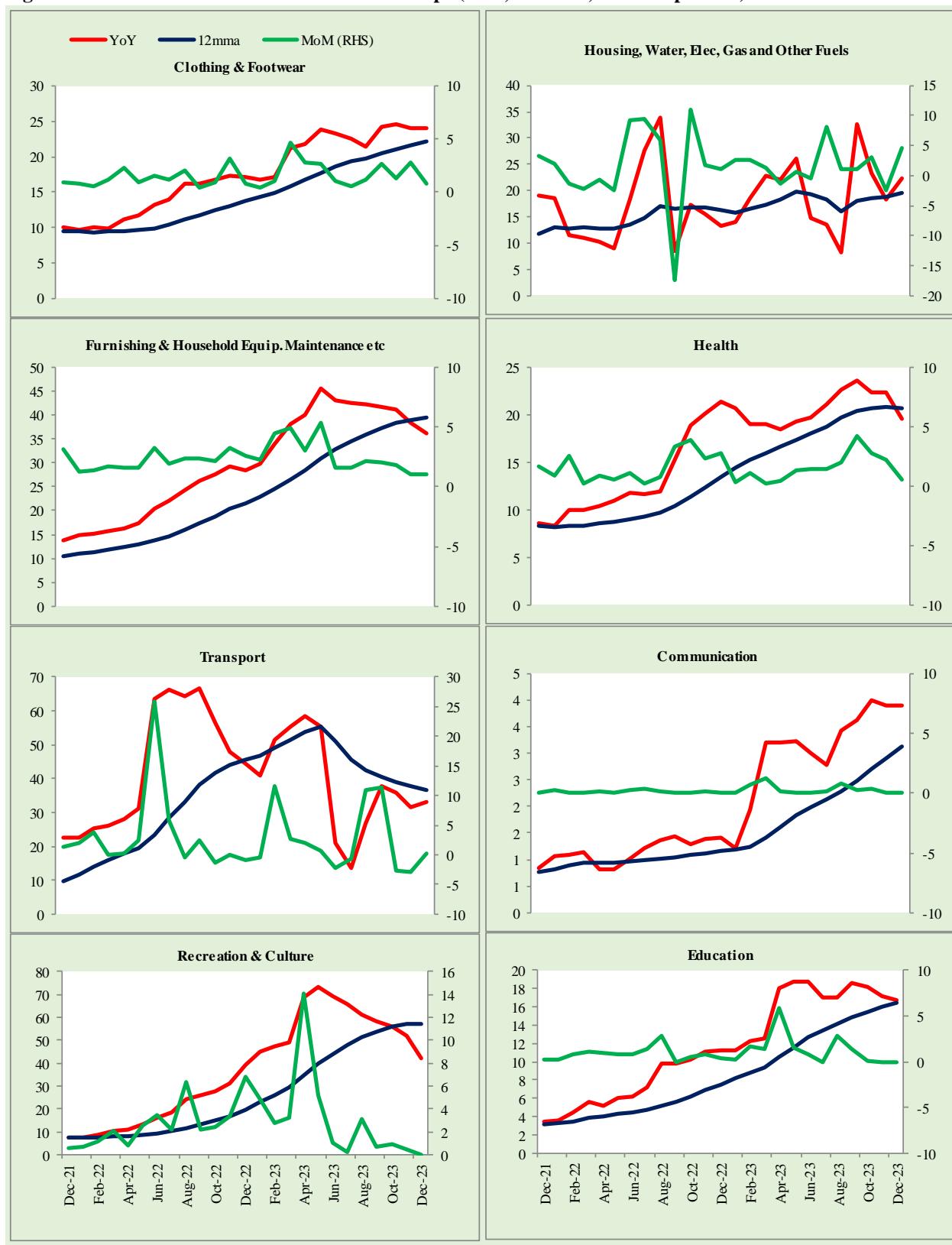
Figure A3: Rural CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent)

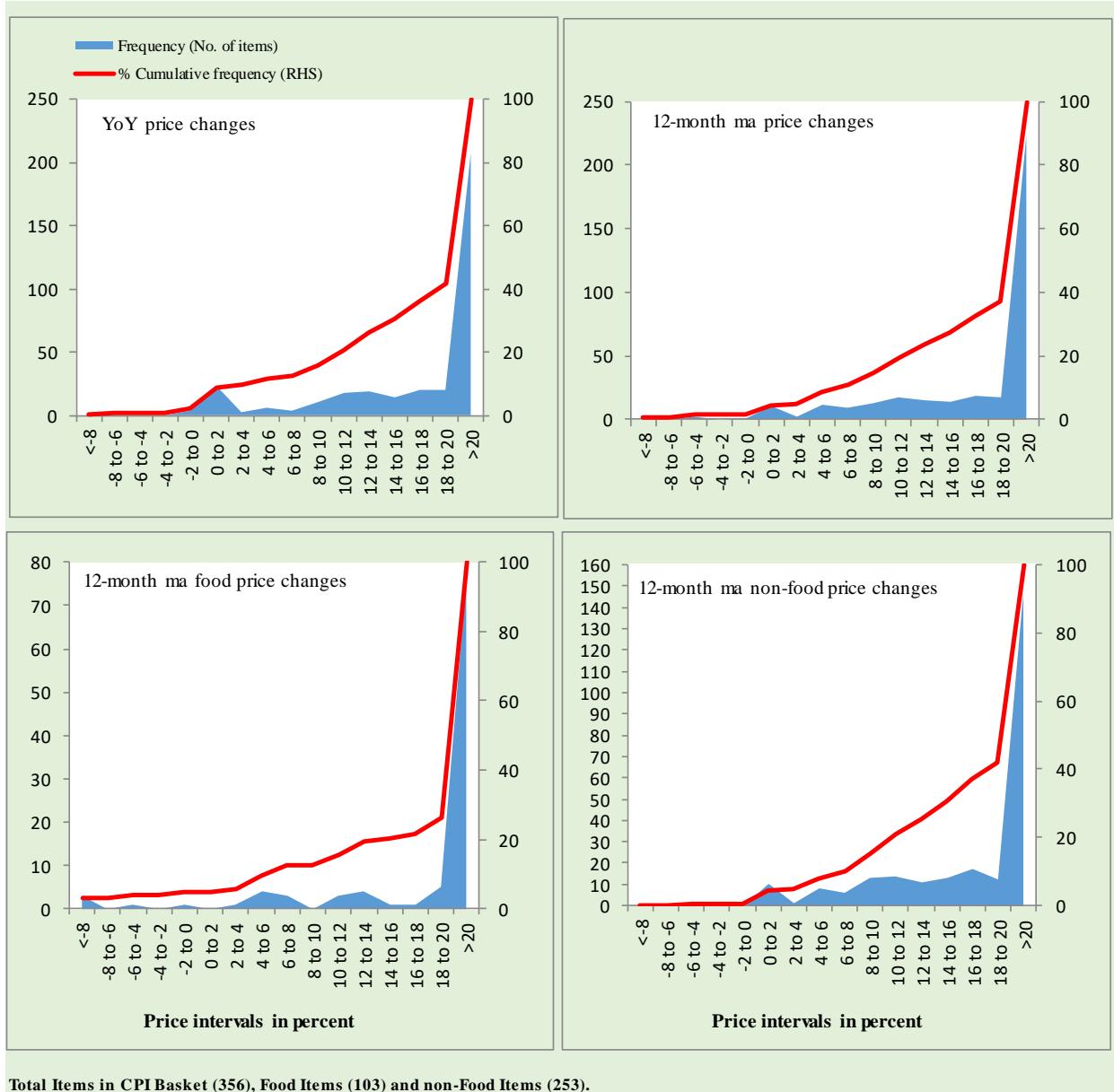
Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)

Figure A5: Frequency Distribution of Price Changes of Rural CPI Items (YoY)

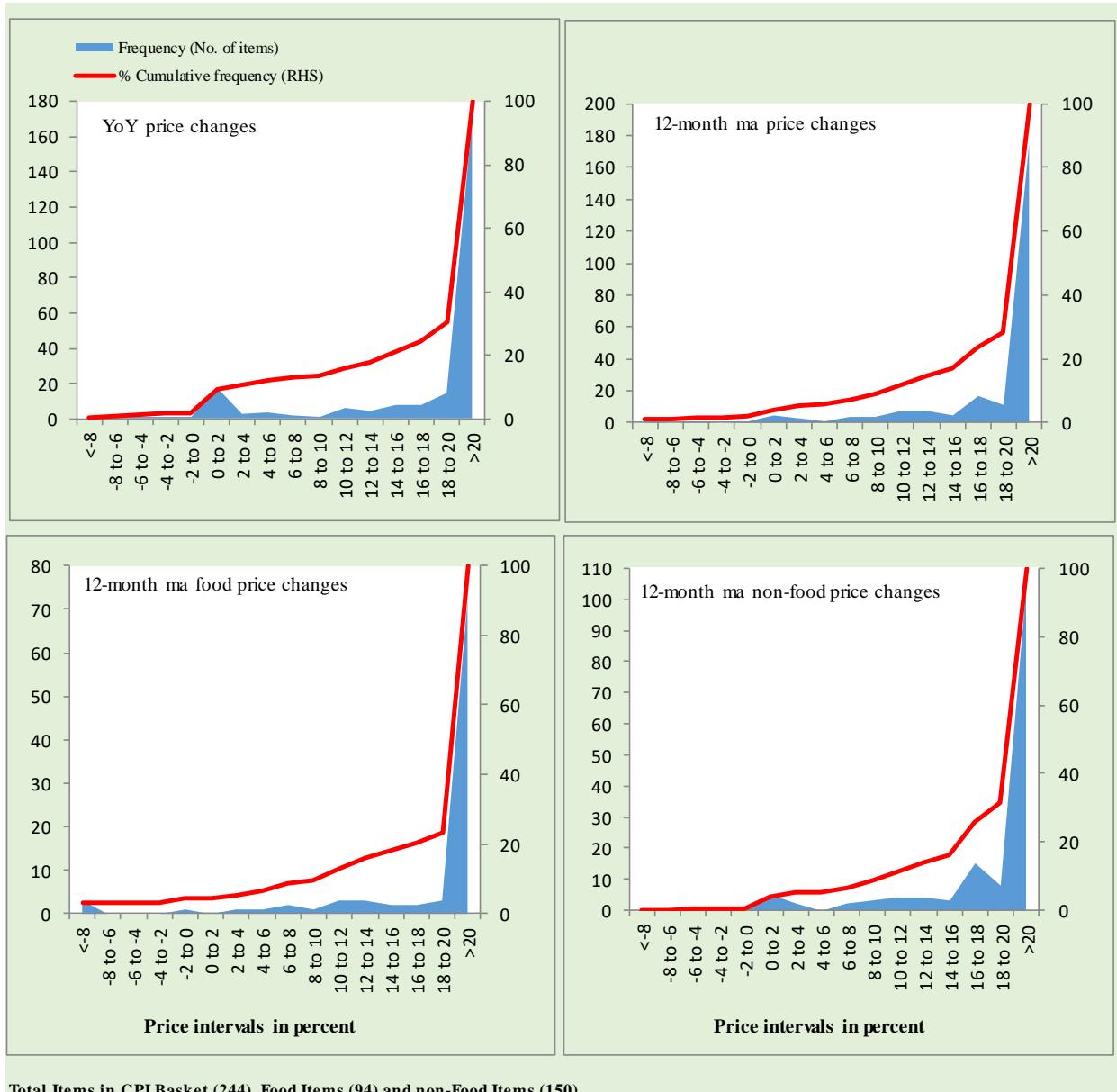


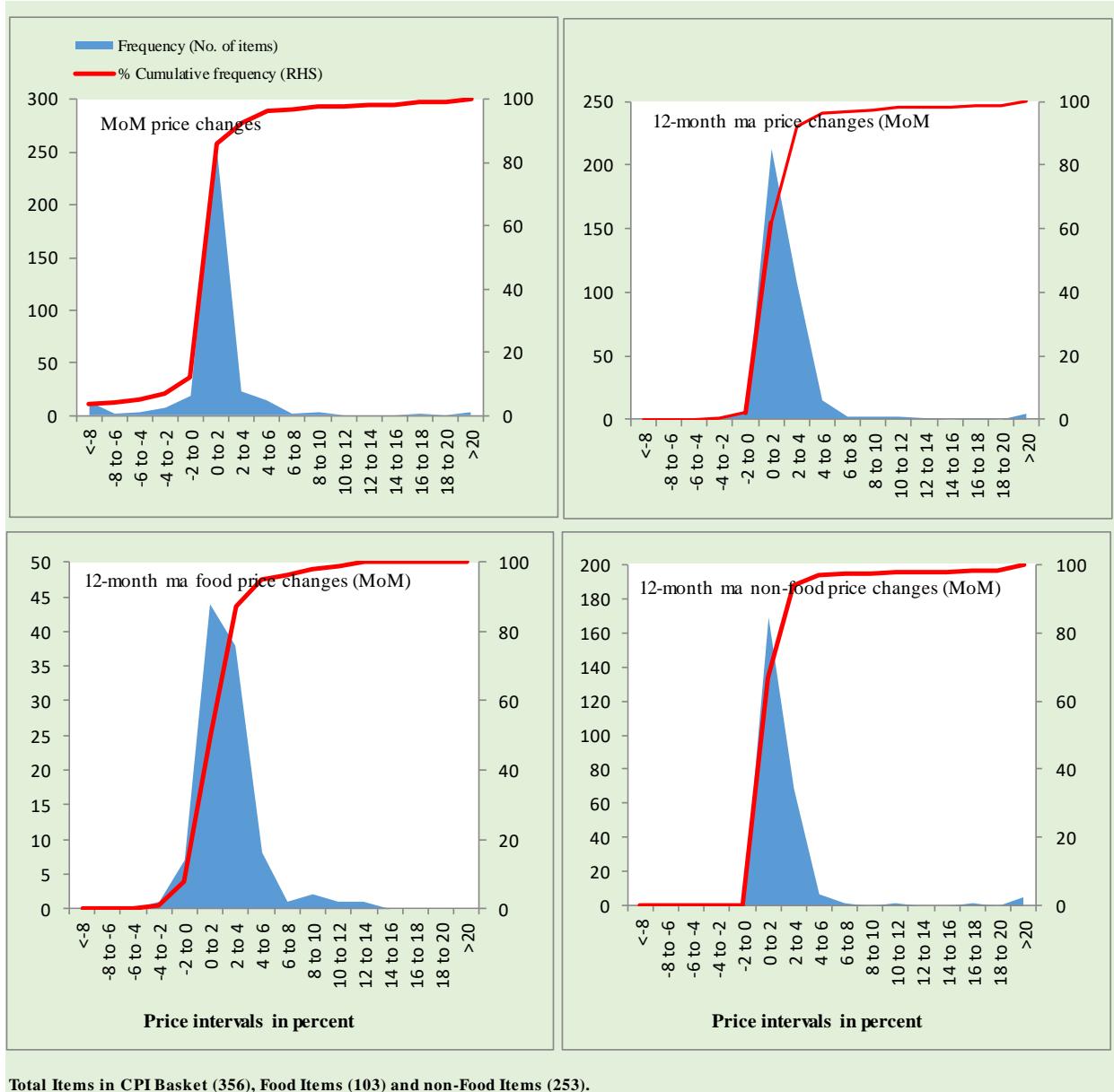
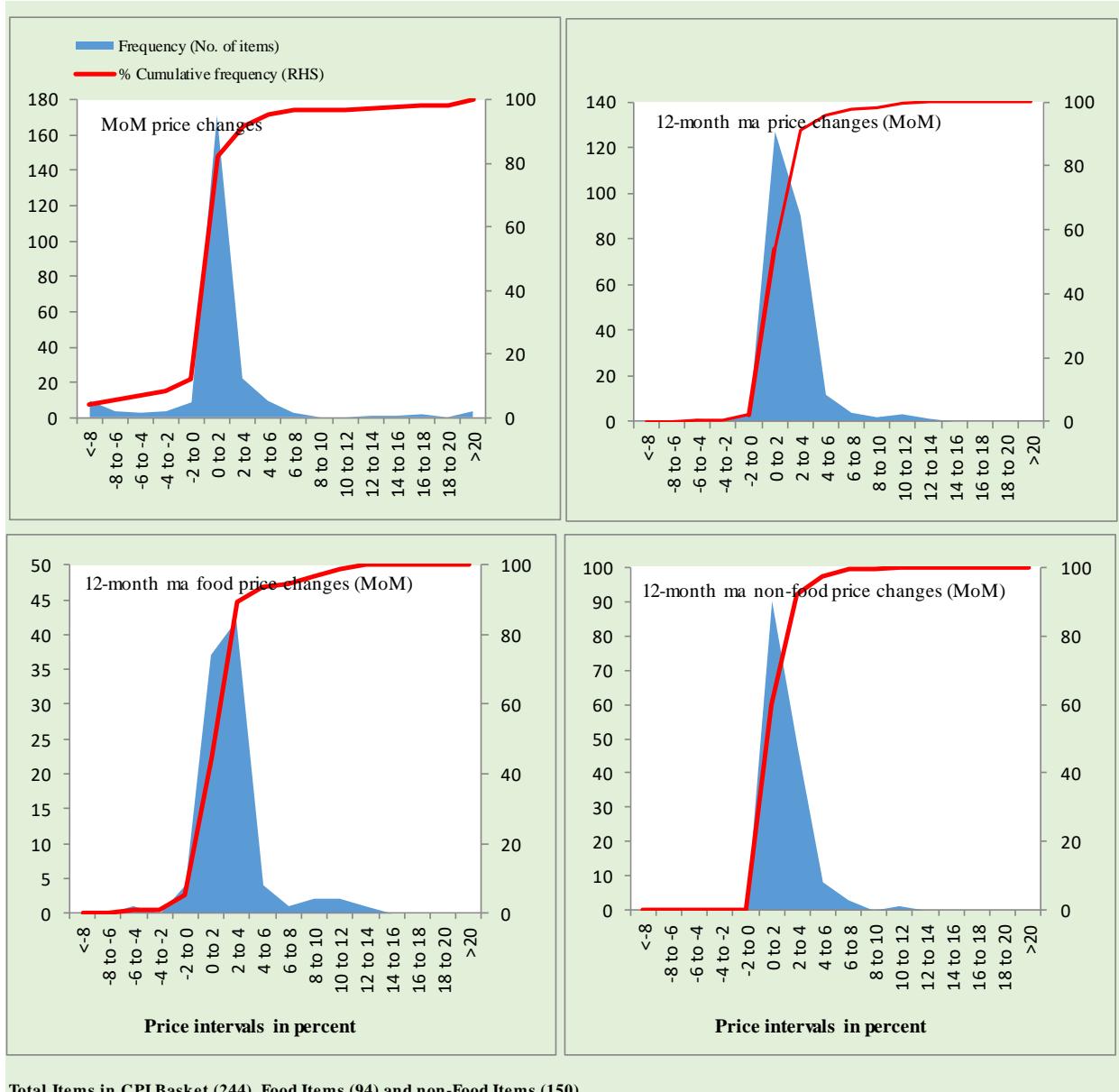
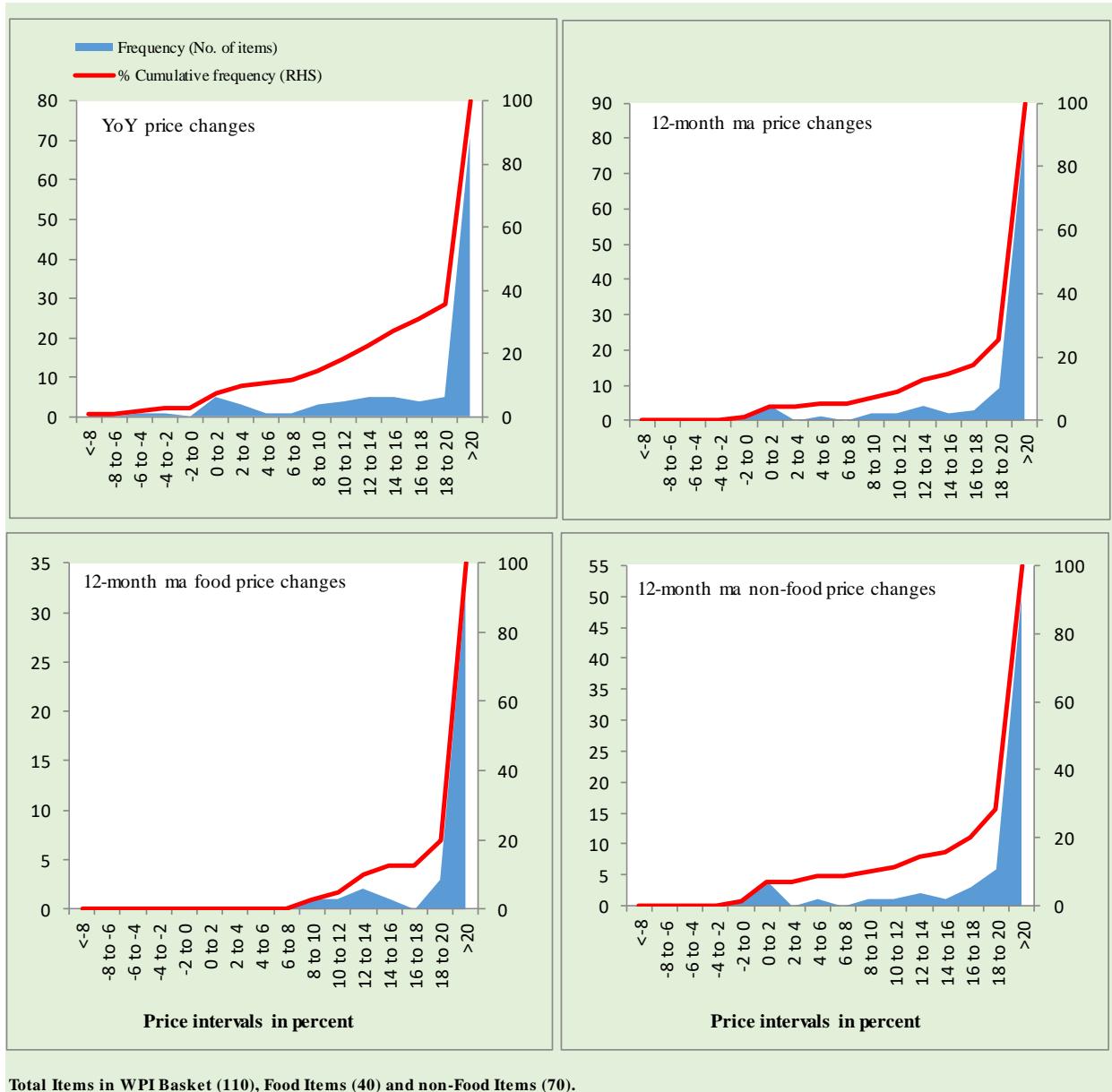
Figure A6: Frequency Distribution of Price Changes of Urban CPI Items (MoM)

Figure A7: Frequency Distribution of Price Changes of Rural CPI Items (MoM)



Total Items in CPI Basket (244), Food Items (94) and non-Food Items (150).

Figure A8: Frequency Distribution of Price Changes of WPI Commodities (YoY)

Technical Notes

1. All the three measures of inflation, viz. CPI (National, Urban and Rural), 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 2015-16.
3. CPI baskets for urban and rural areas contains 356 and 244 consumers' items respectively; WPI basket contains 419 items; SPI contains 51 items.
4. YoY inflation is the percent change of an index in a given month over the index in the same month of the last year. It is computed as follows:

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

5. Period average inflation is the percent change of the average index during the period from December 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 December 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 i.e. NFNE inflation and trimmed inflation:

- 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 indices 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

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 356 and 244 items of CPI urban and rural baskets respectively. It is based on month-on-month (MoM) change in the prices of these items and can be obtained by estimating what is known as an ‘inflation diffusion index’ (IDI) as below:

$$IDI = \frac{\text{No. of items with positive MoM change in price} - \text{No. of items with negative MoM change in price}}{\text{No. of items for which prices are reported}} * 100$$

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 items for which prices have altered or remained constant.

List of Abbreviations

Abbreviation	Stands for
ARIMA	Autoregressive Integrated Moving Average
CIF	Cost, Insurance, and Freight
CNG	Compressed Natural Gas
CPI	Consumer Price Index
DAP	Diammonium Phosphate
FY	Fiscal year
HRI	House Rent Index
IDI	Inflation Diffusion Index
ISSN	International Standard Serial Number
KG	Kilogram
MT	Metric Tonne
NFNE	Non-food,Non-energy
PBS	Pakistan Bureau of Statistics
SPI	Sensitive Price Indicator
WPI	Wholesale Price Index
12MMA	12 Month Moving Average