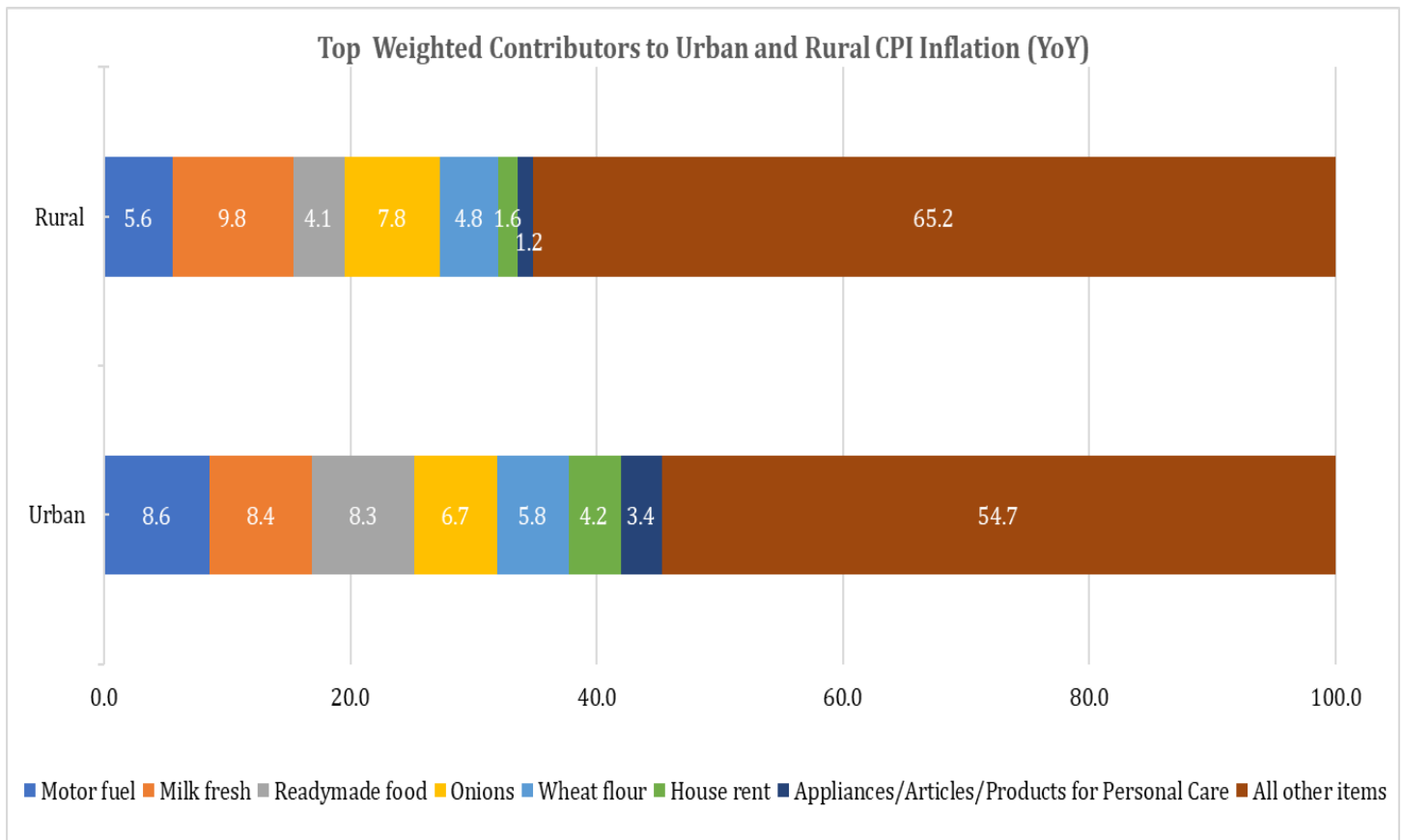




Inflation Monitor

December 2022



State Bank of Pakistan

Data Services and Innovations Department

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The analysis in this document is based on data

- Provided by Pakistan Bureau of Statistics (PBS), for domestic inflation analysis
- Retrieved from Bloomberg, Trading Economics, IMF & World Bank websites for global inflation analysis

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Table of Contents

1. Inflation in Brief	5
2. Heat Maps of CPI inflation	7
3. Trends in Inflation	11
4. Movement in Price Indices (Moving Averages)	12
5. Movement in Price Indices (Month-on-Month)	13
6. Trends in Consumer Price Indices and Inflation	15
7. Weighted Contribution	18
8. Inflation Diffusion Index	20
9. Domestic Commodity Prices (Growth)	22
10. Inflation in Global Context	23
11. Global Commodity Prices (Growth)	24
12. Seasonal Adjustment in CPI	25
List of Illustrations	29
Tables	29
Table A0: Inflation – Summary	29
Table A1: National CPI Inflation by Groups (YoY and MoM in percent)	30
Table A2: Urban CPI Inflation by Groups (YoY and MoM in percent)	30
Table A3: Rural CPI Inflation by Groups (YoY and MoM in percent)	31
Table A4: National CPI Inflation by Groups	32
Table A5: Urban CPI Inflation by Groups	33
Table A6: Rural CPI Inflation by Groups	34
Table A7: Top Ten Contributors to Urban CPI Inflation (YoY) – December 2022	35
Table A8: Top Ten Contributors to Urban CPI Inflation (MoM) in December 2022	36
Table A9: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY) in December 2022	37
Table A10: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM) in December 2022	38
Table A11: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation in December 2022	39
Table A12: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation in December 2022	40
Table A13: Top Ten Contributors to Rural CPI Inflation (YoY) in December 2022	41
Table A14: Top Ten Contributors to Rural CPI Inflation (MoM) in December 2022	42
Table A15: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY) in December 2022	43
Table A16: Top and Bottom Fifteen Contributors to Rural CPI (MoM) Inflation in December 2022	44
Table A17: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation in December 2022	45
Table A18: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation in December 2022	46
Table A19: Distribution of Price Changes (YoY) - Selected Urban CPI Items: December 2022	47
Table A20: Distribution of Price Changes (YoY) - Selected Rural CPI Items: December 2022	48
Table A21: Distribution of Price Changes (YoY) - WPI Items: December 2022	49
Table A22: International Commodity Prices/Indices	50
Table A23: National CPI Data Series Original and Seasonally Adjusted	51
Table A24: Urban CPI Data Series Original and Seasonally Adjusted	52

Table A25: Rural CPI Data Series Original and Seasonally Adjusted	53
Table A26: National CPI Monthly & Average Seasonal Factors	54
Table A27: Urban CPI Monthly & Average Seasonal Factors	54
Table A28: Rural CPI Monthly & Average Seasonal Factors	55
Table A29: National CPI (Month-on-Month) Original & Seasonally Adjusted	56
Table A30: Urban CPI (Month-on-Month) Original & Seasonally Adjusted Series	57
Table A31: Rural CPI (Month-on-Month) Original & Seasonally Adjusted Series	58
Figures	59
Figure A1: National CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022	59
Figure A2: Urban CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022	60
Figure A3: Rural CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022	61
Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY) – December 2022	62
Figure A5: Frequency Distribution of Price Changes of Rural CPI Items (YoY) – December 2022	63
Figure A6: Frequency Distribution of Price Changes of Urban CPI Items (MoM) – December 2022	64
Figure A7: Frequency Distribution of Price Changes of Rural CPI Items (MoM) – December 2022	65
Figure A8: Frequency Distribution of Price Changes of WPI Commodities (YoY) – December 2022	66
Technical Notes	67
Methodology for Estimating Inflation Diffusion Index for Pakistan	69

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Data Support

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1. Inflation in Brief

- I. National CPI Inflation on year-on-year (YoY) basis increased to 24.5 percent in December 2022 from 23.8 percent in previous month. It stood at 12.3 percent in the corresponding month of last year. On month-on-month (MoM) basis, National CPI Inflation decreased to 0.5 percent in December 2022 from 0.8 percent in previous month. A deflation of 0.02 percent was observed during corresponding month of last year.
- II. Urban CPI Inflation (YOY) increased to 21.59 percent in December 2022 from 21.56 percent in previous month. It stood at 12.7 percent during the corresponding month of last year. On MoM basis, Urban CPI Inflation decreased to 0.3 percent in December 2022 from 0.4 percent in the previous month. It stood at 0.3 percent during corresponding month of last year. Seasonally adjusted MoM CPI showed an inflation of 1.1 percent in December 2022 compared to an inflation of 0.4 percent in the previous month.
- III. Rural CPI Inflation (YoY) increased to 28.8 percent in December 2022 from 27.2 percent in previous month. It was recorded 11.6 percent during the corresponding month of last year. Rural CPI Inflation (on MoM basis) decreased to 0.7 percent in December 2022 from 1.3 percent in the previous month. A deflation of 0.5 percent was observed during corresponding month of last year. Seasonally adjusted (MoM) CPI showed an inflation of 1.7 percent in December 2022 as compared to an inflation of 1.1 percent in previous month.
- IV. Urban Core (Non-food, Non-energy (NFNE)) Inflation on YoY basis increased to 14.7 percent in December 2022 from 14.6 percent in previous month. It stood at 8.3 percent during corresponding month of last year. On MoM basis, Urban Core (NFNE) Inflation increased to 1.2 percent in December 2022 from 0.8 percent in previous month. It stood at 1.1 percent during the corresponding month of last year.
- V. Rural Core (Non-food, Non-energy (NFNE)) Inflation on YOY basis increased to 19.0 percent in December 2022 from 18.5 percent in previous month. It stood at 8.9 percent during the corresponding month of last year. On MoM basis, it decreased to 1.5 percent in December 2022 from 2.1 percent in previous month. It was recorded 1.1 percent during the corresponding month of last year.
- VI. Urban Core Inflation (trimmed) on YoY basis decreased to 19.4 percent in December 2022 from 19.8 percent in previous month. It stood at 10.8 percent during the corresponding month of last year. On MoM basis, Urban Core Inflation (trimmed) increased to 0.8 percent in December 2022 from 0.5 percent in previous month. It stood at 1.1 percent during the corresponding month of last year.
- VII. Rural Core Inflation (trimmed) on YoY basis increased to 26.4 percent in December 2022 from 25.4 percent in previous month. It was recorded 10.3 percent during the corresponding month of last year. On MoM basis, Rural Core Inflation (trimmed) decreased to 1.5 percent in December

2022 from 1.8 percent in previous month. It stood at 1.0 percent during corresponding month of last year.

- VIII. WPI Inflation on YoY basis decreased to 27.1 percent in December 2022 from 27.7 percent in previous month. It stood at 26.2 percent during the corresponding month of last year. On MoM basis, a deflation of 0.7 percent is observed in December 2022 as compared to a deflation of 0.02 percent in previous month. A deflation of 0.2 percent was recorded during the corresponding month of last year.
- IX. SPI Inflation on YoY basis increased to 29.68 percent in December 2022 from 29.66 percent in previous month. During corresponding month of last year, SPI Inflation stood at 19.3 percent. On MoM basis, SPI inflation decreased to 0.3 percent in December 2022 from 4.9 percent in previous month. It stood at 0.3 percent during corresponding month of last year.

2. Heat Maps of CPI inflation

Heat map visually elaborates the evolution of inflation. A heat map for National, Urban and Rural CPI inflation (YoY and MoM) and their important sub-indices for the last thirteen months is presented. The observed inflation is compared with the benchmark inflation target of 11.5 percent¹ for FY23. Green areas indicate low inflation pressures whereas red areas indicate higher inflationary pressures.

		Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Headline	National	12.3	13.0	12.2	12.7	13.4	13.8	21.3	24.9	27.3	23.2	26.6	23.8	24.5
	Urban	12.7	13.0	11.5	11.9	12.2	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6
	Rural	11.6	12.9	13.3	13.9	15.1	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8
Food	Urban	11.7	13.3	14.3	14.5	15.6	15.5	24.0	27.4	28.8	30.8	34.7	29.7	32.7
	Rural	9.0	11.8	14.6	15.5	17.7	19.0	27.0	29.6	30.2	32.7	37.2	33.5	37.9
Core	Urban	8.3	8.2	7.8	8.9	9.1	9.7	11.5	12.0	13.8	14.4	14.9	14.6	14.7
	Rural	8.9	9.0	9.4	10.3	10.9	11.5	13.6	14.6	16.5	17.6	18.2	18.5	19.0
Key														
		Source: Pakistan Bureau of Statistics												

		Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Headline	National	-0.02	0.4	1.2	0.80	1.6	0.4	6.3	4.3	2.4	-1.2	4.7	0.8	0.5
	Urban	0.3	0.1	0.9	0.7	1.6	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3
	Rural	-0.5	0.9	1.5	1.0	1.6	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7
Food	Urban	-2.3	-0.8	2.2	1.8	3.7	1.0	5.3	4.3	1.6	5.2	4.5	0.0	0.0
	Rural	-3.1	0.4	2.6	2.3	2.8	1.3	6.0	3.7	1.2	5.7	6.1	0.5	0.1
Core	Urban	1.1	0.8	0.8	1.2	1.1	0.7	2.0	1.2	1.8	0.9	1.3	0.8	1.2
	Rural	1.1	1.2	0.9	1.1	1.2	0.9	2.3	1.6	1.8	1.4	1.5	2.1	1.5
Key														
		Source: Pakistan Bureau of Statistics												

	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	12.3	13.0	12.2	12.7	13.4	13.8	21.3	24.9	27.3	23.2	26.6	23.8	24.5
Food and Non-Alcoholic Beverages	34.58	10.3	12.8	14.7	15.3	17.0	17.3	25.9	28.8	29.5	31.7	36.2	31.2	35.5
Alcoholic Beverages, Tobacco	1.02	2.0	2.0	2.1	1.8	5.1	10.1	17.6	22.5	25.8	32.7	34.6	35.9	36.2
Clothing and Footwear	8.60	11.2	11.2	9.7	9.7	10.8	11.3	13.7	14.6	17.6	17.7	18.3	18.6	17.1
Housing, Water, Elec., Gas and Other Fuels	23.63	16.6	15.5	9.0	8.3	7.1	5.8	13.5	21.8	27.6	3.4	11.9	9.9	7.0
Furnishing and Household Equipment Maintenance	4.10	12.3	13.0	13.4	13.8	14.7	16.1	18.8	19.7	21.9	25.1	27.6	29.1	29.2
Health	2.79	9.4	9.2	10.1	10.0	10.4	10.6	11.3	11.2	11.9	13.8	16.2	17.1	17.5
Transport	5.91	24.1	23.1	25.0	26.3	28.3	31.8	62.2	64.7	63.1	64.5	53.4	44.2	41.2
Communication	2.21	2.5	2.6	2.5	2.6	1.6	1.8	2.0	1.2	1.2	1.3	1.6	1.6	1.7
Recreation and Culture	1.59	7.7	7.8	8.2	9.3	9.7	12.3	14.4	15.4	21.8	22.8	23.7	25.6	38.5
Education	3.79	2.8	3.2	3.4	8.3	8.4	9.5	9.5	9.8	10.0	10.0	10.9	11.1	10.9
Restaurants and Hotels	6.92	12.6	13.0	14.4	14.6	14.6	16.0	21.9	25.0	27.4	28.8	30.4	28.4	27.4
Misc. Goods and Services	4.87	10.6	10.3	10.1	12.4	12.8	13.3	15.8	17.2	20.0	22.9	22.4	23.0	25.8
Key														
		Source: Pakistan Bureau of Statistics												

¹ As per Annual Plan 2022-23 published by Planning Commission of Pakistan.

Heat Map of Urban CPI inflation (YoY)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	12.7	13.0	11.5	11.9	12.2	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6
Food and Non-Alcoholic Beverages	30.42	11.7	13.6	14.5	14.8	16.0	15.8	24.6	27.8	28.9	30.7	34.8	28.9	32.6
Alcoholic Beverages, Tobacco	0.85	2.1	2.0	2.0	1.5	4.8	9.4	18.3	21.7	25.8	34.1	35.4	37.2	37.3
Clothing and Footwear	8.01	12.2	12.4	9.4	9.6	10.5	11.0	14.2	15.0	18.8	18.9	19.5	19.6	17.0
Housing, Water, Elec., Gas and Other Fuels	27.03	15.4	14.2	7.8	7.1	5.6	4.4	11.3	19.2	24.8	1.0	9.5	7.3	4.1
Furnishing and Household Equipment Maintenance	4.09	11.4	11.9	12.4	12.6	13.5	15.2	17.6	18.2	20.3	24.3	27.6	29.0	29.7
Health	2.31	10.1	10.0	10.2	10.0	10.3	10.3	10.9	10.8	11.8	12.3	13.6	14.1	13.5
Transport	6.14	25.0	23.4	24.8	26.3	28.6	32.2	61.5	63.8	62.4	63.3	51.7	42.1	39.2
Communication	2.35	3.3	3.4	3.3	3.3	2.0	2.3	2.5	1.1	1.2	1.2	1.7	1.8	1.8
Recreation and Culture	1.73	7.9	8.1	8.0	8.7	8.9	11.9	13.3	13.9	20.4	21.1	21.4	22.3	38.0
Education	4.88	2.6	3.0	3.2	9.0	9.2	10.4	10.4	10.5	10.1	10.0	11.1	11.1	10.8
Restaurants and Hotels	7.41	13.2	13.2	15.0	14.5	14.5	14.5	21.2	24.7	27.4	29.1	31.8	29.5	28.6
Misc. Goods and Services	4.77	10.4	10.1	9.6	11.9	12.0	12.2	15.1	16.8	20.1	23.1	23.7	23.8	25.9
Source: Pakistan Bureau of Statistics														
<812.5>15														

Heat Map of Rural CPI inflation (YoY)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	11.6	12.9	13.3	13.9	15.1	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8
Food and Non-Alcoholic Beverages	40.87	8.9	12.0	15.0	15.9	18.2	19.0	27.4	29.9	30.2	32.8	37.9	33.7	38.7
Alcoholic Beverages, Tobacco	1.28	1.9	2.0	2.3	2.3	5.5	11.0	16.9	23.4	25.8	31.1	33.7	34.4	35.0
Clothing and Footwear	9.48	10.1	9.7	10.0	9.8	11.3	11.7	13.1	14.0	16.2	16.3	16.8	17.4	17.2
Housing, Water, Elec., Gas and Other Fuels	18.49	19.2	18.5	11.6	11.1	10.3	9.1	18.4	27.6	33.9	8.6	17.3	15.6	13.2
Furnishing and Household Equipment Maintenance	4.10	13.7	14.8	15.0	15.6	16.4	17.5	20.5	22.0	24.2	26.2	27.7	29.2	28.6
Health	3.51	8.7	8.3	10.0	10.0	10.4	10.9	11.8	11.7	12.0	15.2	18.9	20.2	21.4
Transport	5.56	22.5	22.5	25.4	26.2	27.9	31.0	63.4	66.3	64.2	66.6	56.4	47.9	44.6
Communication	1.99	0.9	1.1	1.1	1.1	0.8	0.8	1.0	1.2	1.4	1.4	1.3	1.4	1.4
Recreation and Culture	1.38	7.3	7.4	8.5	10.5	11.0	13.0	16.3	18.2	24.3	25.7	27.7	31.3	39.4
Education	2.13	3.5	3.7	4.4	5.6	5.1	6.0	6.2	7.2	9.8	9.8	10.2	11.1	11.3
Restaurants and Hotels	6.19	11.5	12.6	13.3	14.6	14.7	18.5	23.0	25.4	27.5	28.2	27.9	26.4	25.2
Misc. Goods and Services	5.02	10.7	10.8	10.7	13.1	13.9	14.9	16.8	17.7	19.7	22.6	20.5	21.9	25.6

<8

12.5

>15

Source: Pakistan Bureau of Statistics

Heat Map of National CPI inflation (MoM)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	-0.02	0.4	1.2	0.80	1.6	0.4	6.3	4.3	2.4	-1.2	4.7	0.8	0.5
Food and Non-Alcoholic Beverages	34.58	-3.4	-0.5	2.5	2.3	3.7	0.9	5.5	4.1	1.3	5.8	5.6	0.1	-0.1
Alcoholic Beverages, Tobacco	1.02	0.3	0.1	0.3	0.0	3.1	4.9	7.0	4.1	2.7	5.9	1.8	1.1	0.5
Clothing and Footwear	8.60	2.0	0.8	1.0	1.0	2.1	0.7	2.3	1.1	2.8	0.3	1.0	2.2	0.7
Housing, Water, Elec., Gas and Other Fuels	23.63	2.8	1.0	-1.6	-2.2	-0.7	-2.3	7.7	8.8	5.5	-17.7	10.9	0.6	0.0
Furnishing and Household Equipment Maintenance	4.10	2.3	1.1	1.8	1.4	1.6	1.8	2.9	1.7	2.3	3.4	2.9	2.8	2.4
Health	2.79	1.6	0.7	2.1	0.6	0.9	0.5	1.2	0.2	1.2	2.2	2.8	1.9	1.9
Transport	5.91	1.3	1.0	3.6	0.3	0.4	2.7	24.4	5.7	-0.3	2.2	-1.8	-0.1	-0.8
Communication	2.21	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.4	0.1	0.1	0.4	0.0	0.1
Recreation and Culture	1.59	0.6	0.4	0.5	1.3	0.4	2.8	3.2	1.6	6.3	2.0	1.9	2.0	10.9
Education	3.79	0.4	0.4	0.3	4.7	0.6	1.0	0.3	0.5	1.1	0.0	1.0	0.4	0.3
Restaurants and Hotels	6.92	2.1	1.0	1.7	0.9	0.2	1.8	5.8	2.9	2.3	2.2	2.5	1.9	1.3
Misc. Goods and Services	4.87	0.7	0.8	1.1	1.6	0.8	1.2	3.3	1.6	2.7	3.8	0.9	2.3	3.0

<0.00

0.75

>1.50

Source: Pakistan Bureau of Statistics

Heat Map of Urban CPI inflation (MoM)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	0.3	0.1	0.9	0.7	1.6	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3
Food and Non-Alcoholic Beverages	30.42	-3.0	-1.1	2.3	2.1	4.3	0.9	5.0	4.3	1.4	5.4	4.8	-0.3	-0.3
Alcoholic Beverages, Tobacco	0.85	0.1	0.0	0.2	0.1	3.3	4.6	8.2	2.9	3.4	6.8	1.3	1.6	0.2
Clothing and Footwear	8.01	2.9	0.7	1.3	0.9	2.0	0.5	3.0	1.0	3.4	0.1	1.0	1.3	0.7
Housing, Water, Elec., Gas and Other Fuels	27.03	2.6	0.6	-1.6	-2.2	-0.6	-2.3	7.0	8.6	5.2	-17.8	10.9	-0.1	-0.5
Furnishing and Household Equipment Maintenance	4.09	1.8	0.9	2.0	1.1	1.6	2.0	2.6	1.5	2.3	4.1	3.3	2.6	2.3
Health	2.31	1.6	0.5	1.6	0.9	0.8	0.4	1.4	0.1	1.6	1.0	1.7	1.6	1.1
Transport	6.14	1.3	0.4	3.4	0.5	0.6	2.9	23.5	5.6	-0.2	2.0	-2.2	-0.1	-0.7
Communication	2.35	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.4	0.0	0.1	0.6	0.0	0.1
Recreation and Culture	1.73	0.5	0.3	0.2	0.9	0.2	3.0	3.1	1.2	6.3	2.0	1.7	1.1	13.4
Education	4.88	0.5	0.5	0.1	5.7	0.6	1.1	0.1	0.3	0.7	0.0	1.1	0.2	0.2
Restaurants and Hotels	7.41	2.3	0.6	2.0	0.7	0.2	0.6	6.6	3.3	2.3	2.8	3.0	1.8	1.6
Misc. Goods and Services	4.77	0.6	0.7	1.2	1.8	0.7	1.1	3.7	1.4	3.4	3.9	1.4	1.7	2.4

<0.00

0.75

>1.50

Source: Pakistan Bureau of Statistics

Heat Map of Rural CPI inflation (MoM)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	100.00	-0.5	0.9	1.5	1.0	1.6	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7
Food and Non-Alcoholic Beverages	40.87	-3.7	0.2	2.8	2.5	3.1	0.8	6.1	3.8	1.2	6.2	6.6	0.4	0.0
Alcoholic Beverages, Tobacco	1.28	0.5	0.3	0.3	0.0	2.8	5.3	5.6	5.5	1.9	4.8	2.5	0.6	0.9
Clothing and Footwear	9.48	0.9	0.8	0.6	1.1	2.3	0.9	1.6	1.2	2.0	0.5	1.0	3.2	0.8
Housing, Water, Elec., Gas and Other Fuels	18.49	3.2	1.9	-1.4	-2.3	-0.8	-2.5	9.2	9.4	6.0	-17.5	10.9	1.8	1.1
Furnishing and Household Equipment Maintenance	4.10	3.1	1.3	1.3	1.7	1.6	1.5	3.3	2.0	2.4	2.4	2.2	3.2	2.6
Health	3.51	1.7	0.9	2.5	0.2	0.9	0.6	1.1	0.3	0.8	3.4	3.9	2.3	2.8
Transport	5.56	1.3	2.0	3.9	0.0	0.2	2.5	25.9	5.7	-0.5	2.5	-1.3	0.0	-0.9
Communication	1.99	0.0	0.2	0.0	0.1	0.1	0.0	0.2	0.4	0.2	0.1	0.0	0.1	0.0
Recreation and Culture	1.38	0.6	0.7	1.2	2.0	0.8	2.5	3.4	2.2	6.4	2.2	2.4	3.4	6.8
Education	2.13	0.3	0.2	0.8	1.1	1.0	0.8	0.9	1.4	2.8	0.0	0.5	0.8	0.4
Restaurants and Hotels	6.19	1.6	1.6	1.0	1.2	0.3	3.9	4.4	2.2	2.4	1.2	1.7	2.3	0.7
Misc. Goods and Services	5.02	0.9	1.0	0.8	1.4	1.0	1.3	2.8	2.0	1.9	3.7	0.2	3.2	3.9

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0.75

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Source: Pakistan Bureau of Statistics

Heat Map of Rural CPI inflation (YoY)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Rural	100.00	11.6	12.9	13.3	13.9	15.1	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8
Food	45.95	9.0	11.8	14.6	15.5	17.7	19.0	27.0	29.6	30.2	32.7	37.2	33.5	37.9
Non-perishable	40.16	12.8	12.8	12.4	13.7	15.8	17.0	25.5	29.3	29.6	29.7	31.9	31.8	35.7
Perishable	5.79	-12.0	6.6	35.8	32.8	34.4	33.7	41.2	33.5	34.3	52.6	74.2	43.8	59.5
Non Food	54.05	14.0	13.9	12.2	12.5	12.8	13.1	20.4	24.5	27.5	20.1	22.4	21.4	20.7
Energy	11.41	34.0	32.7	21.9	20.4	19.8	19.3	46.6	61.2	67.8	28.8	36.9	30.7	26.2
NFNE (Core)	42.64	8.9	9.0	9.4	10.3	10.9	11.5	13.6	14.6	16.5	17.6	18.2	18.5	19.0
HRI	8.61	6.6	5.9	5.9	5.9	5.7	5.7	5.7	5.9	5.9	5.9	5.9	5.9	5.9
Core Excl HRI	34.03	9.5	9.7	10.3	11.4	12.2	12.9	15.5	16.8	19.1	20.4	21.2	21.5	22.1
Source: Pakistan Bureau of Statistics														
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Heat Map of Urban CPI inflation (YoY)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Urban	100.00	12.7	13.0	11.5	11.9	12.2	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6
Food	36.80	11.7	13.3	14.3	14.5	15.6	15.5	24.0	27.4	28.8	30.8	34.7	29.7	32.7
Non-perishable	32.34	15.5	14.7	11.8	13.0	14.4	15.0	23.5	27.1	28.2	27.9	29.4	27.1	29.6
Perishable	4.46	-8.7	6.3	34.1	28.0	25.6	20.6	32.4	32.4	33.5	48.3	67.0	38.6	52.9
Non Food	63.20	13.4	12.8	9.9	10.4	10.2	10.4	17.3	21.3	24.7	15.2	18.2	16.4	14.8
Energy	9.47	41.3	38.1	20.2	18.0	15.7	14.1	48.8	70.2	80.7	18.9	34.1	24.5	15.4
NFNE (Core)	53.73	8.3	8.2	7.8	8.9	9.1	9.7	11.5	12.0	13.8	14.4	14.9	14.6	14.7
HRI	19.26	6.6	6.1	6.1	6.1	5.6	5.6	5.6	5.6	5.6	5.6	5.3	5.3	5.3
Core Excl HRI	34.47	9.2	9.3	8.7	10.5	11.0	11.9	14.7	15.5	18.2	19.2	20.1	19.6	19.7

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12.5

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Source: Pakistan Bureau of Statistics

Heat Map of Rural CPI inflation (MoM)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Rural	100.00	-0.5	0.9	1.5	1.0	1.6	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7
Food	45.95	-3.1	0.4	2.6	2.3	2.8	1.3	6.0	3.7	1.2	5.7	6.1	0.5	0.1
Non-perishable	40.16	-0.4	1.0	1.4	2.8	0.6	2.8	6.2	3.5	0.7	4.2	3.7	1.7	2.6
Perishable	5.79	-21.8	-5.1	13.3	0.5	20.0	-10.7	5.2	6.0	3.9	18.4	22.2	-5.5	-13.2
Non Food	54.05	1.9	1.4	0.4	-0.2	0.5	0.0	7.1	4.6	3.1	-4.9	3.9	2.1	1.4
Energy	11.41	4.4	1.9	-0.9	-4.0	-1.8	-2.8	24.3	13.4	6.4	-21.0	11.8	2.2	0.8
NFNE (Core)	42.64	1.1	1.2	0.9	1.1	1.2	0.9	2.3	1.6	1.8	1.4	1.5	2.1	1.5
HRI	8.61	0.0	2.1	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.3	0.0	0.0
Core Excl HRI	34.03	1.4	1.0	1.1	1.3	1.3	1.0	2.9	1.7	2.2	1.7	1.6	2.5	1.8

<0.00

0.75

>1.50

Source: Pakistan Bureau of Statistics

Heat Map of Urban CPI inflation (MoM)														
	Weights	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Urban	100.00	0.3	0.1	0.9	0.7	1.6	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3
Food	36.80	-2.3	-0.8	2.2	1.8	3.7	1.0	5.3	4.3	1.6	5.2	4.5	0.0	0.0
Non-perishable	32.34	0.2	-0.4	0.5	2.6	1.7	3.1	4.9	3.8	1.2	4.0	2.2	0.7	2.2
Perishable	4.46	-20.2	-5.4	14.7	-1.1	20.8	-10.8	5.5	7.3	2.8	14.0	18.5	-4.4	-12.0
Non Food	63.20	2.0	0.6	0.2	-0.1	0.3	-0.1	6.8	4.6	3.3	-6.6	4.5	0.6	0.6
Energy	9.47	5.8	-0.4	-2.3	-5.9	-3.4	-4.6	32.2	18.3	8.4	-31.1	19.5	-0.2	-1.9
NFNE (Core)	53.73	1.1	0.8	0.8	1.2	1.1	0.7	2.0	1.2	1.8	0.9	1.3	0.8	1.2
HRI	19.26	0.0	1.5	0.0	0.0	1.1	0.0	0.0	1.5	0.0	0.0	1.1	0.0	0.0
Core Excl HRI	34.47	1.7	0.4	1.1	1.9	1.0	1.1	3.0	1.1	2.7	1.4	1.4	1.2	1.7

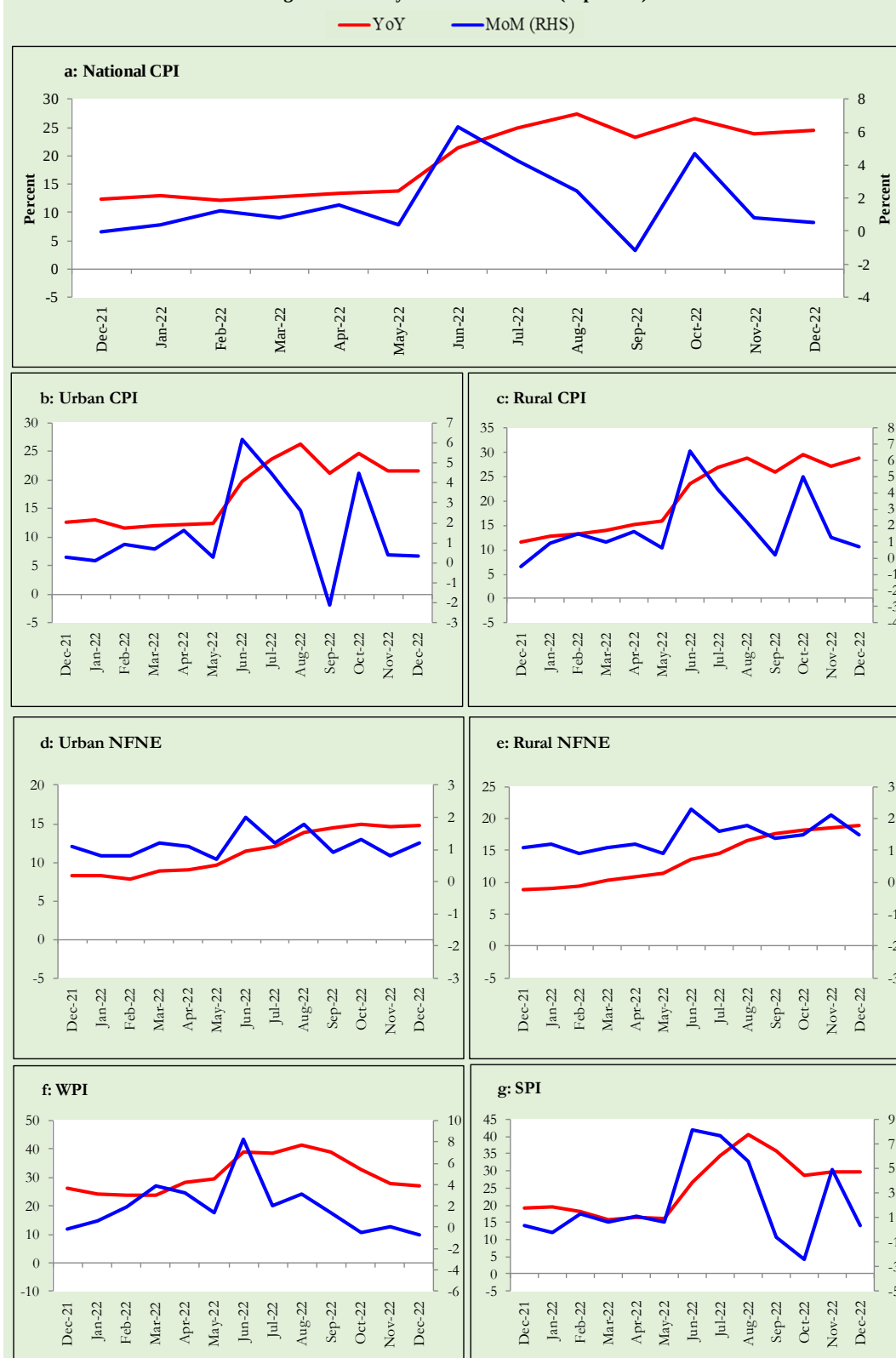
Source: Pakistan Bureau of Statistics



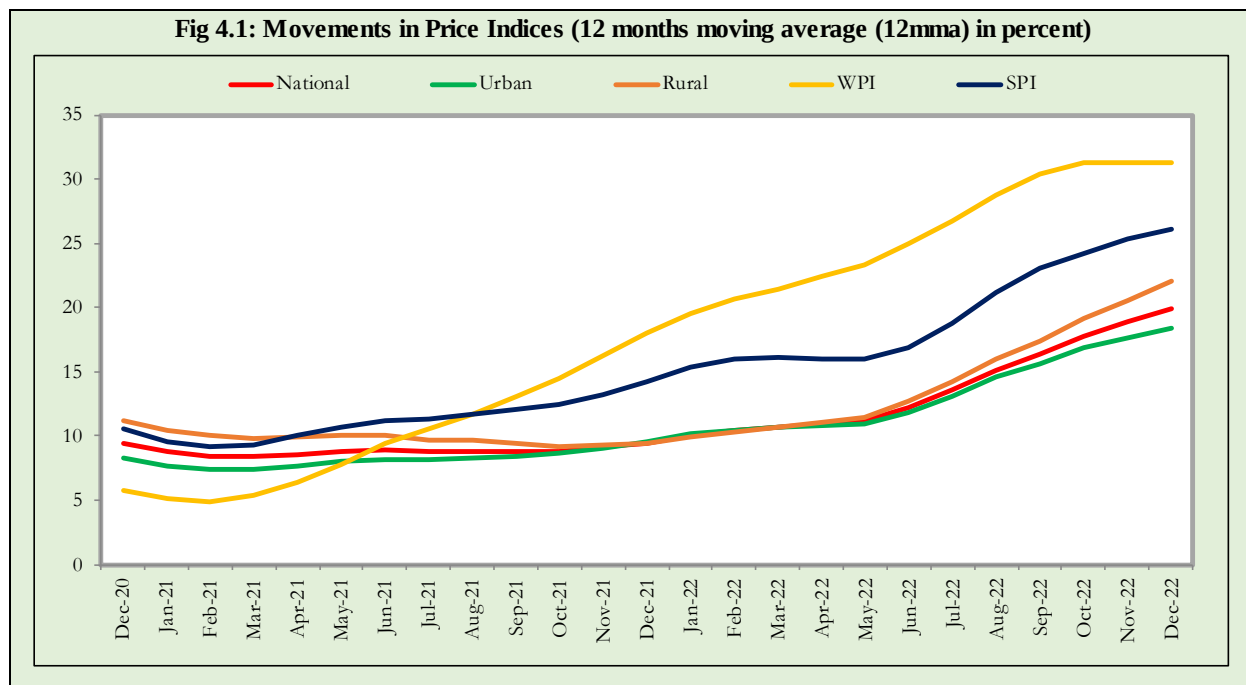
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3. Trends in Inflation

Fig 3.1: Summary of Inflation Trends (in percent)



4. Movement in Price Indices (Moving Averages)



5. Movement in Price Indices (Month-on-Month)

Fig 5.1: Movements in Price Indices (MoM in percent)

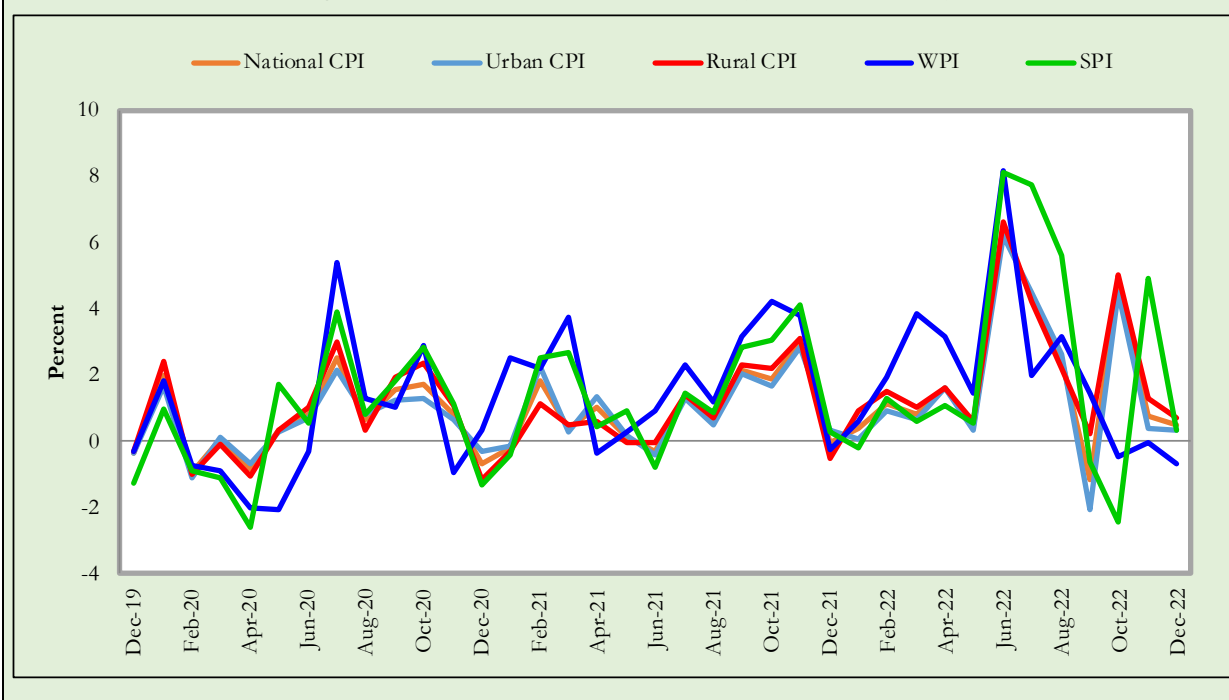


Fig 5.2: Movements in Price Indices (MoM in percent) - Urban CPI Basket

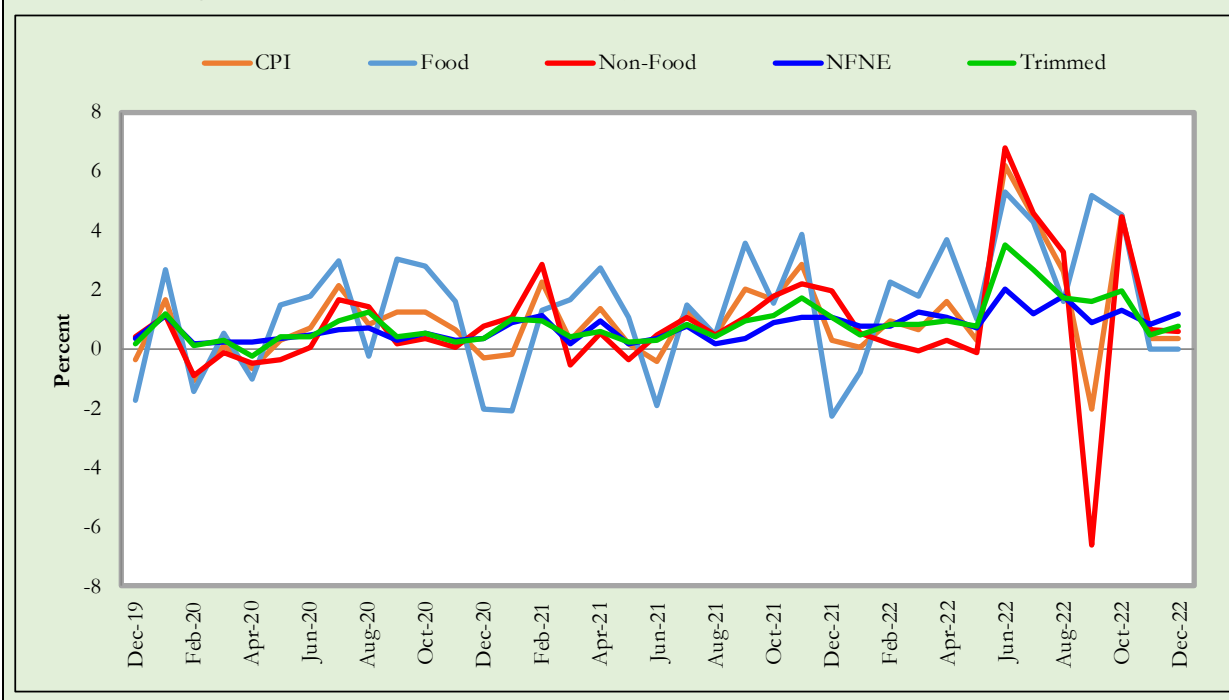
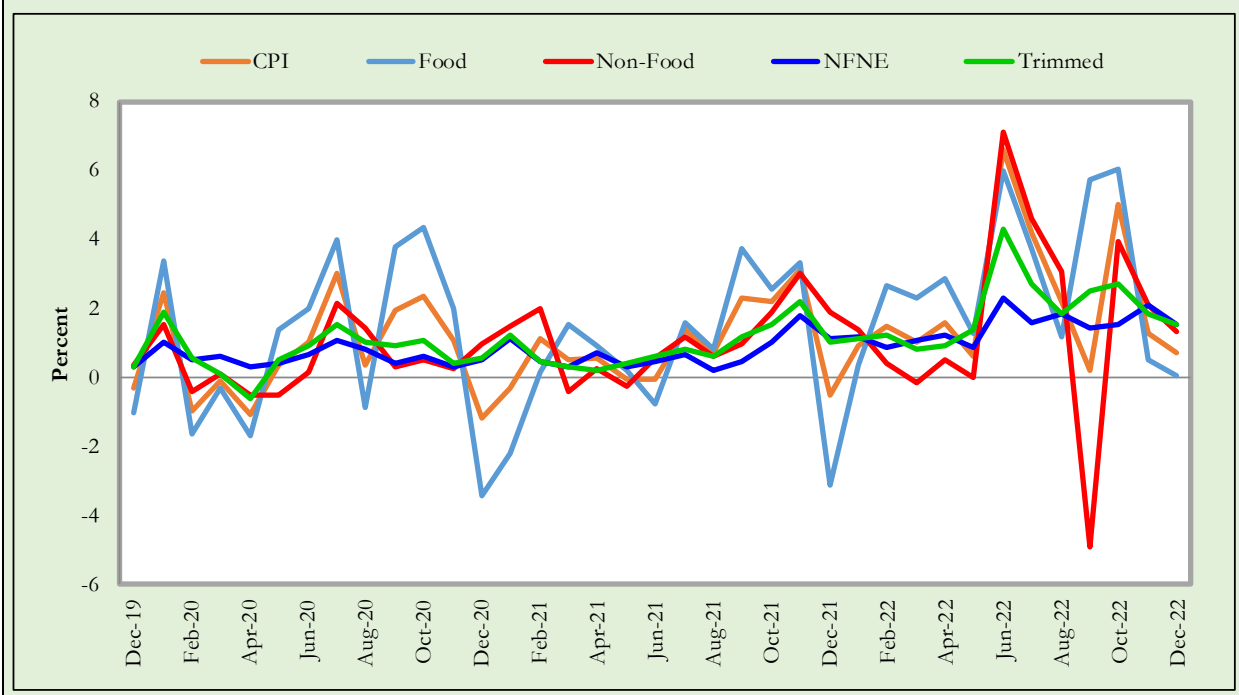
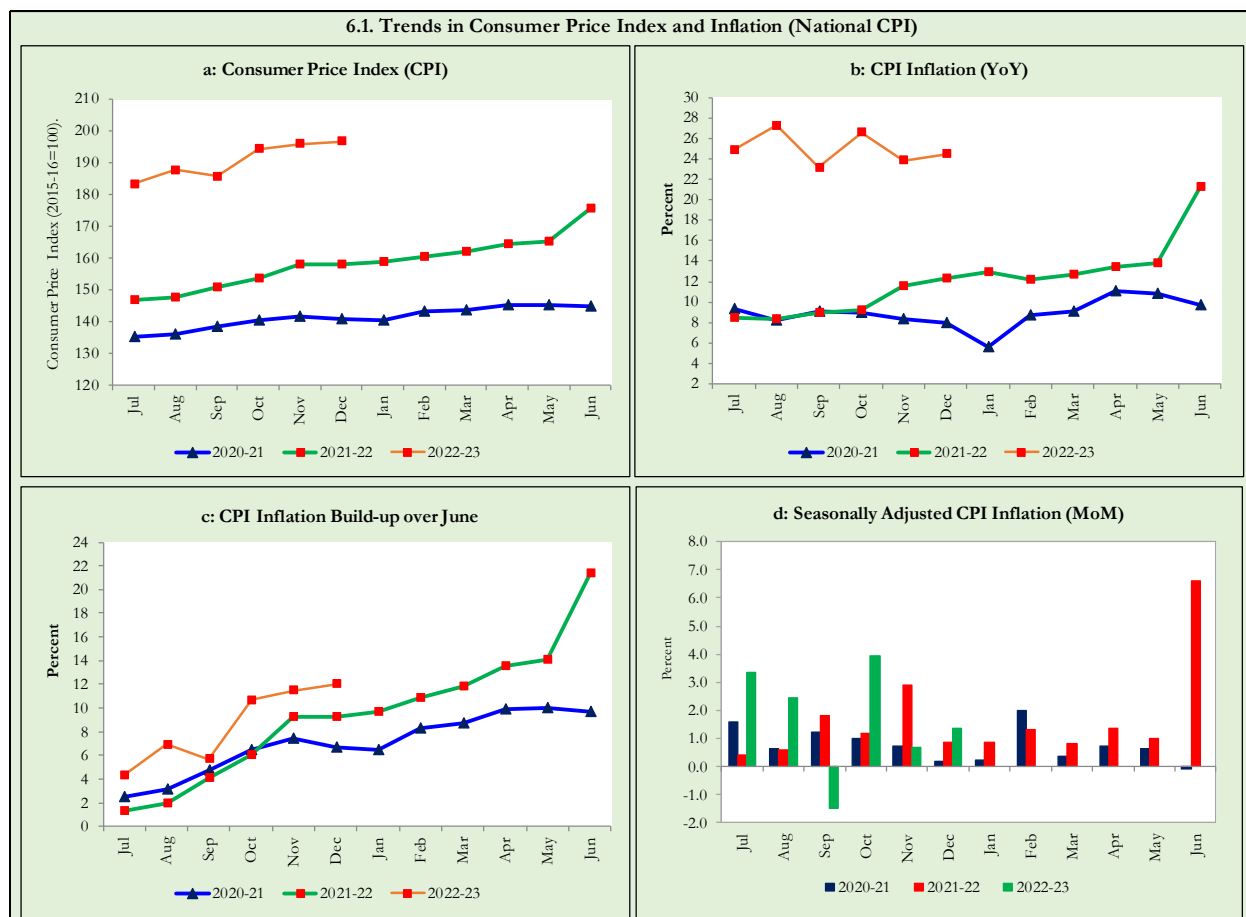


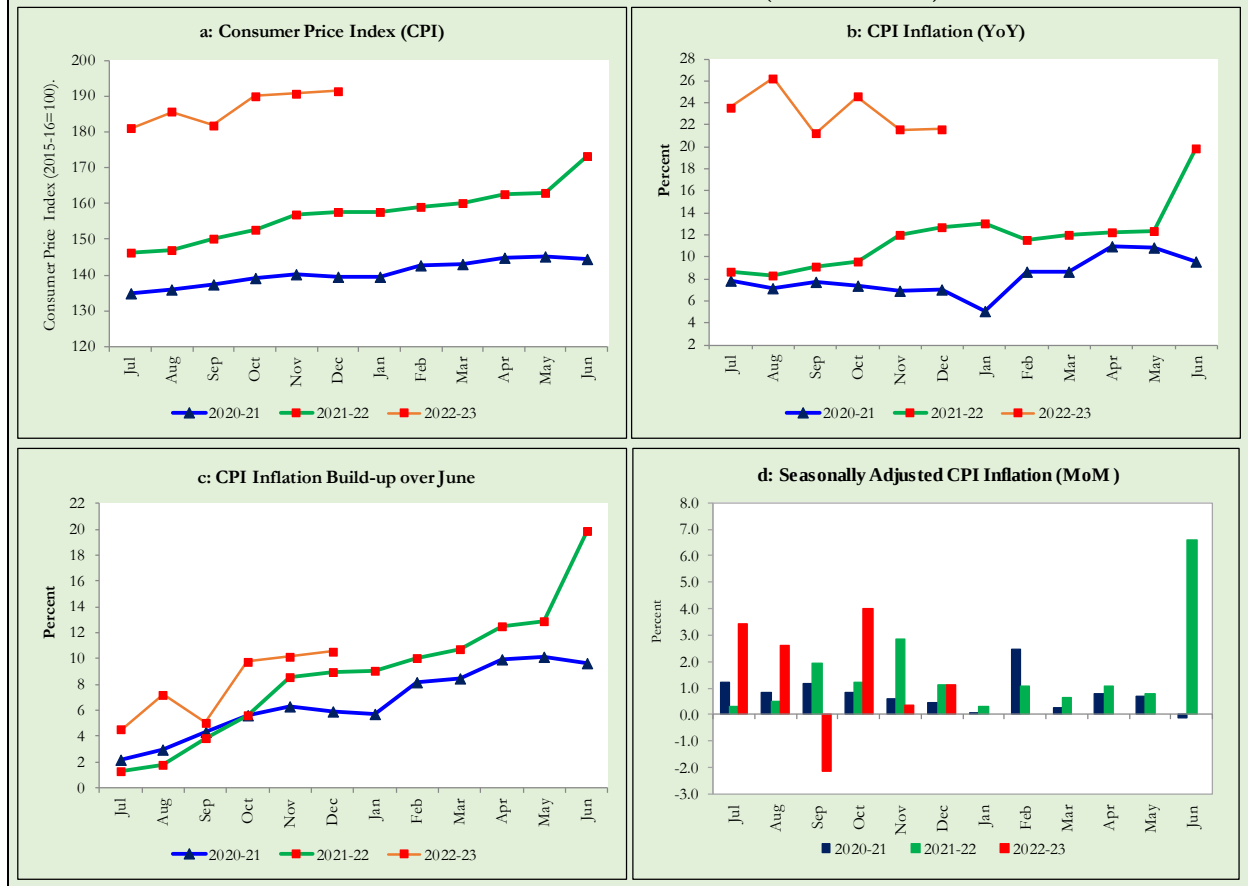
Fig 5.3: Movements in Price Indices (MoM in percent) - Rural CPI Basket

6. Trends in Consumer Price Indices and Inflation

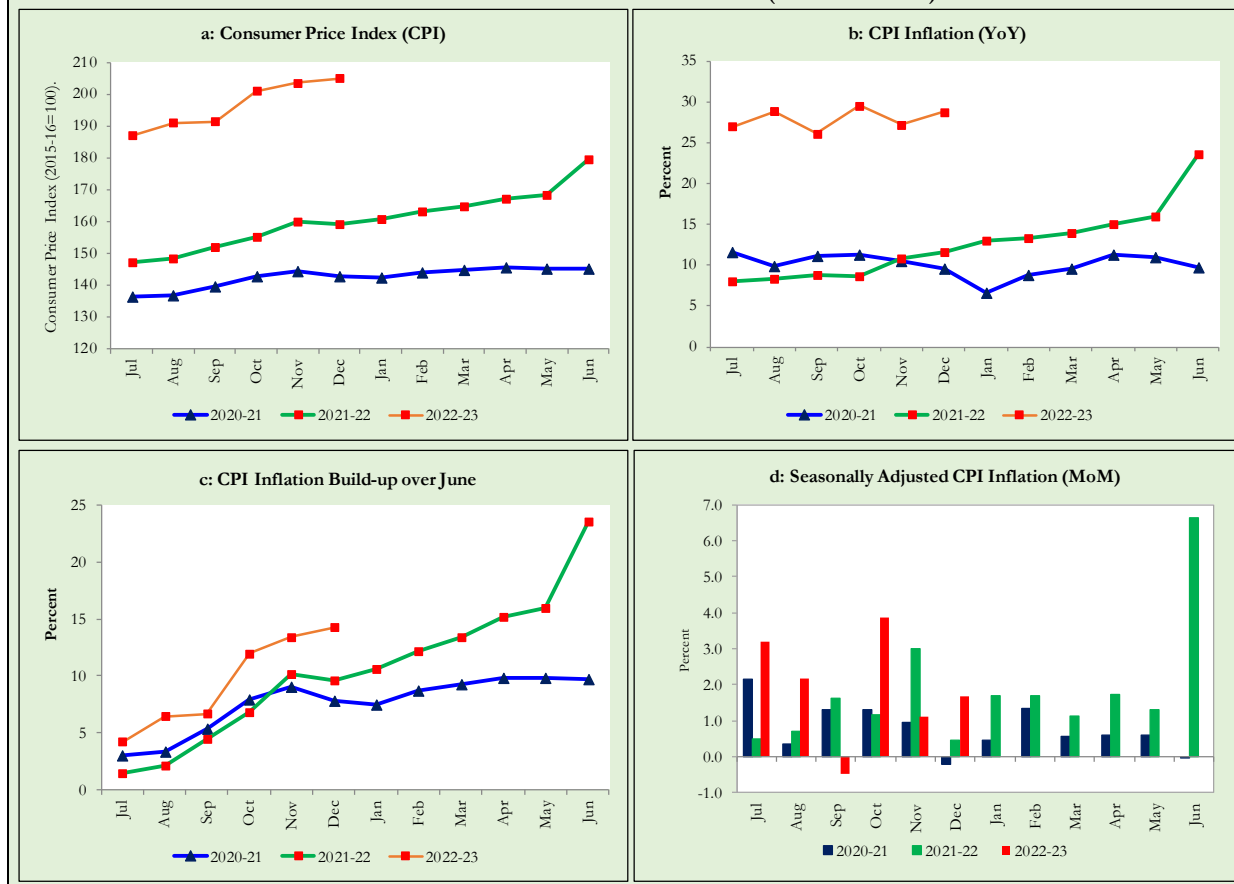
Monthly Consumer Price Indices, CPI inflation (YoY) and inflation build up over June along with seasonally adjusted (MoM) growth rates in CPI (National, Urban and Rural) is summarized in the following graphs (Figure 6.1 to 6.3).



6.2. Trends in Consumer Price Index and Inflation (Urban CPI Basket)



6.3. Trends in Consumer Price Index and Inflation (Rural CPI Basket)



7. Weighted Contribution

The weighted contribution of food group in the overall Urban CPI Inflation increased to 57.3 percent during December 2022 from 53.5 percent in previous month. It was 35.0 percent during corresponding month of last year. The weighted contribution of non-food group decreased to 42.7 percent in December 2022 from 46.6 percent in previous month. Weighted Contribution of non-food was 65.0 percent during corresponding month of last year. Table 7.1 provides the historical perspective of weighted contribution of food and non-food group and their respective sub-indices (Perishable food, Non-Perishable food, Energy, Core Inflation (NFNE), NFNE excluding HRI and HRI) in the overall inflation for urban basket.

Table 7.1 Weighted Contribution (in percent) to Urban CPI Inflation (YoY)									
Period	Overall CPI	Food Group			Non-Food Group				
		Food	Perishable food	Non-Perishable food	Non-food	Energy	Core Inflation (NFNE)	NFNE excl HRI	HRI
	a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h	i
Dec-21	100.0	35.0	-3.4	38.5	65.0	30.8	34.2	24.6	9.5
Jan-22	100.0	38.2	2.0	36.2	61.8	28.4	33.4	24.5	8.9
Feb-22	100.0	46.1	10.9	35.2	54.0	18.7	35.3	25.5	9.8
Mar-22	100.0	45.6	8.9	36.7	54.4	15.3	39.1	29.7	9.4
Apr-22	100.0	48.5	9.6	38.9	51.5	12.7	38.7	30.4	8.4
May-22	100.0	48.2	7.1	41.1	51.7	10.9	40.9	32.6	8.3
Jun-22	100.0	45.7	6.7	39.0	54.3	23.9	30.3	25.2	5.2
Jul-22	100.0	44.0	6.0	38.0	56.0	29.5	26.5	22.1	4.4
Aug-22	100.0	41.6	5.6	36.0	58.4	31.0	27.3	23.4	3.9
Sep-22	100.0	56.0	10.1	45.8	44.0	9.2	34.8	30.0	4.8
Oct-22	100.0	54.3	12.6	41.7	45.7	15.0	30.7	26.9	3.8
Nov-22	100.0	53.5	9.2	44.2	46.6	12.8	33.8	29.5	4.3
Dec-22	100.0	57.3	10.0	47.3	42.7	8.5	34.2	30.0	4.2

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

For rural basket, the weighted contribution of food group in the overall Rural CPI Inflation increased to 61.9 percent during December 2022 from 59.4 percent in previous month. It was 37.2 percent during corresponding month of last year. The weighted contribution of non-food group decreased to 38.1 percent in December 2022 from 40.6 percent in previous month. Weighted contribution of non-food group was 62.8 percent during corresponding month of last year. Table 7.2 provides the historical perspective of weighted contribution of food (Perishable food, Non-Perishable food) and non-food group (Energy, Core Inflation (NFNE), NFNE excluding HRI and HRI) in the overall inflation for rural basket.

Table 7.2 Weighted Contribution (in percent) to Rural CPI Inflation (YoY)

Period	Overall CPI	Food Group			Non-Food Group				
		Food	Perishable food	Non-Perishable food	Non-food	Energy	Core Inflation (NFNE)	NFNE excl HRI	HRI
	a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h	i
Dec-21	100.0	37.2	-6.9	44.1	62.8	31.2	31.6	27.0	4.6
Jan-22	100.0	43.2	2.7	40.5	56.8	27.7	29.1	25.3	3.8
Feb-22	100.0	51.3	12.4	38.9	48.7	19.2	29.5	25.8	3.6
Mar-22	100.0	52.6	11.2	41.5	47.4	16.7	30.7	27.2	3.5
Apr-22	100.0	55.5	12.7	42.8	44.5	14.6	29.9	26.8	3.1
May-22	100.0	56.7	10.6	46.1	43.3	13.2	30.1	27.1	3.0
Jun-22	100.0	54.2	8.7	45.4	45.8	21.7	24.1	22.1	2.0
Jul-22	100.0	52.1	6.9	45.2	47.9	25.4	22.6	20.8	1.8
Aug-22	100.0	49.6	6.8	42.9	50.4	26.7	23.7	22.0	1.7
Sep-22	100.0	60.1	11.6	48.5	39.9	12.6	27.3	25.5	1.8
Oct-22	100.0	60.7	15.2	45.5	39.3	14.6	24.7	23.1	1.6
Nov-22	100.0	59.4	10.8	48.6	40.6	13.7	26.9	25.3	1.6
Dec-22	100.0	61.9	10.9	50.9	38.1	11.6	26.5	25.0	1.6

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

8. Inflation Diffusion Index

Inflation Diffusion Index (IDI) is the difference (MoM change) 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 basket for which prices have reported. IDI for urban and rural baskets is presented in Table 8.1(a & b) for the last thirteen months.

Table 8.1(a) Inflation Diffusion Index for Urban CPI Basket - based on MoM change													
Groups	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	63.2	57.6	60.1	60.1	57.3	61.2	75.3	71.1	70.8	62.4	66.3	54.5	56.7
Food & Non-Alcoholic Beverages	34.4	40.0	46.7	34.4	44.4	37.8	57.8	66.7	54.4	56.7	43.3	18.9	26.7
Alcoholic Beverages & Tobacco	33.3	66.7	33.3	33.3	66.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Clothing & Footwear	85.0	77.5	77.5	70.0	67.5	72.5	82.5	62.5	70.0	62.5	72.5	75.0	77.5
Housing, Water, Elect, Gas & other Fuels	69.0	13.8	3.4	10.3	17.2	20.7	72.4	75.9	58.6	3.4	51.7	24.1	10.3
Furnishing & Household Equip. Maintenance etc.	88.1	88.1	90.5	90.5	90.5	97.6	100.0	97.6	95.2	97.6	100.0	100.0	95.2
Health	90.3	71.0	87.1	77.4	74.2	61.3	90.3	61.3	77.4	87.1	80.6	83.9	71.0
Transport	53.1	62.5	62.5	59.4	40.6	53.1	93.8	81.3	50.0	37.5	46.9	34.4	25.0
Communication	20.0	40.0	20.0	20.0	20.0	20.0	40.0	40.0	20.0	40.0	40.0	20.0	40.0
Recreation & Culture	24.0	36.0	36.0	68.0	44.0	76.0	44.0	52.0	80.0	72.0	80.0	24.0	72.0
Education	68.8	31.3	37.5	75.0	43.8	50.0	25.0	31.3	75.0	12.5	37.5	50.0	56.3
Restaurant & Hotels	100.0	78.6	92.9	78.6	78.6	92.9	92.9	85.7	100.0	92.9	100.0	100.0	100.0
Miscellaneous	86.2	89.7	86.2	100.0	89.7	96.6	100.0	86.2	96.6	93.1	89.7	100.0	96.6
NFNE	75.3	67.2	69.4	76.6	67.2	72.8	81.3	71.5	77.4	67.2	76.6	71.5	72.3

Table 8.1(b) Inflation Diffusion Index for Rural CPI Basket - based on MoM change

Groups	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
General	56.1	57.4	59.4	52.0	54.9	59.0	74.2	76.6	72.5	67.2	68.0	54.5	48.8
Food & Non-Alcoholic Beverages	21.5	44.3	45.6	41.8	32.9	40.5	53.2	64.6	53.2	62.0	55.7	13.9	12.7
Alcoholic Beverages & Tobacco	80.0	60.0	100.0	0.0	80.0	100.0	100.0	100.0	100.0	100.0	60.0	100.0	80.0
Clothing & Footwear	96.3	70.4	92.6	74.1	92.6	88.9	81.5	81.5	88.9	66.7	81.5	96.3	85.2
Housing, Water, Elect, Gas & other Fuels	73.9	17.4	4.3	0.0	26.1	26.1	82.6	95.7	78.3	30.4	56.5	34.8	0.0
Furnishing & Household Equip. Maintenance etc.	96.2	92.3	92.3	84.6	80.8	84.6	92.3	92.3	100.0	88.5	100.0	100.0	96.2
Health	78.6	64.3	78.6	42.9	71.4	42.9	100.0	64.3	71.4	92.9	64.3	100.0	78.6
Transport	43.8	62.5	62.5	37.5	50.0	68.8	87.5	75.0	43.8	68.8	31.3	18.8	25.0
Communication	20.0	20.0	20.0	20.0	20.0	20.0	20.0	40.0	20.0	20.0	20.0	20.0	20.0
Recreation & Culture	15.4	38.5	53.8	69.2	30.8	76.9	53.8	53.8	84.6	69.2	84.6	46.2	84.6
Education	20.0	60.0	80.0	80.0	100.0	80.0	80.0	100.0	80.0	0.0	100.0	80.0	80.0
Restaurant & Hotels	85.7	78.6	57.1	78.6	57.1	71.4	92.9	85.7	92.9	85.7	85.7	85.7	71.4
Miscellaneous	82.4	94.1	76.5	88.2	94.1	76.5	94.1	94.1	94.1	94.1	88.2	100.0	94.1
NFNE	72.1	67.6	71.3	66.9	74.3	69.9	82.4	78.7	80.9	72.1	76.5	80.9	74.3

9. Domestic Commodity Prices (Growth)

Growth of domestic food commodities (YoY and MoM in percent) 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	57.3	9.4	58.6	9.0
2	Wheat Flour Bag	20 Kg	32.4	3.8	37.4	2.7
3	Rice Basmati Broken (Superior/Average Quality)*	1 Kg	66.9	6.0	47.3	7.0
4	Beef With Bone (Average Quality)	1 Kg	19.2	0.3	21.6	0.4
5	Mutton (Average Quality)	1 Kg	26.0	0.2	21.7	0.7
6	Chicken Farm Broiler (Live)	1 Kg	43.8	5.4	41.4	1.7
7	Milk Fresh (Un-Boiled)	1 Litre	25.0	1.7	29.8	0.9
8	Eggs Farm	Dozen	54.4	9.7	57.8	13.7
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	29.4	-1.5	32.3	-0.9
10	Pulse Masoor (Washed)	1 Kg	24.6	-2.4	36.6	-2.0
11	Pulse Moong (Washed)	1 Kg	42.8	0.3	43.3	-0.7
12	Pulse Mash (Washed)	1 Kg	38.3	-0.3	44.3	-0.4
13	Pulse Gram	1 Kg	45.2	-2.1	54.3	-3.8
14	Potatoes	1 Kg	24.9	-21.9	15.1	-21.4
15	Onions	1 Kg	415.0	10.0	463.5	18.1
16	Tomatoes	1 Kg	14.7	-54.0	21.7	-52.1
17	Sugar Refined	1 Kg	2.4	3.1	3.8	4.8
18	Garlic (Lehsun)	1 Kg	21.8	2.3	21.2	0.8
19	Ginger (Adrak)	500 Gm	4.8	0.6	0.0	-0.1
20	Tea Lipton Yellow Label 190 Gm Packet	Each	63.8	1.2	58.1	3.0

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

10. Inflation in Global Context

In global context, Pakistan's inflation in comparison with inflation in selected developed and emerging economies is given in figure 10.1 and 10.2.

Fig 10.1: Inflation (YoY) in Global Context

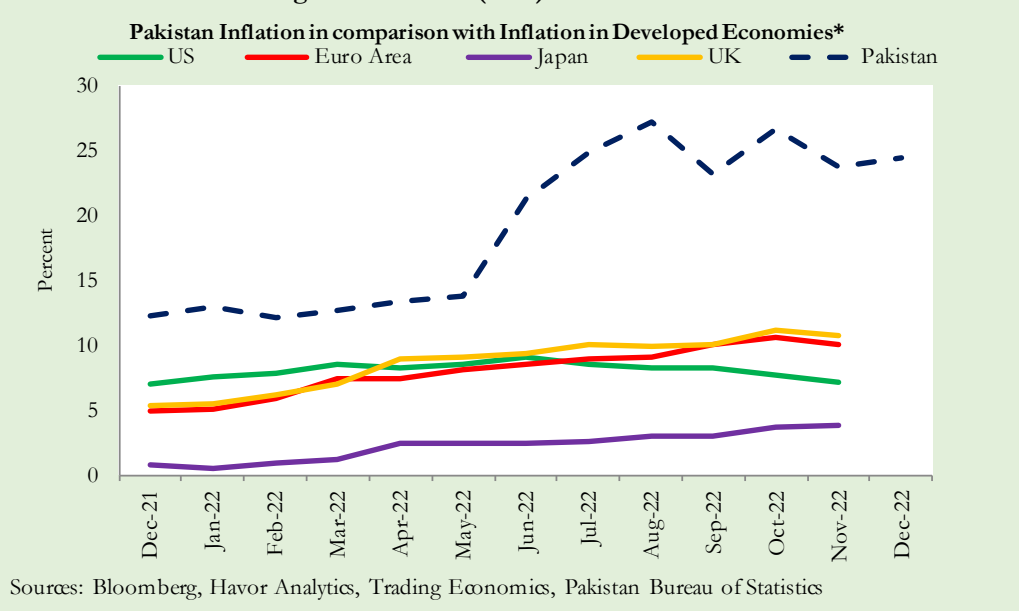
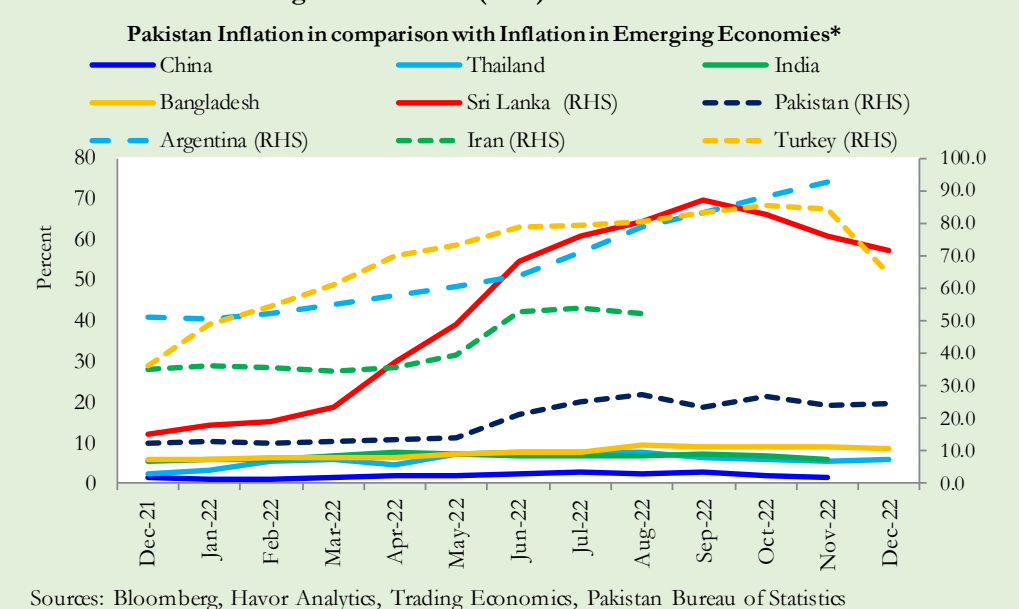


Fig 10.2: Inflation (YoY) in Global Context



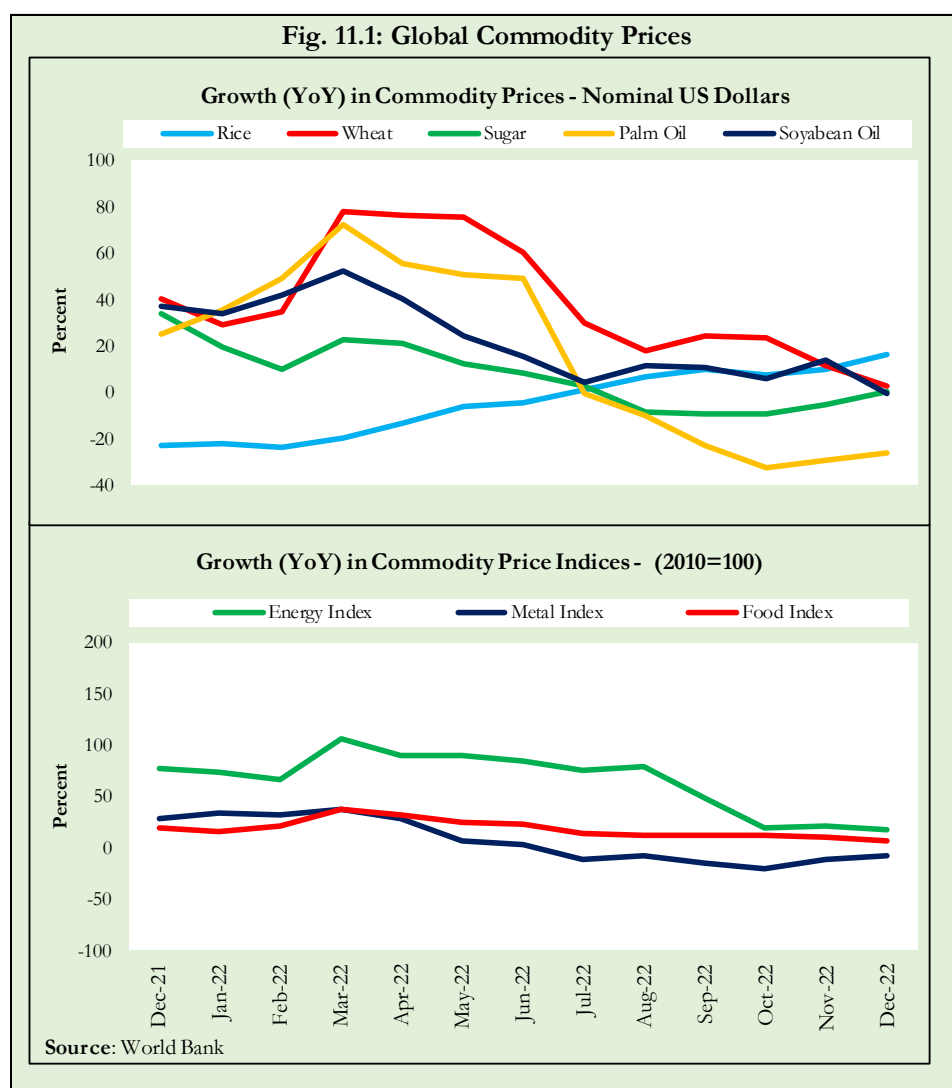
* US, Euro Area, Japan, UK, China, India, Bangladesh, Argentina and Iran has not released Inflation data for the month of December, 2022 as per Trading Economics/Bloomberg/Haver analytics.

Note for the readers: Inflation rates in countries such as Sri Lanka (57.2%), Argentina (92.4%), Iran (52.2%) and Turkey (64.2%) are higher than that of inflation in Pakistan (24.5%).

11. Global Commodity Prices (Growth)

Global commodity prices and various group indices have a relation with 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-21		Nov-22		Dec-22	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	18.6	1.1	9.2	-0.1	6.3	-1.5
Metals	27.7	0.0	-12.5	5.6	-8.3	4.8
Energy	76.3	-2.3	21.2	-4.6	16.4	-6.2
Agricultural	17.2	0.7	2.4	-0.5	1.0	-0.7
Cotton	48.2	-5.1	-20.2	1.3	-16.0	-0.1

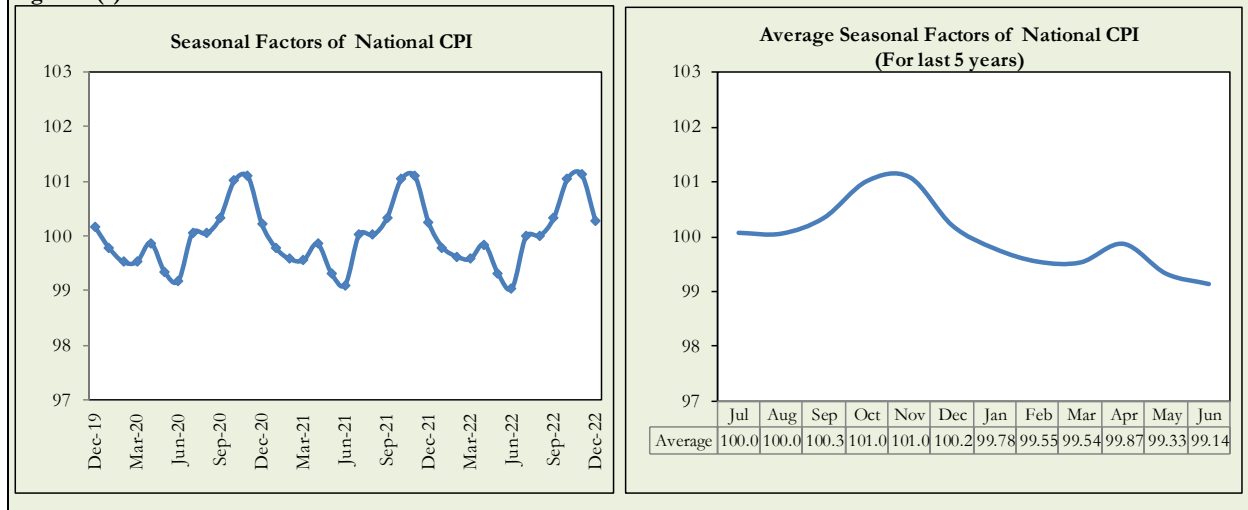
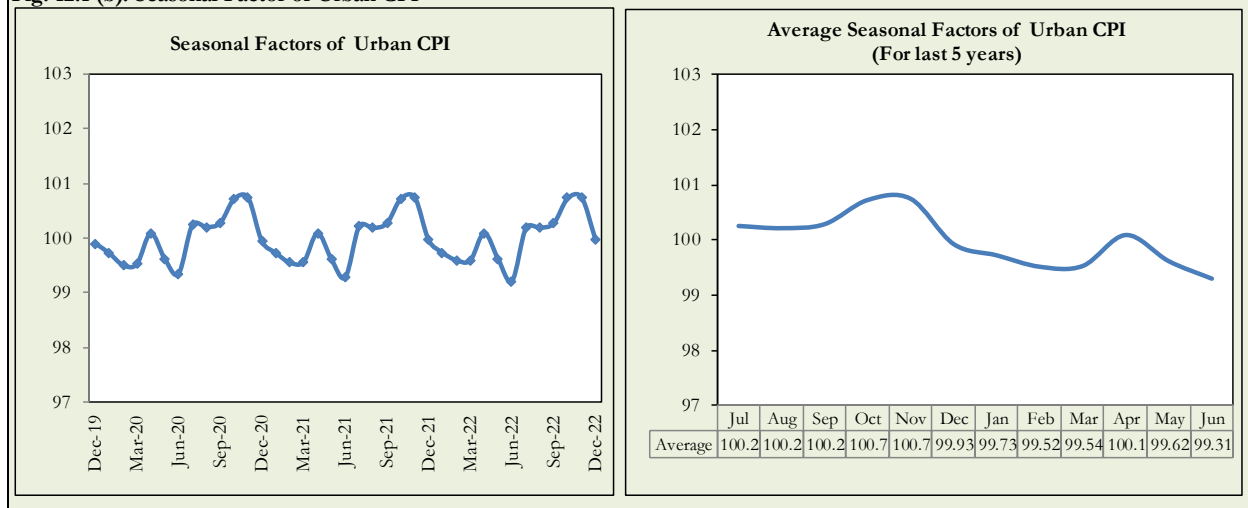
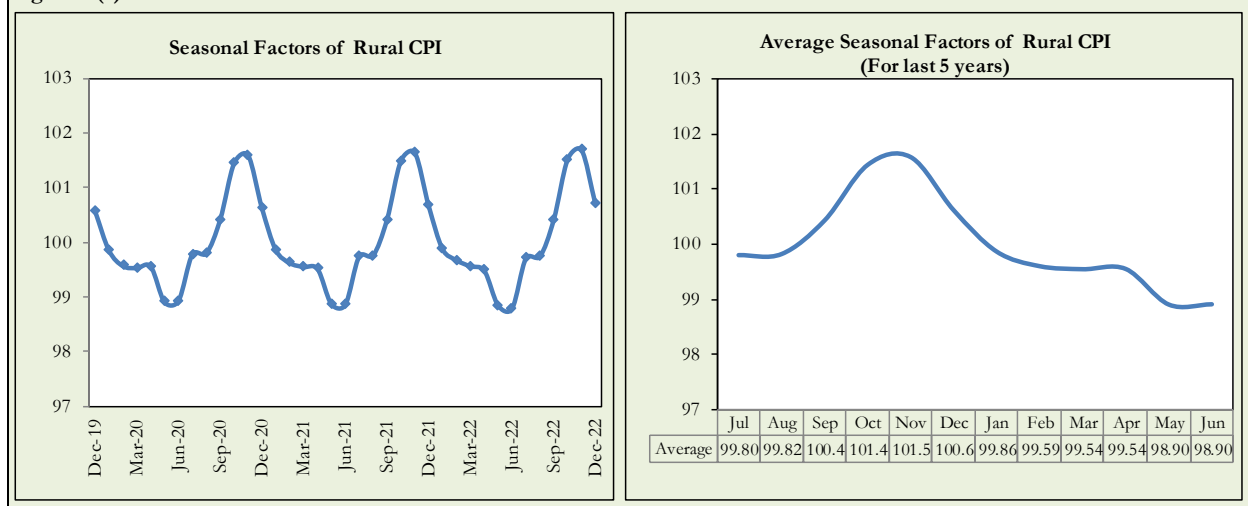


12. Seasonal Adjustment in CPI

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 these 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 Indices (National CPI, Urban CPI and Rural CPI) from December 2008 to December 2022 has been used for seasonal adjustment analysis.

Figure 12.1 reveals that 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 the months from July to December and downward seasonality in the remaining months of the year. Upward and downward seasonality is above and below the trend line respectively.

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

Figures 12.2 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. 12.2 (a): Seasonal Plot of National CPI

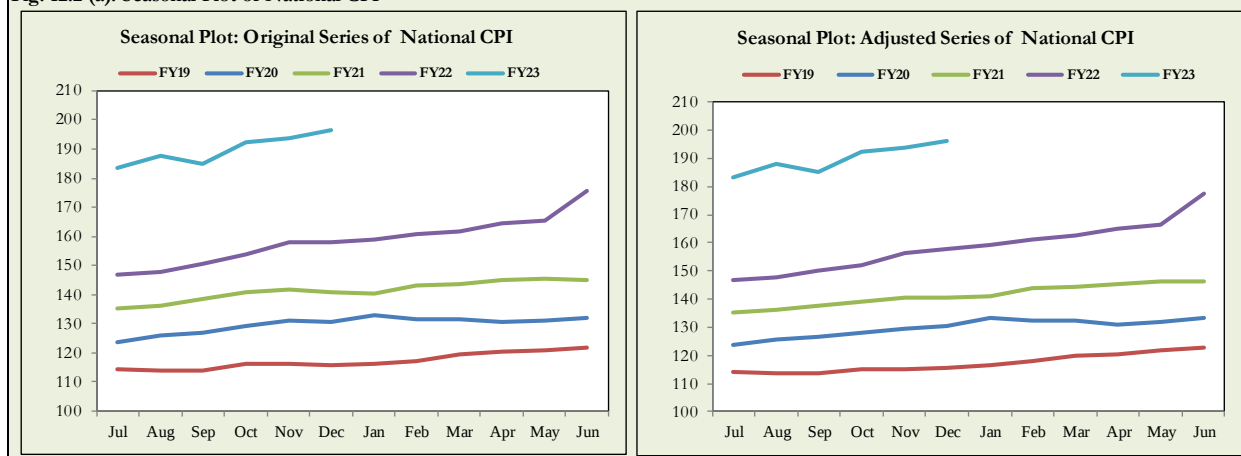


Fig. 12.2 (b): Seasonal Plot of Urban CPI

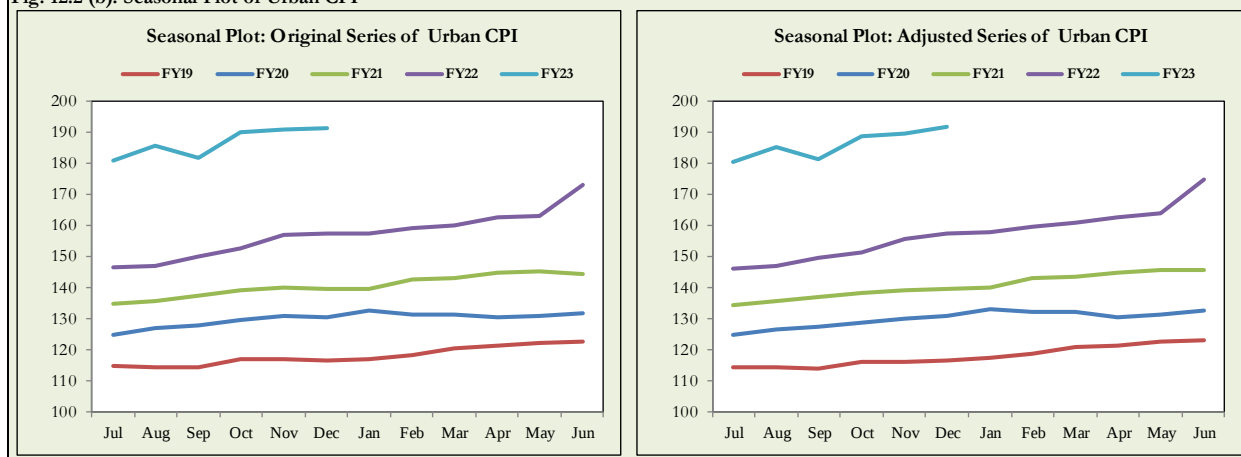
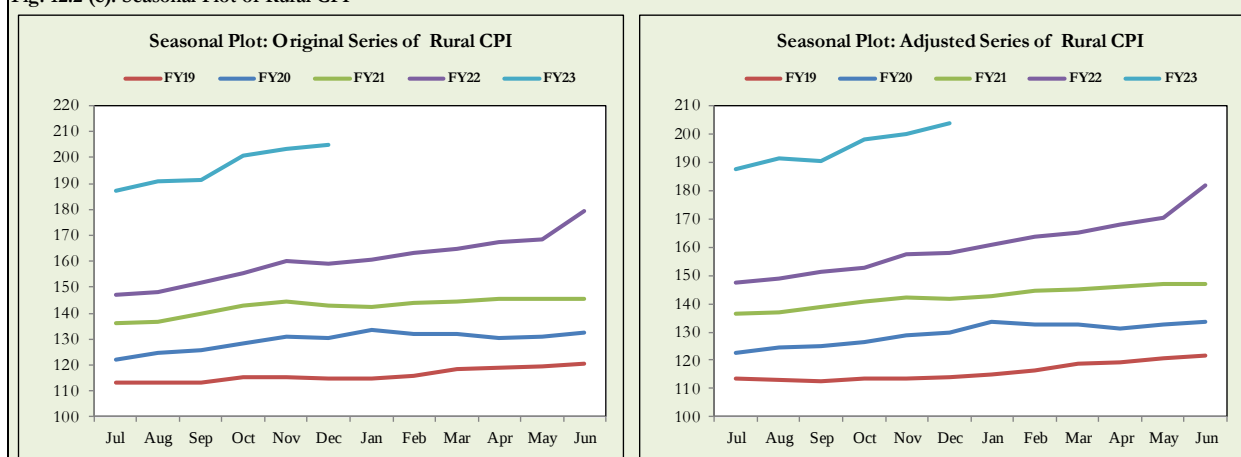


Fig. 12.2 (c): Seasonal Plot of Rural CPI

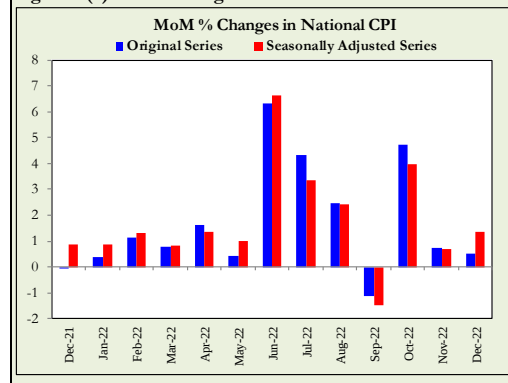


Seasonally adjusted Index of National CPI for December 2022 stood at 196.31 against 196.86 in original series showing a decrease of 0.55 because of seasonal adjustment.

Seasonally adjusted Index of Urban CPI for December 2022 stood at 191.50 against 191.46 in original series showing an increase of 0.04 on account of seasonal adjustment.

Seasonally adjusted Index of Rural CPI for December 2022 stood at 203.58 against 205.00 in original series showing a decrease of 1.42 on account of seasonal adjustment.

Fig. 12.3 (a): MoM Changes in National CPI



Month-on-month change of seasonally adjusted National CPI series showed an inflation of 1.36% during December 2022 over previous month against an inflation of 0.49% in original series.

Month-on-month change of seasonally adjusted Urban CPI series showed an inflation of 1.13% during December 2022 over previous month against an inflation of 0.35% in original series.

Month-on-month change of seasonally adjusted Rural CPI series showed an inflation of 1.69% during December 2022 over previous month against an inflation of 0.70% in original series.

Fig. 12.3 (b): MoM % Changes in Urban CPI

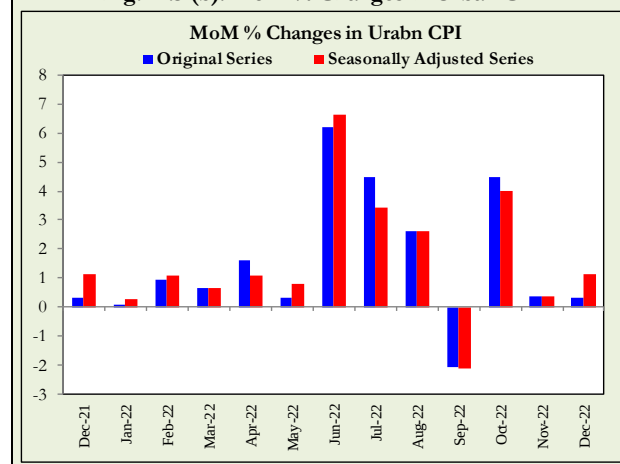
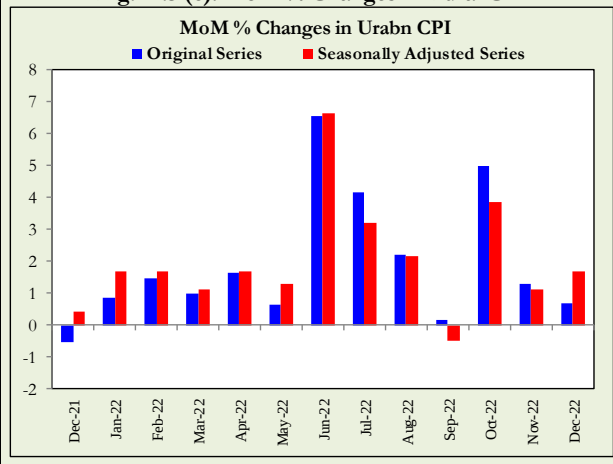


Fig. 12.3 (c): MoM % Changes in Rural CPI



List of Illustrations

Tables

Table A0: Inflation – Summary

Period	CPI							WPI			SPI**	Core Inflation			
	General			Food		Non-Food		General	Food	Non-Food		NFNE*		Trimmed	
	National	Urban	Rural	Urban	Rural	Urban	Rural					Urban	Rural	Urban	Rural
Annual Average															
FY20	10.7	10.2	11.6	13.6	15.9	8.3	8.1	10.2	13.3	8.6	14.4	7.5	8.7	8.3	10.1
FY21	8.9	8.1	10.0	12.4	13.1	5.7	7.4	9.4	14.5	6.6	11.2	6.0	7.6	7.6	9.6
FY22	12.2	11.8	12.7	13.4	13.0	10.8	12.3	24.9	13.1	32.0	16.9	8.1	9.0	10.4	11.2
Year-on-Year															
Dec-21	12.3	12.7	11.6	11.7	9.0	13.4	14.0	26.2	11.7	35.2	19.3	8.3	8.9	10.8	10.3
Jan-22	13.0	13.0	12.9	13.3	11.8	12.8	13.9	24.0	12.5	30.7	19.5	8.2	9.0	10.6	10.9
Feb-22	12.2	11.5	13.3	14.3	14.6	9.9	12.2	23.6	12.5	30.1	18.1	7.8	9.4	9.8	11.3
Mar-22	12.7	11.9	13.9	14.5	15.5	10.4	12.5	23.8	14.3	29.1	15.8	8.9	10.3	10.5	11.7
Apr-22	13.4	12.2	15.1	15.6	17.7	10.2	12.8	28.1	15.3	35.7	16.5	9.1	10.9	10.5	12.8
May-22	13.8	12.4	15.9	15.5	19.0	10.4	13.1	29.6	13.9	38.9	16.1	9.7	11.5	10.7	14.1
Jun-22	21.3	19.8	23.6	24.0	27.0	17.3	20.4	38.9	23.6	47.8	26.5	11.5	13.6	16.7	19.1
Jul-22	24.9	23.6	26.9	27.4	29.6	21.3	24.5	38.5	24.2	46.7	34.3	12.0	14.6	19.1	21.7
Aug-22	27.3	26.2	28.8	28.8	30.2	24.7	27.5	41.2	26.4	49.6	40.6	13.8	16.5	21.4	23.8
Sep-22	23.2	21.2	26.1	30.8	32.7	15.2	20.1	38.9	29.6	44.0	35.9	14.4	17.6	19.5	24.4
Oct-22	26.6	24.6	29.5	34.7	37.2	18.2	22.4	32.6	32.0	32.9	28.6	14.9	18.2	22.0	26.7
Nov-22	23.8	21.6	27.2	29.7	33.5	16.4	21.4	27.7	27.7	27.7	29.7	14.6	18.5	19.8	25.4
Dec-22	24.5	21.6	28.8	32.7	37.9	14.8	20.7	27.1	31.0	25.2	29.7	14.7	19.0	19.4	26.4
12- Month Moving Average															
Dec-21	9.5	9.5	9.4	11.2	9.5	8.5	9.4	18.0	12.4	21.4	14.2	6.7	7.4	9.2	9.3
Jan-22	10.1	10.2	10.0	11.7	9.9	9.3	10.1	19.5	12.5	23.8	15.3	7.0	7.5	9.5	9.4
Feb-22	10.4	10.4	10.4	12.0	10.3	9.5	10.4	20.7	12.4	25.8	16.0	7.1	7.6	9.6	9.6
Mar-22	10.7	10.7	10.7	12.3	10.7	9.8	10.7	21.5	12.4	27.0	16.1	7.3	7.9	9.6	9.8
Apr-22	10.9	10.8	11.1	12.3	11.1	9.9	11.1	22.5	12.4	28.6	16.0	7.5	8.2	9.7	9.9
May-22	11.2	11.0	11.5	12.3	11.6	10.1	11.4	23.3	12.2	30.1	16.0	7.7	8.5	9.7	10.3
Jun-22	12.2	11.8	12.7	13.4	13.0	10.8	12.3	24.9	13.1	32.0	16.9	8.1	9.0	10.4	11.2
Jul-22	13.6	13.1	14.2	15.0	14.9	11.9	13.6	26.7	14.2	34.2	18.8	8.6	9.7	11.4	12.5
Aug-22	15.1	14.6	15.9	16.5	16.6	13.4	15.3	28.8	15.5	36.6	21.1	9.2	10.5	12.4	13.9
Sep-22	16.3	15.6	17.4	18.2	18.7	14.0	16.3	30.4	17.2	38.1	23.0	9.9	11.5	13.7	15.4
Oct-22	17.8	16.9	19.2	20.4	21.3	14.7	17.3	31.3	19.1	38.3	24.2	10.6	12.4	15.2	17.0
Nov-22	18.9	17.7	20.6	22.0	23.5	15.1	18.0	31.3	20.5	37.4	25.3	11.1	13.3	16.4	18.2
Dec-22	19.9	18.4	22.0	23.7	25.9	15.2	18.5	31.3	22.2	36.3	26.2	11.7	14.2	17.3	19.6
Period Average (Since July)															
Dec-21	9.8	10.1	9.4	10.6	8.4	9.8	10.3	21.5	10.8	28.1	15.0	7.0	7.2	9.0	8.5
Jan-22	10.3	10.5	9.9	11.0	8.9	10.2	10.9	21.8	11.0	28.5	15.7	7.2	7.5	9.1	8.8
Feb-22	10.5	10.6	10.4	11.4	9.6	10.2	11.0	22.1	11.2	28.7	16.0	7.3	7.7	9.2	9.2
Mar-22	10.8	10.8	10.8	11.7	10.3	10.2	11.2	22.3	11.6	28.8	15.9	7.5	8.0	9.4	9.5
Apr-22	11.0	10.9	11.2	12.1	11.0	10.2	11.4	22.9	11.9	29.5	16.0	7.6	8.3	9.7	9.9
May-22	11.3	11.1	11.6	12.5	11.7	10.2	11.5	23.5	12.1	30.4	16.0	7.8	8.6	9.8	10.4
Jun-22	12.2	11.8	12.7	13.4	13.0	10.8	12.3	24.9	13.1	32.0	16.9	8.1	9.0	10.4	11.2
Jul-22	24.9	23.6	26.9	27.4	29.6	21.3	24.5	38.5	24.2	46.7	34.3	12.0	14.6	19.1	21.7
Aug-22	26.1	24.9	27.9	28.1	29.9	23.0	26.0	39.9	25.3	48.1	37.5	12.9	15.6	20.5	23.2
Sep-22	25.1	23.7	27.3	29.0	30.9	20.4	24.0	39.6	26.7	46.7	36.9	13.4	16.2	21.4	24.6
Oct-22	25.5	23.9	27.9	30.5	32.5	19.8	23.6	37.7	28.1	43.1	34.8	13.8	16.7	21.9	25.0
Nov-22	25.1	23.4	27.7	30.3	32.7	19.1	23.1	35.6	28.0	39.7	33.7	13.9	17.1	21.9	25.1
Dec-22	25.0	23.1	27.9	30.7	33.6	18.4	22.7	34.1	28.5	37.1	33.0	14.1	17.4	21.6	25.4
Month-on-Month															
Dec-21	-0.02	0.3	-0.5	-2.3	-3.1	2.0	1.9	-0.2	-1.1	0.2	0.3	1.1	1.1	1.1	1.0
Jan-22	0.4	0.1	0.9	-0.8	0.4	0.6	1.4	0.6	0.5	0.7	-0.2	0.8	1.2	0.5	1.1
Feb-22	1.2	0.9	1.5	2.2	2.6	0.2	0.4	1.9	1.5	2.2	1.3	0.8	0.9	0.8	1.2
Mar-22	0.8	0.7	1.0	1.8	2.3	-0.1	-0.2	3.9	3.0	4.3	0.6	1.2	1.1	0.8	0.8
Apr-22	1.6	1.6	1.6	3.7	2.8	0.3	0.5	3.2	2.8	3.4	1.1	1.1	1.2	0.9	0.9
May-22	0.4	0.3	0.6	1.0	1.3	-0.1	0.0	1.4	0.1	2.1	0.6	0.7	0.9	0.8	1.4
Jun-22	6.3	6.2	6.6	5.3	6.0	6.8	7.1	8.2	7.6	8.5	8.1	2.0	2.3	3.5	4.3
Jul-22	4.3	4.5	4.2	4.3	3.7	4.6	4.6	2.0	1.7	2.1	7.7	1.2	1.6	2.7	2.7
Aug-22	2.4	2.6	2.2	1.6	1.2	3.3	3.1	3.1	2.2	3.6	5.6	1.8	1.8	1.7	1.8
Sep-22	-1.2	-2.1	0.2	5.2	5.7	-6.6	-4.9	1.4	5.0	-0.2	-0.6	0.9	1.4	1.6	2.5
Oct-22	4.7	4.5	5.0	4.5	6.1	4.5	3.9	-0.5	3.4	-2.4	-2.4	1.3	1.5	1.9	2.7
Nov-22	0.8	0.4	1.3	0.0	0.5	0.6	2.1	-0.02	-1.4	0.7	4.9	0.8	2.1	0.5	1.8
Dec-22	0.5	0.3	0.7	0.0	0.1	0.6	1.4	-0.7	1.5	-1.8	0.3	1.2	1.5	0.8	1.5

* Non-Food Non-Energy, ** SPI for all expenditure groups combined

Source: Pakistan Bureau of Statistics

Table A1: National CPI Inflation by Groups (YoY and MoM in percent)

Groups	Weights	MoM change			YoY change		
		Dec-21	Nov-22	Dec-22	Dec-21	Nov-22	Dec-22
Food & Non-Alcoholic	34.6	-3.4	0.1	-0.1	10.3	31.2	35.5
Alcoholic Beverages & Tobacco	1.0	0.3	1.1	0.5	2.0	35.9	36.2
Clothing & Footwear	8.6	2.0	2.2	0.7	11.2	18.6	17.1
Housing, Water, Elec, Gas & other Fuels	23.6	2.8	0.6	0.0	16.6	9.9	7.0
Furnishing & Household Equip. Maintenance etc	4.1	2.3	2.8	2.4	12.3	29.1	29.2
Health	2.8	1.6	1.9	1.9	9.4	17.1	17.5
Transport	5.9	1.3	-0.1	-0.8	24.1	44.2	41.2
Communication	2.2	0.0	0.0	0.1	2.5	1.6	1.7
Recreation & Culture	1.6	0.6	2.0	10.9	7.7	25.6	38.5
Education	3.8	0.4	0.4	0.3	2.8	11.1	10.9
Restaurants & Hotels	6.9	2.1	1.9	1.3	12.6	28.4	27.4
Miscellaneous	4.9	0.7	2.3	3.0	10.6	23.0	25.8
Overall National CPI	100.0	-0.02	0.8	0.5	12.3	23.8	24.5

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

Groups	Weights	MoM change			YoY change		
		Dec-21	Nov-22	Dec-22	Dec-21	Nov-22	Dec-22
I. Food Group	36.8	-2.3	0.0	0.0	11.7	29.7	32.7
Food & Non-Alcoholic Beverages	30.4	-3.0	-0.3	-0.3	11.7	28.9	32.6
Alcoholic Beverages & Tobacco	0.9	0.1	1.6	0.2	2.1	37.2	37.3
Restaurant & Hotels (Food)	5.5	2.1	1.4	1.6	13.6	33.2	32.6
II. Non-Food Group	63.2	2.0	0.6	0.6	13.4	16.4	14.8
Clothing & Footwear	8.0	2.9	1.3	0.7	12.2	19.6	17.0
Housing, Water, Elec, Gas & other Fuels	27.0	2.6	-0.1	-0.5	15.4	7.3	4.1
Furnishing & Household Equip. Maintenance etc	4.1	1.8	2.6	2.3	11.4	29.0	29.7
Health	2.3	1.6	1.6	1.1	10.1	14.1	13.5
Transport	6.1	1.3	-0.1	-0.7	25.0	42.1	39.2
Communication	2.4	0.0	0.0	0.1	3.3	1.8	1.8
Recreation & Culture	1.7	0.5	1.1	13.4	7.9	22.3	38.0
Education	4.9	0.5	0.2	0.2	2.6	11.1	10.8
Restaurants & Hotels (Non-food Component)	1.9	3.1	3.0	1.6	12.2	18.1	16.4
Miscellaneous	4.8	0.6	1.7	2.4	10.4	23.8	25.9
Overall Urban CPI	100.0	0.3	0.4	0.3	12.7	21.6	21.6

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

Groups	Weights	MoM Change			YoY Change		
		Dec-21	Nov-22	Dec-22	Dec-21	Nov-22	Dec-22
I. Food Group	45.9	-3.1	0.5	0.1	9.0	33.5	37.9
Food and Non-Alcoholic Beverages	40.9	-3.7	0.4	0.0	8.9	33.7	38.7
Alcoholic Beverages, Tobacco	1.3	0.5	0.6	0.9	1.9	34.4	35.0
Restaurants and Hotels (Food Component)	3.8	2.2	1.8	0.9	12.1	31.4	29.6
II. Non-Food Group	54.1	1.9	2.1	1.4	14.0	21.4	20.7
Clothing and Footwear	9.5	0.9	3.2	0.8	10.1	17.4	17.2
Housing, Water, Elec., Gas and Other Fuels	18.5	3.2	1.8	1.1	19.2	15.6	13.2
Furnishing and Household Equip. Maintenance	4.1	3.1	3.2	2.6	13.7	29.2	28.6
Health	3.5	1.7	2.3	2.8	8.7	20.2	21.4
Transport	5.6	1.3	0.0	-0.9	22.5	47.9	44.6
Communication	2.0	0.0	0.1	0.0	0.9	1.4	1.4
Recreation and Culture	1.4	0.6	3.4	6.8	7.3	31.3	39.4
Education	2.1	0.3	0.8	0.4	3.5	11.1	11.3
Restaurants and Hotels (Non-Food Component)	2.4	0.5	3.3	0.2	10.4	16.9	16.6
Miscellaneous	5.0	0.9	3.2	3.9	10.7	21.9	25.6
Rural CPI	100.0	-0.5	1.3	0.7	11.6	27.2	28.8

Table A4: National CPI Inflation by Groups

Period	General	Food and Non-Alcoholic Beverages	Non-Perishable Food Items	Perishable Food Items	Alcoholic Beverages, Tobacco	Clothing and Footwear	Housing, Water, Elec, Gas and Other Fuels	Furnishing and Household Equipment	Health	Transport	Communication	Recreation and Culture	Education	Restaurants and Hotels	Misc. Goods and Services
Year-on-Year															
Dec-21	12.3	10.3	14.2	-10.2	2.0	11.2	16.6	12.3	9.4	24.1	2.5	7.7	2.8	12.6	10.6
Jan-22	13.0	12.8	13.8	6.4	2.0	11.2	15.5	13.0	9.2	23.1	2.6	7.8	3.2	13.0	10.3
Feb-22	12.2	14.7	12.1	34.9	2.1	9.7	9.0	13.4	10.1	25.0	2.5	8.2	3.4	14.4	10.1
Mar-22	12.7	15.3	13.3	30.1	1.8	9.7	8.3	13.8	10.0	26.3	2.6	9.3	8.3	14.6	12.4
Apr-22	13.4	17.0	15.0	29.6	5.1	10.8	7.1	14.7	10.4	28.3	1.6	9.7	8.4	14.6	12.8
May-22	13.8	17.3	15.9	26.4	10.1	11.3	5.8	16.1	10.6	31.8	1.8	12.3	9.5	16.0	13.3
Jun-22	21.3	25.9	24.4	36.3	17.6	13.7	13.5	18.8	11.3	62.2	2.0	14.4	9.5	21.9	15.8
Jul-22	24.9	28.8	28.1	32.9	22.5	14.6	21.8	19.7	11.2	64.7	1.2	15.4	9.8	25.0	17.2
Aug-22	27.3	29.5	28.9	33.9	25.8	17.6	27.6	21.9	11.9	63.1	1.2	21.8	10.0	27.4	20.0
Sep-22	23.2	31.7	28.8	50.3	32.7	17.7	3.4	25.1	13.8	64.5	1.3	22.8	10.0	28.8	22.9
Oct-22	26.6	36.2	30.6	70.4	34.6	18.3	11.9	27.6	16.2	53.4	1.6	23.7	10.9	30.4	22.4
Nov-22	23.8	31.2	29.3	41.1	35.9	18.6	9.9	29.1	17.1	44.2	1.6	25.6	11.1	28.4	23.0
Dec-22	24.5	35.5	32.5	55.9	36.2	17.1	7.0	29.2	17.5	41.2	1.7	38.5	10.9	27.4	25.8
12- Month Moving Average															
Dec-21	9.5	10.5	14.1	-8.5	3.7	10.2	10.0	9.6	8.7	10.4	1.9	6.0	2.0	8.9	9.8
Jan-22	10.1	11.0	14.2	-6.2	3.4	10.3	11.1	10.0	8.8	12.6	2.0	6.2	2.1	9.2	9.7
Feb-22	10.4	11.4	14.0	-2.7	3.1	10.2	10.9	10.4	8.9	14.9	2.2	6.5	2.3	9.8	9.5
Mar-22	10.7	11.8	13.7	0.7	2.8	10.1	10.9	10.8	9.0	17.0	2.4	6.9	2.9	10.3	9.7
Apr-22	10.9	11.9	13.5	2.9	2.8	10.0	10.6	11.3	9.1	18.8	2.4	7.3	3.5	10.8	9.9
May-22	11.2	12.1	13.3	5.2	3.3	10.1	10.4	11.8	9.2	20.2	2.4	8.0	4.1	11.5	10.2
Jun-22	12.2	13.4	14.3	8.2	4.3	10.4	10.8	12.6	9.4	24.1	2.4	8.7	4.8	12.6	10.6
Jul-22	13.6	15.2	15.7	11.7	6.0	10.9	11.8	13.4	9.6	28.7	2.3	9.5	5.4	14.0	11.3
Aug-22	15.1	16.8	17.2	14.3	7.9	11.6	13.5	14.5	9.9	33.4	2.2	10.8	6.0	15.6	12.4
Sep-22	16.3	18.6	18.5	19.5	10.5	12.3	12.9	15.8	10.4	38.1	2.0	12.1	6.6	17.4	13.7
Oct-22	17.8	21.1	20.1	27.3	13.2	13.0	12.9	17.4	11.1	41.4	1.9	13.5	7.4	19.3	14.9
Nov-22	18.9	22.9	21.4	32.2	16.1	13.8	12.5	18.9	11.8	43.0	1.9	15.0	8.1	20.7	16.0
Dec-22	19.9	25.0	23.0	38.3	18.9	14.3	11.7	20.4	12.5	44.3	1.8	17.7	8.8	22.0	17.3
Period Average (Since July)															
Dec-21	9.8	9.6	12.8	-6.6	2.2	9.7	11.7	10.1	8.5	15.1	2.7	7.0	2.5	9.3	8.7
Jan-22	10.3	10.1	12.9	-5.1	2.1	9.9	12.3	10.5	8.6	16.3	2.7	7.1	2.6	9.8	8.9
Feb-22	10.5	10.6	12.8	-1.4	2.1	9.9	11.8	10.9	8.8	17.4	2.7	7.2	2.7	10.4	9.1
Mar-22	10.8	11.2	12.9	1.4	2.1	9.9	11.4	11.2	8.9	18.4	2.6	7.5	3.3	10.9	9.4
Apr-22	11.0	11.8	13.1	4.2	2.4	10.0	11.0	11.6	9.1	19.4	2.5	7.7	3.8	11.3	9.8
May-22	11.3	12.3	13.4	6.0	3.1	10.1	10.5	12.0	9.2	20.5	2.5	8.1	4.4	11.7	10.1
Jun-22	12.2	13.4	14.3	8.2	4.3	10.4	10.8	12.6	9.4	24.1	2.4	8.7	4.8	12.6	10.6
Jul-22	24.9	28.8	28.1	32.9	22.5	14.6	21.8	19.7	11.2	64.7	1.2	15.4	9.8	25.0	17.2
Aug-22	26.1	29.2	28.5	33.4	24.1	16.1	24.7	20.8	11.6	63.9	1.2	18.6	9.9	26.2	18.6
Sep-22	25.1	30.0	28.6	39.2	27.0	16.6	17.5	22.2	12.3	64.1	1.2	20.0	9.9	27.1	20.0
Oct-22	25.5	31.6	29.1	47.5	28.9	17.1	16.1	23.6	13.3	61.3	1.3	20.9	10.2	27.9	20.6
Nov-22	25.1	31.5	29.1	46.0	30.3	17.4	14.8	24.7	14.1	57.6	1.4	21.9	10.4	28.0	21.1
Dec-22	25.0	32.2	29.7	47.6	31.3	17.3	13.4	25.5	14.7	54.6	1.4	24.7	10.4	27.9	21.9
Month-on-Month															
Dec-21	-0.02	-3.4	-0.1	-20.9	0.3	2.0	2.8	2.3	1.6	1.3	0.0	0.6	0.4	2.1	0.7
Jan-22	0.4	-0.5	0.3	-5.2	0.1	0.8	1.0	1.1	0.7	1.0	0.1	0.4	0.4	1.0	0.8
Feb-22	1.2	2.5	0.9	14.0	0.3	1.0	-1.6	1.8	2.1	3.6	0.0	0.5	0.3	1.7	1.1
Mar-22	0.8	2.3	2.7	-0.3	0.0	1.0	-2.2	1.4	0.6	0.3	0.0	1.3	4.7	0.9	1.6
Apr-22	1.6	3.7	1.2	20.4	3.1	2.1	-0.7	1.6	0.9	0.4	0.0	0.4	0.6	0.2	0.8
May-22	0.4	0.9	3.0	-10.8	4.9	0.7	-2.3	1.8	0.5	2.7	0.1	2.8	1.0	1.8	1.2
Jun-22	6.3	5.5	5.5	5.4	7.0	2.3	7.7	2.9	1.2	24.4	0.2	3.2	0.3	5.8	3.3
Jul-22	4.3	4.1	3.6	6.7	4.1	1.1	8.8	1.7	0.2	5.7	0.4	1.6	0.5	2.9	1.6
Aug-22	2.4	1.3	1.0	3.3	2.7	2.8	5.5	2.3	1.2	-0.3	0.1	6.3	1.1	2.3	2.7
Sep-22	-1.2	5.8	4.1	16.1	5.9	0.3	-17.7	3.4	2.2	2.2	0.1	2.0	0.0	2.2	3.8
Oct-22	4.7	5.6	2.9	20.3	1.8	1.0	10.9	2.9	2.8	-1.8	0.4	1.9	1.0	2.5	0.9
Nov-22	0.8	0.1	1.2	-5.0	1.1	2.2	0.6	2.8	1.9	-0.1	0.0	2.0	0.4	1.9	2.3
Dec-22	0.5	-0.1	2.4	-12.6	0.5	0.7	0.0	2.4	1.9	-0.8	0.1	10.9	0.3	1.3	3.0
3-Years Average (in current month during FY21-FY23)															
YoY	14.9	19.7	21.0	15.0	14.7	12.7	9.0	16.4	11.6	20.6	1.6	16.9	5.0	16.6	16.1
MoM	-0.1	-2.2	0.6	-16.2	0.3	1.1	1.3	1.7	1.5	0.7	0.0	4.0	0.2	1.3	1.3

Source: Pakistan Bureau of Statistics

Table A5: Urban CPI Inflation by Groups

Period	General	Food and Non-Alcoholic Beverages	Non-Perishable Food Items	Perishable Food Items	Alcoholic Beverages, Tobacco	Clothing and Footwear	Housing, Water, Elec, Gas and Other Fuels	Furnishing and Household Equipment Maintenance	Health	Transport	Communication	Recreation and Culture	Education	Restaurants and Hotels	Misc. Goods and Services
Year-on-Year															
Dec-21	12.7	11.7	15.5	-8.7	2.1	12.2	15.4	11.4	10.1	25.0	3.3	7.9	2.6	13.2	10.4
Jan-22	13.0	13.6	14.7	6.3	2.0	12.4	14.2	11.9	10.0	23.4	3.4	8.1	3.0	13.2	10.1
Feb-22	11.5	14.5	11.8	34.1	2.0	9.4	7.8	12.4	10.2	24.8	3.3	8.0	3.2	15.0	9.6
Mar-22	11.9	14.8	13.0	28.0	1.5	9.6	7.1	12.6	10.0	26.3	3.3	8.7	9.0	14.5	11.9
Apr-22	12.2	16.0	14.4	25.6	4.8	10.5	5.6	13.5	10.3	28.6	2.0	8.9	9.2	14.5	12.0
May-22	12.4	15.8	15.0	20.6	9.4	11.0	4.4	15.2	10.3	32.2	2.3	11.9	10.4	14.5	12.2
Jun-22	19.8	24.6	23.5	32.4	18.3	14.2	11.3	17.6	10.9	61.5	2.5	13.3	10.4	21.2	15.1
Jul-22	23.6	27.8	27.1	32.4	21.7	15.0	19.2	18.2	10.8	63.8	1.1	13.9	10.5	24.7	16.8
Aug-22	26.2	28.9	28.2	33.5	25.8	18.8	24.8	20.3	11.8	62.4	1.2	20.4	10.1	27.4	20.1
Sep-22	21.2	30.7	27.9	48.3	34.1	18.9	1.0	24.3	12.3	63.3	1.2	21.1	10.0	29.1	23.1
Oct-22	24.6	34.8	29.4	67.0	35.4	19.5	9.5	27.6	13.6	51.7	1.7	21.4	11.1	31.8	23.7
Nov-22	21.6	28.9	27.1	38.6	37.2	19.6	7.3	29.0	14.1	42.1	1.8	22.3	11.1	29.5	23.8
Dec-22	21.6	32.6	29.6	52.9	37.3	17.0	4.1	29.7	13.5	39.2	1.8	38.0	10.8	28.6	25.9
12- Month Moving Average															
Dec-21	9.5	11.4	15.1	-7.1	4.4	10.8	9.3	8.9	9.1	10.9	2.5	5.2	1.6	9.3	9.8
Jan-22	10.2	12.0	15.2	-5.1	4.0	11.1	10.3	9.4	9.3	13.2	2.7	5.6	1.8	9.6	9.7
Feb-22	10.4	12.3	14.9	-1.7	3.7	10.9	10.1	9.8	9.5	15.5	2.9	6.0	2.0	10.2	9.6
Mar-22	10.7	12.6	14.6	1.4	3.2	10.7	10.0	10.2	9.6	17.5	3.2	6.4	2.7	10.8	9.7
Apr-22	10.8	12.5	14.2	3.2	3.1	10.5	9.6	10.6	9.6	19.3	3.2	6.9	3.3	11.3	9.9
May-22	11.0	12.5	13.9	4.8	3.4	10.5	9.3	11.1	9.7	20.8	3.2	7.6	4.1	11.7	10.0
Jun-22	11.8	13.7	14.8	7.5	4.5	10.8	9.6	11.9	9.7	24.5	3.2	8.3	4.9	12.7	10.4
Jul-22	13.1	15.2	16.0	11.0	6.0	11.2	10.5	12.6	9.9	29.0	3.0	9.0	5.6	14.0	11.0
Aug-22	14.6	16.8	17.3	13.6	7.9	11.9	12.0	13.5	10.1	33.6	2.8	10.2	6.2	15.7	12.2
Sep-22	15.6	18.5	18.4	18.8	10.5	12.7	11.3	14.8	10.4	38.1	2.6	11.5	6.9	17.4	13.5
Oct-22	16.9	20.7	19.8	25.9	13.3	13.5	11.1	16.4	10.8	41.2	2.4	12.7	7.7	19.4	14.7
Nov-22	17.7	22.1	20.8	30.2	16.2	14.3	10.6	18.0	11.2	42.5	2.3	13.9	8.4	20.9	15.9
Dec-22	18.4	23.9	22.0	35.8	19.2	14.7	9.6	19.5	11.5	43.5	2.1	16.5	9.1	22.2	17.2
Period Average (Since July)															
Dec-21	10.1	10.7	14.1	-6.1	2.5	10.4	10.8	9.8	9.2	15.9	3.7	6.7	2.2	9.8	8.9
Jan-22	10.5	11.1	14.1	-4.6	2.5	10.7	11.3	10.1	9.3	17.0	3.6	6.9	2.3	10.3	9.0
Feb-22	10.6	11.5	13.8	-0.9	2.4	10.6	10.8	10.4	9.4	18.0	3.6	7.0	2.4	10.9	9.1
Mar-22	10.8	11.9	13.7	1.7	2.3	10.4	10.4	10.6	9.5	19.0	3.5	7.2	3.1	11.3	9.4
Apr-22	10.9	12.3	13.8	4.1	2.6	10.4	9.9	10.9	9.6	19.9	3.4	7.4	3.8	11.7	9.7
May-22	11.1	12.7	13.9	5.5	3.2	10.5	9.4	11.3	9.6	21.1	3.3	7.8	4.4	11.9	9.9
Jun-22	11.8	13.7	14.8	7.5	4.5	10.8	9.6	11.9	9.7	24.5	3.2	8.3	4.9	12.7	10.4
Jul-22	23.6	27.8	27.1	32.4	21.7	15.0	19.2	18.2	10.8	63.8	1.1	13.9	10.5	24.7	16.8
Aug-22	24.9	28.4	27.6	33.0	23.7	16.9	22.0	19.2	11.3	63.1	1.2	17.1	10.3	26.1	18.5
Sep-22	23.7	29.2	27.7	38.2	27.2	17.6	14.9	20.9	11.6	63.2	1.2	18.5	10.2	27.1	20.0
Oct-22	23.9	30.6	28.1	45.8	29.2	18.1	13.5	22.6	12.1	60.2	1.3	19.2	10.4	28.3	20.9
Nov-22	23.4	30.3	27.9	44.1	30.8	18.4	12.2	23.9	12.5	56.2	1.4	19.8	10.6	28.5	21.5
Dec-22	23.1	30.7	28.2	45.5	31.9	18.1	10.8	24.9	12.7	53.1	1.5	22.9	10.6	28.6	22.3
Month-on-Month															
Dec-21	0.3	-3.0	0.2	-20.2	0.1	2.9	2.6	1.8	1.6	1.3	0.0	0.5	0.5	2.3	0.6
Jan-22	0.1	-1.1	-0.4	-5.4	0.0	0.7	0.6	0.9	0.5	0.4	0.1	0.3	0.5	0.6	0.7
Feb-22	0.9	2.3	0.5	14.7	0.2	1.3	-1.6	2.0	1.6	3.4	0.0	0.2	0.1	2.0	1.2
Mar-22	0.7	2.1	2.6	-1.1	0.1	0.9	-2.2	1.1	0.9	0.5	0.0	0.9	5.7	0.7	1.8
Apr-22	1.6	4.3	1.7	20.8	3.3	2.0	-0.6	1.6	0.8	0.6	0.0	0.2	0.6	0.2	0.7
May-22	0.3	0.9	3.1	-10.8	4.6	0.5	-2.3	2.0	0.4	2.9	0.2	3.0	1.1	0.6	1.1
Jun-22	6.2	5.0	4.9	5.5	8.2	3.0	7.0	2.6	1.4	23.5	0.2	3.1	0.1	6.6	3.7
Jul-22	4.5	4.3	3.8	7.3	2.9	1.0	8.6	1.5	0.1	5.6	0.4	1.2	0.3	3.3	1.4
Aug-22	2.6	1.4	1.2	2.8	3.4	3.4	5.2	2.3	1.6	-0.2	0.0	6.3	0.7	2.3	3.4
Sep-22	-2.1	5.4	4.0	14.0	6.8	0.1	-17.8	4.1	1.0	2.0	0.1	2.0	0.0	2.8	3.9
Oct-22	4.5	4.8	2.2	18.5	1.3	1.0	10.9	3.3	1.7	-2.2	0.6	1.7	1.1	3.0	1.4
Nov-22	0.4	-0.3	0.7	-4.4	1.6	1.3	-0.1	2.6	1.6	-0.1	0.0	1.1	0.2	1.8	1.7
Dec-22	0.3	-0.3	2.2	-12.0	0.2	0.7	-0.5	2.3	1.1	-0.7	0.1	13.4	0.2	1.6	2.4
3-Years Average (in current month during FY21-FY23)															
YoY	13.8	19.1	20.3	14.9	15.3	12.7	7.4	15.7	10.3	20.2	1.9	16.4	4.8	17.3	15.6
MoM	0.1	-2.0	0.8	-15.5	0.1	1.3	1.0	1.5	1.2	0.8	0.1	4.7	0.2	1.6	1.1

Source: Pakistan Bureau of Statistics

Table A6: Rural CPI Inflation by Groups

Period	General	Food and Non-Alcoholic Beverages	Non-Perishable Food Items	Perishable Food Items	Alcoholic Beverages, Tobacco	Clothing and Footwear	Housing, Water, Elec, Gas and Other Fuels	Furnishing and Household Equipment Maintenance	Health	Transport	Communication	Recreation and Culture	Education	Restaurants and Hotels	Misc. Goods and Services
Year-on-Year															
Dec-21	11.6	8.9	12.8	-12.0	1.9	10.1	19.2	13.7	8.7	22.5	0.9	7.3	3.5	11.5	10.7
Jan-22	12.9	12.0	12.8	6.6	2.0	9.7	18.5	14.8	8.3	22.5	1.1	7.4	3.7	12.6	10.8
Feb-22	13.3	15.0	12.4	35.8	2.3	10.0	11.6	15.0	10.0	25.4	1.1	8.5	4.4	13.3	10.7
Mar-22	13.9	15.9	13.7	32.8	2.3	9.8	11.1	15.6	10.0	26.2	1.1	10.5	5.6	14.6	13.1
Apr-22	15.1	18.2	15.8	34.4	5.5	11.3	10.3	16.4	10.4	27.9	0.8	11.0	5.1	14.7	13.9
May-22	15.9	19.0	17.0	33.7	11.0	11.7	9.1	17.5	10.9	31.0	0.8	13.0	6.0	18.5	14.9
Jun-22	23.6	27.4	25.5	41.2	16.9	13.1	18.4	20.5	11.8	63.4	1.0	16.3	6.2	23.0	16.8
Jul-22	26.9	29.9	29.3	33.5	23.4	14.0	27.6	22.0	11.7	66.3	1.2	18.2	7.2	25.4	17.7
Aug-22	28.8	30.2	29.6	34.3	25.8	16.2	33.9	24.2	12.0	64.2	1.4	24.3	9.8	27.5	19.7
Sep-22	26.1	32.8	29.7	52.6	31.1	16.3	8.6	26.2	15.2	66.6	1.4	25.7	9.8	28.2	22.6
Oct-22	29.5	37.9	31.9	74.2	33.7	16.8	17.3	27.7	18.9	56.4	1.3	27.7	10.2	27.9	20.5
Nov-22	27.2	33.7	31.8	43.8	34.4	17.4	15.6	29.2	20.2	47.9	1.4	31.3	11.1	26.4	21.9
Dec-22	28.8	38.7	35.7	59.5	35.0	17.2	13.2	28.6	21.4	44.6	1.4	39.4	11.3	25.2	25.6
12- Month Moving Average															
Dec-21	9.4	9.5	13.1	-10.0	3.0	9.5	11.7	10.5	8.4	9.5	0.8	7.4	3.1	8.2	9.8
Jan-22	10.0	9.9	13.1	-7.5	2.8	9.4	12.9	10.9	8.3	11.7	0.8	7.4	3.3	8.5	9.7
Feb-22	10.4	10.5	13.0	-3.8	2.5	9.4	12.9	11.4	8.3	14.0	0.9	7.5	3.5	8.9	9.5
Mar-22	10.7	10.9	12.7	-0.1	2.3	9.4	12.9	11.8	8.4	16.1	1.0	7.8	3.8	9.5	9.7
Apr-22	11.1	11.2	12.7	2.6	2.5	9.5	12.9	12.3	8.6	17.9	1.0	8.2	4.0	10.1	10.0
May-22	11.5	11.7	12.7	5.6	3.1	9.6	12.8	12.9	8.8	19.3	1.0	8.6	4.3	11.0	10.4
Jun-22	12.7	13.2	13.9	9.0	4.2	9.9	13.5	13.7	9.1	23.4	1.0	9.3	4.5	12.3	10.9
Jul-22	14.2	15.1	15.5	12.7	6.0	10.4	14.9	14.7	9.4	28.3	1.0	10.3	4.7	13.9	11.6
Aug-22	15.9	16.8	17.1	15.0	8.0	11.1	17.0	15.9	9.7	33.2	1.0	11.7	5.2	15.6	12.8
Sep-22	17.4	18.8	18.6	20.3	10.5	11.8	16.6	17.3	10.4	38.1	1.1	13.2	5.7	17.4	14.1
Oct-22	19.2	21.5	20.4	29.0	13.2	12.5	16.9	18.9	11.3	41.8	1.1	14.9	6.2	19.1	15.2
Nov-22	20.6	23.7	22.1	34.6	15.9	13.1	16.7	20.4	12.4	43.9	1.1	16.9	6.9	20.4	16.2
Dec-22	22.0	26.3	24.0	41.3	18.7	13.7	16.2	21.6	13.5	45.6	1.2	19.7	7.6	21.6	17.5
Period Average (Since July)															
Dec-21	9.4	8.4	11.4	-7.2	1.7	8.9	13.8	10.6	7.8	13.7	0.9	7.5	3.8	8.3	8.3
Jan-22	9.9	8.9	11.6	-5.6	1.8	9.0	14.5	11.2	7.9	15.0	1.0	7.5	3.8	8.9	8.7
Feb-22	10.4	9.7	11.7	-1.8	1.8	9.1	14.1	11.7	8.2	16.3	1.0	7.6	3.8	9.5	9.0
Mar-22	10.8	10.4	11.9	1.2	1.9	9.2	13.8	12.1	8.4	17.5	1.0	7.9	4.0	10.1	9.4
Apr-22	11.2	11.2	12.3	4.3	2.3	9.4	13.4	12.6	8.6	18.5	1.0	8.2	4.2	10.6	9.9
May-22	11.6	11.9	12.8	6.5	3.0	9.6	13.0	13.0	8.8	19.7	1.0	8.7	4.3	11.3	10.3
Jun-22	12.7	13.2	13.9	9.0	4.2	9.9	13.5	13.7	9.1	23.4	1.0	9.3	4.5	12.3	10.9
Jul-22	26.9	29.9	29.3	33.5	23.4	14.0	27.6	22.0	11.7	66.3	1.2	18.2	7.2	25.4	17.7
Aug-22	27.9	30.0	29.5	33.9	24.6	15.1	30.8	23.1	11.8	65.3	1.3	21.3	8.5	26.4	18.7
Sep-22	27.3	31.0	29.6	40.4	26.8	15.5	23.3	24.1	13.0	65.7	1.3	22.7	8.9	27.0	20.0
Oct-22	27.9	32.8	30.2	49.5	28.5	15.8	21.7	25.0	14.5	63.3	1.3	24.0	9.2	27.3	20.1
Nov-22	27.7	33.0	30.5	48.2	29.7	16.1	20.4	25.9	15.6	59.9	1.3	25.5	9.6	27.1	20.5
Dec-22	27.9	33.9	31.4	49.9	30.6	16.3	19.1	26.3	16.6	57.2	1.4	27.8	9.9	26.7	21.4
Month-on-Month															
Dec-21	-0.5	-3.7	-0.4	-21.8	0.5	0.9	3.2	3.1	1.7	1.3	0.0	0.6	0.3	1.6	0.9
Jan-22	0.9	0.2	1.0	-5.1	0.3	0.8	1.9	1.3	0.9	2.0	0.2	0.7	0.2	1.6	1.0
Feb-22	1.5	2.8	1.4	13.3	0.3	0.6	-1.4	1.3	2.5	3.9	0.0	1.2	0.8	1.0	0.8
Mar-22	1.0	2.5	2.8	0.5	0.0	1.1	-2.3	1.7	0.2	0.0	0.1	2.0	1.1	1.2	1.4
Apr-22	1.6	3.1	0.6	20.0	2.8	2.3	-0.8	1.6	0.9	0.2	0.1	0.8	1.0	0.3	1.0
May-22	0.6	0.8	2.8	-10.7	5.3	0.9	-2.5	1.5	0.6	2.5	0.0	2.5	0.8	3.9	1.3
Jun-22	6.6	6.1	6.2	5.2	5.6	1.6	9.2	3.3	1.1	25.9	0.2	3.4	0.9	4.4	2.8
Jul-22	4.2	3.8	3.5	6.0	5.5	1.2	9.4	2.0	0.3	5.7	0.4	2.2	1.4	2.2	2.0
Aug-22	2.2	1.2	0.7	3.9	1.9	2.0	6.0	2.4	0.8	-0.5	0.2	6.4	2.8	2.4	1.9
Sep-22	0.2	6.2	4.2	18.4	4.8	0.5	-17.5	2.4	3.4	2.5	0.1	2.2	0.0	1.2	3.7
Oct-22	5.0	6.6	3.7	22.2	2.5	1.0	10.9	2.2	3.9	-1.3	0.0	2.4	0.5	1.7	0.2
Nov-22	1.3	0.4	1.7	-5.5	0.6	3.2	1.8	3.2	2.3	0.0	0.1	3.4	0.8	2.3	3.2
Dec-22	0.7	0.0	2.6	-13.2	0.9	0.8	1.1	2.6	2.8	-0.9	0.0	6.8	0.4	0.7	3.9
3-Years Average (in current month during FY21-FY23)															
YoY	16.6	20.4	21.8	15.3	14.1	12.7	12.4	17.4	12.9	21.3	0.9	17.8	5.6	15.4	16.7
MoM	-0.3	-2.5	0.3	-17.0	0.6	0.9	2.0	2.1	1.8	0.5	0.0	2.7	0.2	0.9	1.6

Source: Pakistan Bureau of Statistics

Table A7: Top Ten Contributors to Urban CPI Inflation (YoY) – December 2022

Items/Contributors		Weights	YoY Change		Weighted Contribution (%)
			Dec-21	Dec-22	
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	39.68	49.45	8.55
2	Milk Fresh	7.11	14.46	26.00	8.35
3	Readymade Food	5.52	13.57	32.61	8.32
4	Onions	0.59	-27.73	414.98	6.73
5	Wheat Flour	3.01	19.12	40.58	5.76
6	House Rent	19.26	6.62	5.27	4.24
7	Appliances/Articles/Products For Personal	2.98	11.74	25.74	3.39
8	Washing Soap/Detergents/Match Box	1.41	16.57	46.65	3.05
9	Chicken	1.36	-14.34	43.76	2.49
10	Meat	2.04	20.40	22.03	2.48
Total		46.19			53.36
B. Ranked by Percentage Change					
1	Onions	0.59	-27.73	414.98	6.73
2	Tea	0.84	8.62	63.81	2.42
3	Text Books	0.67	10.98	59.20	1.55
4	Wheat	0.61	14.63	57.26	1.85
5	Eggs	0.51	-8.19	54.38	1.68
6	Gram Whole	0.09	20.13	53.18	0.21
7	Motor Fuel	2.91	39.68	49.45	8.55
8	Dessert Preparation	0.04	5.02	47.90	0.08
9	Washing Soap/Detergents/Match Box	1.41	16.57	46.65	3.05
10	Butter	0.09	8.59	46.65	0.26
Total		7.76			26.38
C. Ranked by Weights					
1	House Rent	19.26	6.62	5.27	4.24
2	Milk Fresh	7.11	14.46	26.00	8.35
3	Readymade Food	5.52	13.57	32.61	8.32
4	Education	4.88	2.63	10.82	2.33
5	Electricity Charges	4.56	59.38	-2.69	-0.69
6	Wheat Flour	3.01	19.12	40.58	5.76
7	Appliances/Articles/Products For Personal	2.98	11.74	25.74	3.39
8	Motor Fuel	2.91	39.68	49.45	8.55
9	Cotton Cloth	2.22	9.94	21.36	2.19
10	Meat	2.04	20.40	22.03	2.48
Total		54.49			44.92

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 21.6 percent in December 2022.

Table A8: Top Ten Contributors to Urban CPI Inflation (MoM) in December 2022

Table A6: Top Ten Contributors to Urban CPI Inflation (MoM) in December 2022					
Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Text Books	0.67	0.19	32.12	52.31
2	Fresh Fruits	1.44	-1.97	13.36	45.98
3	Onions	0.59	34.42	9.99	39.05
4	Wheat Flour	3.01	-1.04	3.66	36.32
5	Milk Fresh	7.11	0.77	1.51	31.01
6	Readymade Food	5.52	1.40	1.63	27.95
7	Washing Soap/Detergents/Match Box	1.41	3.63	5.11	24.03
8	Wheat	0.61	-0.62	9.45	22.54
9	Rice	1.18	1.00	5.85	22.05
10	Eggs	0.51	5.34	9.71	21.71
Total		22.05			322.95
B. Ranked by Percentage Change					
1	Text Books	0.67	0.19	32.12	52.31
2	Fresh Fruits	1.44	-1.97	13.36	45.98
3	Onions	0.59	34.42	9.99	39.05
4	Eggs	0.51	5.34	9.71	21.71
5	Wheat	0.61	-0.62	9.45	22.54
6	Dry Fruits	0.33	12.79	8.84	8.32
7	Solid Fuel	0.42	5.87	6.63	6.56
8	Rice	1.18	1.00	5.85	22.05
9	Dessert Preparation	0.04	0.65	5.67	0.67
10	Chicken	1.36	-5.08	5.43	21.69
Total		7.15			240.88
C. Ranked by Weights					
1	House Rent	19.26	0.00	0.00	0.00
2	Milk Fresh	7.11	0.77	1.51	31.01
3	Readymade Food	5.52	1.40	1.63	27.95
4	Education	4.88	0.23	0.22	2.74
5	Electricity Charges	4.56	-0.34	-3.34	-44.39
6	Wheat Flour	3.01	-1.04	3.66	36.32
7	Appliances/Articles/Products For Personal	2.98	1.02	1.73	14.50
8	Motor Fuel	2.91	-0.01	-1.82	-24.68
9	Cotton Cloth	2.22	1.06	0.51	3.27
10	Meat	2.04	0.30	0.23	1.64
Total		54.49			48.36

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Urban CPI, which is 0.3 percent in December 2022.

Table A9: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY) in December 2022

Items/Contributors		Weights	YoY Change		Weighted Contribution (%)
			Dec-21	Dec-22	
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	39.68	49.45	8.55
2	Milk Fresh	7.11	14.46	26.00	8.35
3	Readymade Food	5.52	13.57	32.61	8.32
4	Onions	0.59	-27.73	414.98	6.73
5	Wheat Flour	3.01	19.12	40.58	5.76
6	House Rent	19.26	6.62	5.27	4.24
7	Appliances/Articles/Products For Personal	2.98	11.74	25.74	3.39
8	Washing Soap/Detergents/Match Box	1.41	16.57	46.65	3.05
9	Chicken	1.36	-14.34	43.76	2.49
10	Meat	2.04	20.40	22.03	2.48
11	Rice	1.18	10.05	46.61	2.46
12	Cooking Oil	1.10	59.33	31.97	2.42
13	Tea	0.84	8.62	63.81	2.42
14	Education	4.88	2.63	10.82	2.33
15	Vegetable Ghee	1.03	56.33	30.07	2.19
Total		55.22			65.18
Bottom 15 Contributors					
1	Electricity Charges	4.56	59.38	-2.69	-0.69
2	Condiments And Spices	1.33	-2.63	-8.05	-0.66
3	Gur	0.04	14.13	-2.68	0.00
4	Gas Charges	1.08	0.00	0.00	0.00
5	Therapeutic Appliances And Equipme	0.01	4.23	6.02	0.00
6	Major Tools & Equipments	0.01	10.48	18.08	0.01
7	Dental Services	0.02	7.21	13.59	0.01
8	Carpets	0.03	7.67	8.63	0.01
9	Postal Services	0.02	10.87	13.85	0.01
10	Newspapers	0.07	0.00	4.21	0.01
11	Motor Vehicle Tax	0.05	7.62	8.92	0.02
12	Electrical Appliances For Personal	0.05	9.87	10.94	0.02
13	Accommodation Services	0.13	4.87	6.55	0.03
14	Communication Services	1.88	1.96	0.52	0.03
15	Mustard Oil	0.01	60.77	41.48	0.03
Total		9.29			-1.17

Table A10: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM) in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Text Books	0.67	0.19	32.12	52.31
2	Fresh Fruits	1.44	-1.97	13.36	45.98
3	Onions	0.59	34.42	9.99	39.05
4	Wheat Flour	3.01	-1.04	3.66	36.32
5	Milk Fresh	7.11	0.77	1.51	31.01
6	Readymade Food	5.52	1.40	1.63	27.95
7	Washing Soap/Detergents/Match Box	1.41	3.63	5.11	24.03
8	Wheat	0.61	-0.62	9.45	22.54
9	Rice	1.18	1.00	5.85	22.05
10	Eggs	0.51	5.34	9.71	21.71
11	Chicken	1.36	-5.08	5.43	21.69
12	Personal Effects N.E.C.	0.94	4.03	4.99	17.98
13	Appliances/Articles/Products For Personal	2.98	1.02	1.73	14.50
14	Dry Fruits	0.33	12.79	8.84	8.32
15	Condiments And Spices	1.33	1.35	2.15	8.15
Total		28.99			393.59
Bottom 15 Contributors					
1	Tomatoes	0.35	-9.56	-53.96	-121.81
2	Fresh Vegetables	1.53	-26.42	-24.89	-121.80
3	Potatoes	0.45	14.57	-21.33	-45.28
4	Electricity Charges	4.56	-0.34	-3.34	-44.39
5	Motor Fuel	2.91	-0.01	-1.82	-24.68
6	Vegetable Ghee	1.03	-1.74	-2.03	-10.15
7	Cooking Oil	1.10	-1.53	-1.39	-7.23
8	Pulse Masoor	0.16	-11.17	-2.41	-1.05
9	Pulse Gram	0.17	-5.51	-2.14	-1.04
10	Besan	0.08	-3.50	-3.23	-0.81
11	Gram Whole	0.09	-2.01	-1.90	-0.61
12	Pulse Mash	0.12	-4.26	-0.26	-0.07
13	Gur	0.04	-1.61	-0.31	-0.03
14	Gas Charges	1.08	0.00	0.00	0.00
15	Newspapers	0.07	0.00	0.00	0.00
Total		13.74			-378.95

Table A11: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Fresh fruits	1.44	-1.97	13.36	45.98
2	Onions	0.59	34.42	9.99	39.05
3	Wheat flour	3.01	-1.04	3.66	36.32
4	Milk fresh	7.11	0.77	1.51	31.01
5	Readymade food	5.52	1.40	1.63	27.95
6	Wheat	0.61	-0.62	9.45	22.54
7	Rice	1.18	1.00	5.85	22.05
8	Eggs	0.51	5.34	9.71	21.71
9	Chicken	1.36	-5.08	5.43	21.69
10	Dry fruits	0.33	12.79	8.84	8.32
11	Condiments and Spices	1.33	1.35	2.15	8.15
12	Sugar	1.11	3.67	3.12	7.72
13	Beverages	0.89	0.41	2.28	4.93
14	Tea	0.84	14.79	1.18	3.73
15	Milk products	0.64	0.65	1.30	2.43
Total		26.48			303.58
Bottom 15 Contributors					
1	Tomatoes	0.35	-9.56	-53.96	-121.81
2	Fresh vegetables	1.53	-26.42	-24.89	-121.80
3	Potatoes	0.45	14.57	-21.33	-45.28
4	Vegetable ghee	1.03	-1.74	-2.03	-10.15
5	Cooking oil	1.10	-1.53	-1.39	-7.23
6	Pulse masoor	0.16	-11.17	-2.41	-1.05
7	Pulse gram	0.17	-5.51	-2.14	-1.04
8	Besan	0.08	-3.50	-3.23	-0.81
9	Gram whole	0.09	-2.01	-1.90	-0.61
10	Pulse mash	0.12	-4.26	-0.26	-0.07
11	Gur	0.04	-1.61	-0.31	-0.03
12	Ice cream	0.10	0.70	0.00	0.00
13	Mustard oil	0.01	0.20	0.43	0.02
14	Butter	0.09	4.96	0.23	0.10
15	Pulse moong	0.17	-3.05	0.32	0.13
Total		5.50			-309.62

Table A12: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Text books	0.67	0.19	32.12	52.31
2	Washing soap/detergents/match Box	1.41	3.63	5.11	24.03
3	Personal Effects n.e.c.	0.94	4.03	4.99	17.98
4	Appliances/Articles/Products for Personal	2.98	1.02	1.73	14.50
5	Marriage Hall Charges	1.75	3.11	1.68	7.93
6	Transport services	1.75	-1.54	1.50	7.23
7	Solid Fuel	0.42	5.87	6.63	6.56
8	Drugs and medicines	1.07	2.10	1.78	5.38
9	Woolen cloth	0.84	1.27	2.03	4.48
10	Woolen readymade garments	0.43	12.71	3.06	3.59
11	Cotton cloth	2.22	1.06	0.51	3.27
12	Education	4.88	0.23	0.22	2.74
13	stationery	0.35	0.41	1.91	2.08
14	Construction input items	0.38	0.43	1.51	1.84
15	Recreation and culture	0.65	3.14	1.18	1.51
Total		20.74			155.43
Bottom 15 Contributors					
1	Electricity charges	4.56	-0.34	-3.34	-44.39
2	Motor fuel	2.91	-0.01	-1.82	-24.68
3	Gas charges	1.08	0.00	0.00	0.00
4	Newspapers	0.07	0.00	0.00	0.00
5	Communication Services	1.88	0.00	0.00	0.00
6	Motor vehicle tax	0.05	0.00	0.00	0.00
7	House rent	19.26	0.00	0.00	0.00
8	Footwear	1.48	0.05	0.00	0.00
9	Water supply	0.53	0.73	0.00	0.00
10	Therapeutic Appliances and Equipme	0.01	1.78	0.07	0.00
11	Major tools & equipments	0.01	0.45	0.11	0.00
12	Postal services	0.02	0.00	0.06	0.00
13	Carpets	0.03	1.84	0.12	0.01
14	Household servant	0.77	1.31	0.01	0.01
15	Garbage collection	0.11	0.00	0.04	0.01
Total		32.75			-69.03

Table A13: Top Ten Contributors to Rural CPI Inflation (YoY) in December 2022

Items/Contributors		Weights	YoY Change		Weighted Contribution (%)
			Dec-21	Dec-22	
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	10.07	29.75	9.78
2	Wheat	3.47	9.51	58.62	7.96
3	Onions	0.90	-29.78	463.50	7.77
4	Solid Fuel	4.48	9.88	37.66	5.58
5	Motor Fuels	2.49	38.43	51.66	5.56
6	Wheat Flour	3.43	19.29	38.27	4.77
7	Vegetable Ghee	2.38	55.47	33.89	4.54
8	Readymade Food	3.80	12.13	29.61	4.15
9	Rice	1.55	5.52	48.86	3.18
10	Transport Services	1.80	9.25	51.17	2.84
Total		34.68			56.13
B. Ranked by Percentage Change					
1	Onions	0.90	-29.78	463.50	7.77
2	Gram Whole	0.11	26.72	61.24	0.22
3	Wheat	3.47	9.51	58.62	7.96
4	Tea	1.26	8.91	58.09	2.39
5	Eggs	0.57	-8.03	57.78	1.43
6	Nimco	0.08	12.38	55.32	0.13
7	Pulse Gram	0.28	8.07	54.34	0.42
8	Besan	0.07	12.49	54.08	0.12
9	Motor Fuels	2.49	38.43	51.66	5.56
10	Transport Services	1.80	9.25	51.17	2.84
Total		11.03			28.84
C. Ranked by Weights					
1	Milk Fresh	10.38	10.07	29.75	9.78
2	House Rent	8.61	6.64	5.86	1.57
3	Solid Fuel	4.48	9.88	37.66	5.58
4	Readymade Food	3.80	12.13	29.61	4.15
5	Wheat	3.47	9.51	58.62	7.96
6	Electricity Charges	3.44	59.38	-2.69	-0.39
7	Wheat Flour	3.43	19.29	38.27	4.77
8	Cotton Cloth	2.84	9.74	15.42	1.67
9	Motor Fuels	2.49	38.43	51.66	5.56
10	Vegetable Ghee	2.38	55.47	33.89	4.54
Total		45.32			45.19

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 Rural CPI, which is 28.8 percent in December 2022.

Table A14: Top Ten Contributors to Rural CPI Inflation (MoM) in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Wheat	3.47	0.35	8.97	56.77
2	Onions	0.90	29.22	18.06	46.29
3	Solid Fuel	4.48	7.61	6.36	39.03
4	Rice	1.55	1.57	6.62	19.26
5	Wheat Flour	3.43	-1.85	3.26	17.41
6	Eggs	0.57	2.80	13.68	15.03
7	Personal Effects N.E.C.	1.21	5.10	6.49	13.85
8	Drugs And Medicines	1.58	3.82	5.55	12.72
9	Milk Fresh	10.38	4.16	0.88	11.90
10	Fresh Fruits	1.45	2.14	6.68	11.24
Total		29.02			243.50
B. Ranked by Percentage Change					
1	Text Books	0.50	0.00	18.82	10.52
2	Onions	0.90	29.22	18.06	46.29
3	Eggs	0.57	2.80	13.68	15.03
4	Wheat	3.47	0.35	8.97	56.77
5	Dry Fruits	0.25	16.61	8.15	3.10
6	Fresh Fruits	1.45	2.14	6.68	11.24
7	Rice	1.55	1.57	6.62	19.26
8	Personal Effects N.E.C.	1.21	5.10	6.49	13.85
9	Solid Fuel	4.48	7.61	6.36	39.03
10	Drugs And Medicines	1.58	3.82	5.55	12.72
Total		15.96			227.81
C. Ranked by Weights					
1	Milk Fresh	10.38	4.16	0.88	11.90
2	House Rent	8.61	0.00	0.00	0.00
3	Solid Fuel	4.48	7.61	6.36	39.03
4	Readymade Food	3.80	1.80	0.86	4.94
5	Wheat	3.47	0.35	8.97	56.77
6	Electricity Charges	3.44	-0.34	-3.34	-15.48
7	Wheat Flour	3.43	-1.85	3.26	17.41
8	Cotton Cloth	2.84	1.38	0.02	0.10
9	Motor Fuels	2.49	-0.03	-1.99	-10.64
10	Vegetable Ghee	2.38	-1.14	-1.45	-8.44
Total		45.32			95.59

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Rural CPI, which is 0.7 percent in December 2022.

Table A15: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY) in December 2022

Items/Contributors		Weights	YoY Change		Weighted Contribution (%)
			Dec-21	Dec-22	
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	10.07	29.75	9.78
2	Wheat	3.47	9.51	58.62	7.96
3	Onions	0.90	-29.78	463.50	7.77
4	Solid Fuel	4.48	9.88	37.66	5.58
5	Motor Fuels	2.49	38.43	51.66	5.56
6	Wheat Flour	3.43	19.29	38.27	4.77
7	Vegetable Ghee	2.38	55.47	33.89	4.54
8	Readymade Food	3.80	12.13	29.61	4.15
9	Rice	1.55	5.52	48.86	3.18
10	Transport Services	1.80	9.25	51.17	2.84
11	Tea	1.26	8.91	58.09	2.39
12	Washing Soaps, Detergents And Match Box	1.70	16.85	37.90	2.16
13	Chicken	1.46	-13.43	41.35	1.95
14	Drugs And Medicines	1.58	10.07	33.64	1.90
15	Personal Grooming Services	1.54	13.66	30.16	1.73
Total		42.22			66.26
Bottom 15 Contributors					
1	Electricity Charges	3.44	59.38	-2.69	-0.39
2	Postal Services	0.01	0.00	0.00	0.00
3	Newspapers	0.02	0.00	0.10	0.00
4	Gur	0.15	11.71	0.33	0.00
5	Garbage Collection	0.01	11.25	7.13	0.00
6	Water Supply	0.06	1.63	1.63	0.01
7	Communication Services	1.65	0.62	0.16	0.01
8	Honey	0.03	20.69	8.55	0.01
9	Dental Services	0.02	10.45	19.73	0.01
10	Motor Vehicle Tax	0.02	-5.56	24.88	0.01
11	Dessert Preparation	0.01	7.66	34.55	0.01
12	Cleaning And Laundering	0.02	12.19	23.84	0.01
13	Accommodation Services	0.14	0.00	7.08	0.02
14	Ice Cream	0.06	7.38	12.90	0.02
15	Mustard Oil	0.01	57.78	41.19	0.03
Total		5.65			-0.25

Table A16: Top and Bottom Fifteen Contributors to Rural CPI (MoM) Inflation in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Wheat	3.47	0.35	8.97	56.77
2	Onions	0.90	29.22	18.06	46.29
3	Solid Fuel	4.48	7.61	6.36	39.03
4	Rice	1.55	1.57	6.62	19.26
5	Wheat Flour	3.43	-1.85	3.26	17.41
6	Eggs	0.57	2.80	13.68	15.03
7	Personal Effects N.E.C.	1.21	5.10	6.49	13.85
8	Drugs And Medicines	1.58	3.82	5.55	12.72
9	Milk Fresh	10.38	4.16	0.88	11.90
10	Fresh Fruits	1.45	2.14	6.68	11.24
11	Text Books	0.50	0.00	18.82	10.52
12	Sugar	2.03	3.75	4.82	10.03
13	Washing Soaps, Detergents And Match Box	1.70	3.79	4.13	9.96
14	Personal Grooming Services	1.54	3.00	3.31	7.65
15	Tea	1.26	10.42	3.01	6.10
Total		36.05			287.76
Bottom 15 Contributors					
1	Fresh Vegetables	2.09	-26.88	-26.22	-83.03
2	Tomatoes	0.51	-9.57	-52.15	-81.85
3	Potatoes	0.74	5.72	-21.17	-35.54
4	Electricity Charges	3.44	-0.34	-3.34	-15.48
5	Motor Fuels	2.49	-0.03	-1.99	-10.64
6	Vegetable Ghee	2.38	-1.14	-1.45	-8.44
7	Pulse Gram	0.28	-3.16	-3.83	-1.51
8	Pulse Masoor	0.21	-12.33	-1.99	-0.57
9	Gram Whole	0.11	-2.33	-1.62	-0.31
10	Besan	0.07	0.61	-2.28	-0.25
11	Cooking Oil	0.60	-1.32	-0.17	-0.24
12	Pulse Moong	0.25	-1.51	-0.74	-0.21
13	Construction Input Items	0.63	2.28	-0.13	-0.11
14	Pulse Mash	0.15	-4.75	-0.38	-0.06
15	Postal Services	0.01	0.00	0.00	0.00
Total		13.96			-238.24

Table A17: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Wheat	3.47	0.35	8.97	56.77
2	Onions	0.90	29.22	18.06	46.29
3	Rice	1.55	1.57	6.62	19.26
4	Wheat Flour	3.43	-1.85	3.26	17.41
5	Eggs	0.57	2.80	13.68	15.03
6	Milk fresh	10.38	4.16	0.88	11.90
7	Fresh fruits	1.45	2.14	6.68	11.24
8	Sugar	2.03	3.75	4.82	10.03
9	Tea	1.26	10.42	3.01	6.10
10	Readymade Food	3.80	1.80	0.86	4.94
11	Chicken	1.46	-2.70	1.71	3.60
12	Dry fruits	0.25	16.61	8.15	3.10
13	Condiments and Spices	1.49	5.68	1.18	2.61
14	Cigarettes	1.24	0.53	0.95	1.50
15	Meat	1.71	0.45	0.50	1.35
Total		34.99			211.15
Bottom 15 Contributors					
1	Fresh Vegetables	2.09	-26.88	-26.22	-83.03
2	Tomatoes	0.51	-9.57	-52.15	-81.85
3	Potatoes	0.74	5.72	-21.17	-35.54
4	Vegetable ghee	2.38	-1.14	-1.45	-8.44
5	Pulse Gram	0.28	-3.16	-3.83	-1.51
6	Pulse Masoor	0.21	-12.33	-1.99	-0.57
7	Gram Whole	0.11	-2.33	-1.62	-0.31
8	Besan	0.07	0.61	-2.28	-0.25
9	Cooking oil	0.60	-1.32	-0.17	-0.24
10	Pulse Moong	0.25	-1.51	-0.74	-0.21
11	Pulse Mash	0.15	-4.75	-0.38	-0.06
12	Ice Cream	0.06	1.03	0.00	0.00
13	Pan Prepared	0.04	2.56	0.00	0.00
14	Honey	0.03	1.40	0.51	0.02
15	Mustard oil	0.01	0.31	0.95	0.03
Total		7.53			-211.97

Table A18: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation in December 2022

Items/Contributors		Weights	MoM Change		Weighted Contribution (%)
			Nov-22	Dec-22	
A. Ranked by Weighted Contribution					
1	Solid Fuel	4.48	7.61	6.36	39.03
2	Personal Effects n.e.c.	1.21	5.10	6.49	13.85
3	Drugs and Medicines	1.58	3.82	5.55	12.72
4	Text Books	0.50	0.00	18.82	10.52
5	Washing Soaps, Detergents and Match Box	1.70	3.79	4.13	9.96
6	Personal Grooming Services	1.54	3.00	3.31	7.65
7	Appliances/Articles/Products for Personal	2.27	1.76	2.32	5.95
8	Footware	1.92	6.26	1.49	3.28
9	Woolen Readymade Garments	0.54	10.26	3.70	2.56
10	Liquefied Hydrocarbons	1.00	-2.25	1.18	1.98
11	Household Equipments	1.28	1.92	1.14	1.98
12	Household Textiles	0.44	7.36	3.44	1.84
13	Transport Services	1.80	-0.99	0.64	1.69
14	Hosiry	0.43	4.01	1.71	1.25
15	Education	2.13	0.84	0.43	0.99
Total		22.81			115.26
Bottom 15 Contributors					
1	Electricity Charges	3.44	-0.34	-3.34	-15.48
2	Motor Fuels	2.49	-0.03	-1.99	-10.64
3	Construction Input Items	0.63	2.28	-0.13	-0.11
4	Postal Services	0.01	0.00	0.00	0.00
5	Newspapers	0.02	0.00	0.00	0.00
6	Garbage Collection	0.01	0.00	0.00	0.00
7	Communication Services	1.65	0.00	0.00	0.00
8	Accommodation Services	0.14	0.00	0.00	0.00
9	Motor Vehicle Tax	0.02	0.00	0.00	0.00
10	Water Supply	0.06	0.00	0.00	0.00
11	House Rent	8.61	0.00	0.00	0.00
12	Mechanical Services	0.36	0.53	0.00	0.00
13	Hospitals Services	1.01	0.65	0.00	0.00
14	Dental Services	0.02	1.54	0.20	0.00
15	Motor Vehicles	0.73	2.47	0.01	0.01
Total		19.21			-26.21

Table A19: Distribution of Price Changes (YoY) - Selected Urban CPI Items: December 2022

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	Chilies Powder National 200 Gm Packet, Peas (Matar), Guava (Amrood) (Average Quality), Cardamom Small (Average Quality), Turnip (Shalgham), Cucumber (Kheera), Radish (Mooli), Gur (Average Quality)	Sugar Refined, Jam-E-Shireen Standard Size (800 Ml), Spinach (Paalak), Cardamom Large (Loose) (Average Quality), Ginger (Adrak),	Coriander Seed Powder National 200 Gm Packet, Lemon,	Honey Marhaba Bottle 500 Gm, Almonds (Badam) Kaghazi With Shell (Average Quality), Carrot (Gajar), Chilies (Green), Tomatoes, Cumin Seed (Zeera) White National 50 Gm Packet, Turmeric Powder
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,		Dry Cleaning Charges Pant Coat Both, Shirt Boy Length 24"/26", Women Shalwar Kameez (Average Quality), Vest "Baniyan" For Men Average Quality,	Heavy Weight Suiting Lawrance Pur (Average Quality), Tailoring Charges Pant (Men), Dopatta Geoette (Average Quality), Awami Suit Gents Wash & Wear (Average Quality), Dopatta Cotton (Average Quality), Gents Shoes Paul Bata, Pant Cloth Wash & Wear (Average Quality), Full Pant Boy Length 24"/26", Brassier (Average Quality), Gents Sandal Bata, Linen, Ladies (Average Quality)
Housing, Water, Elec, Gas & other Fuels	Electricity Charges 51-100 Units, Electricity Charges Upto 50 Units, Electricity Charges 101-300 Units, Electricity Charges Combined, Gas Charges Upto 3.3719 Mmbtu , Gas Charges 3.3719 - 6.7438 Mmbtu , Gas Charges 6.7438 - 10.1157 Mmbtu	Lpg 11.67 Kg Cylinder,	Electricity Charges 301-700 Units, Water Charges Per House, House Rent Combined, Electricity Charges Above 700 Units, Iron Bars (M.S. Bar) 1/2 " 40 Grade,	Bricks New 1St Class, Electrician Charges, Painter Wage Rate, Mason Wage Rate, Unskilled Labor Wage Rate, Charges For Refuse/Waste Collection, Plumber Wage Rate, Sand (Black Pit), Bajri, Firewood Whole, Cement Blocks (6"X8"X12"), Synthetic Enamel Ici Balti 3.64 Litre,
Furnishing & Household Equip. Maintenance etc			Water Set (Omroc) 6 Glasses + Jug, Bed Sheet Double With Two Pillow Covers (Superior Quality), Plain Carpet, Bed Sheet Single (Superior Quality),	Sewing Machine (Sn) Without Cover, Dining Table Wit Glass Top And Six Chairs (Average Quality), Frying Pan Non-Stick Medium Size Sonex, Bucket (Balti) Plastic Medium Size, Electric Iron Dry (National/West Point), Air Cooler Super Asia Ecm-4000/Jc-1000, Cot Iron
Health		Ventolin Tablets 2 Mg, Sugar Test (Random/Fasting) Charges Of Both, Blood Test (Cp) Charges,	Lederplex Syrup Bottle, Electronic Bp Checking Apparatus, Gynecologist Fee Per Visit, Cac 1000 Tablets Sandoz Bottle, Cost Of Surgery (C-Section), Glucometer, Amoxil Capsule 250 Mg, Physiotherapist Fee Per Visit,	Septtran Tablets, Dental Surgeon Fee Per Visit, Ecg Charges, Glaxose-D 400 Gm Packet, Betnovate-N Ointment 10 Gm Tube, Dental Extraction Fee, Doctor (Mbbs) Clinic Fee, Ultrasound Abdominal, Johar Joshanda Instant (Sachet) Packet, Calpol Syrup 100 Ml Bottle, Entox Tablets, Urine
Transport	Car Suzuki 800 Cc Without Ac,	Air Fare Economy Class Per Kilometer (National Average),	Car Tax 800 Cc To 1500 Cc,	Tire Car Puncture Charges, Car Service Charges, Motorcycle Service Charges, Train Fare Ac Sleeper Per Person, Cng, Car Toyota 1300 Cc Xli, Bus Fare Minimum Within City, Tire Motorcycle Cd 70 (Back Wheel), Mini Bus Fare Minimum Within City, Taxi Four Seater Fare, Mini Bus Fare
Communication	Mobile Call Charges, Telephone Call Charges,	Internet Charges (Dsl) 1 Mb (Unlimited),	Mobile Set With Rear Camera And Without Touch Screen,	Courier Charges Minimum Within Zone Outside City (Tcs),
Recreation & Culture	Newspaper Daily Jang, Mag The Weekly (Magazine),	Urdu Book Ba/B.Sc,	Recreational Park Charges (Minimum Playland Ticket), Akhbar-E-Jehan Weekly,	Cable Charges, Led Sony/Samsung 32" Colored, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Pen Ink Dollar 57 Ml Bottle, Newspaper Daily Dawn, Laptop Dell/Hp/Acer Core I5, Display (14'-15'), English Book Ba/B.Sc, Urdu Book Class Xi/Inter, Ballpoint Pen
Education	Government University Fee M.S.C / M.A.,	Government College Fee First Year, Coaching Fee For Class Xi/Xii Science Group, Coaching Fee For Class Xi/Xii Commerce Group, Vocational Training Basic Computer Short Course Fee (3	Government Medical College/University Tuition Fee For Mbbs (1St Year), Tuition Fee Private University M.Sc./M.A.,	Private Engineering University Tuition Fee For Be (1St Year), Private School Fee English Medium Average Standard (Class Vi), Private School Fee English Medium Average Standard (Class V), Private School
Restaurant & Hotels		Government Hostel Accommodation Fee For Intermediate College Per Student,		Marriage Hall Service Charges With Food (Average Meal), Private Hostel Accommodation Fee For Intermediate College Per Student, Marriage Hall Charges With Furniture, Tea Prepared Ordinary, Seekh Kabab (Beef) (Average Quality),
Miscellaneous			Purse Ladies Medium Size (Average Quality), Shampoo Sun Silk/Pantene 90 Ml Bottle,	Electric Hair Straightener (Philips), Hair Style Charges (At Average Beauty Parlor), Artificial Jewelry (Locket Set) (Average Quality), Tooth Brush (Shield), Tissue Paper Perfumed Box 100 Napkins, Perfume Medium Size Broche/Medora, Nail Polish Swiss Miss/Medora (Medium), Talcum

Table A20: Distribution of Price Changes (YoY) - Selected Rural CPI Items: December 2022

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	Guava (Amrood) (Average Quality), Turnip (Shalgham), Radish (Mooli), Cucumber (Kheera), Spinach (Paalak), Peas (Matar),	Ginger (Adrak), Gur (Average Quality), Jam-E-Shireen Standard Size (800 ML), Sugar Refined,	Honey Marhaba Bottle 500 Gm,	Ice Cream Walls Cup (Large Size), Potatoes, Cold Drink (Pepsi/Coca-Cola) 1.5 Liter Bottle, Almonds (Badam) Kaghazi With Shell (Average Quality), Fish Fresh, Fruit Juice Small Packet 250 ML, Lemon, Garlic (Lehsun), Beef With Bone (Average Quality), Tomatoes, Mutton (Average Quality),
Alcoholic Beverages & Tobacco				Tobacco Hukka Twisted, Chewing Tobacco (Niswar), Pan Prepared (Sweet With Beetle Nuts), Cigarettes Capstan 20'S Packet, Cigarettes Gold Leaf 20'S Packet,
Clothing & Footwear				Dopatta Georgette (Average Quality), Footware Gents Local (Average Quality), Chaddar (Wash-N-Wear) (2X2.5 Meter), Shirting (Average Quality), Lawn Printed (Average Quality), Full Pant Boy Length 24"/26", Shirt Boy Length 24"/26", Long Cloth, Georgette (Average Quality), Pullover Ladies (Average Quality), School Uniform Boys (Pant & Shirt) 24"/26",
Housing, Water, Elec, Gas & other Fuels	Electricity Charges 51-100 Units, Electricity Charges Upto 50 Units, Electricity Charges 101-300 Units, Electricity Charges Combined,	Water Charges Per House,	Electricity Charges 301-1000 Units, House Rent Combined, Charges For Refuse/Waste Collection, Electricity Charges Above 1000 Units, Lpg 11.67 Kg Cylinder, Carpenter Wage Rate, Mason Wage Rate,	Plumber Wage Rate, Painter Wage Rate, Unskilled Labor Wage Rate, Electrician Charges, Bricks New 1st Class, Coal, Sand (Black Pit), Firewood Whole, Cement (Local) 50 Kg Bag, Bajri, Kerosene Oil,
Furnishing & Household Equip. Maintenance etc				Cot Iron (Charpai), Aluminium Cooking Pan (Degchi), Water Set (Omroc) 6 Glass, Cleanser Powder Vim 900 Gm Polybag, Finis 400 ML Bottle, Tea Set Pakistani (China-Ware) Set Of 21 Pieces, Bucket (Balti) Plastic Medium Size, Sewing
Health		Physiotherapist Fee Per Visit,	Hydryllin Syrup 120 ML Bottle, Cost Of Surgery (C-Section), Cac 1000 Tablets Sandoz Bottle, Daonil Tablets 5 Mg,	Blood Test (Cp) Charges, Amoxil Capsule 250 Mg, Inderal Tablets 10 Mg, X-Ray (Chest) Charges, Johar Joshanda Instant (Sachet) Packet, Doctor (Mbbs) Clinic Fee, Dental Surgeon Fee Per Visit, Dettol
Transport	Car Suzuki 800 Cc Without Ac,	Air Fare Economy Class Per Kilometer,		Cng, Motorcycle Service Charges, Tire Cycle, Car Tax 800 Cc To 1500 Cc, Bus Fare Outside City (Non Ac), Tire Motorcycle Cd 70 (Back Wheel), Motorcycle Honda Cd 70, Tire Car Mehran Tubeless (General), Bicycle, Mobil Oil
Communication	Postal Registration Charges, Mobile Call Charges, Telephone Call Charges,	Internet Charges (Dsl) 1 Mb (Unlimited),	Mobile Set With Rear Camera And Without Touch Screen,	
Recreation & Culture		Newspaper Daily Jang,	Cable Charges,	Led Sony/Samsung 32" Colored, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Ballpoint Pen Local, Exercise Book (With Lines) 80 To 100 Pages, English Books Class Vi, Lead Pencil Goldfish, English Books Class Xi Complete Set, Urdu Books Class V/Text Book
Education			Vocational Training Basic Computer Short Course Fee (3 Months) , Private School Fee English Medium Average Standard (Class I),	Private School Fee English Medium Average Standard (Class V), Private School Fee English Medium Average Standard (Class Vi), Coaching Fee For Class Ix/X Science Group,
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student,			Marriage Hall Charges With Furniture, Marriage Hall Service Charges With Food (Average Meal), Chicken Roast (Full) (Average Quality), Tea Prepared Ordinary, Cooked Beef At Average Hotel, Pizza Chicken Medium Size (Average Quality),
Miscellaneous			Tooth Brush (Shield),	Talcum Powder Viceroy/Black Cat, Shampoo Sun Silk/Pantene 90 ML Bottle, Tooth Paste Colgate 75 Gm, Shaving Cream (Touchme Large/Admiral), Trunk Medium Size (Average Quality), Hair Color (Kala Kola), Blade Treet Ordinary (10 No. Packet), Purse Ladies Medium Size (Average Quality), Hair Cut Charges For

Table A21: Distribution of Price Changes (YoY) - WPI Items: December 2022

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	Fiber Crops,	Raw Animal Materials / Wool, Unmanufactured Tobacco,		Sugar Crops, Cotton Seeds, Fish Live Fresh or Chilled, Millet / Bajra, Fuel Wood in Logs, Sorghum / Jowar, Stimulant & Spice Crops, Other Oil Seeds, Raw Milk from Bovine Animals, Edible Roots / Potatoes, Fresh Fruits, Rice, Hides, Skins & Fur Skins, Raw,
ores/Minerals, Elec., Gas & Water		Natural Gas Liquefied,		Electrical Energy, Salt & Pure Sodium Chloride, Coal not Agglomerated,
Food, Beverages, Tobacco, Textile, Apparel and Leather Product	Spices, Nylon Yarn, Cotton Yarn, Blended Yarn, Woolen Carpets,	Sugar Refined,	Synthetic Carpets, Bed Sheets, Sugar Confectionary, Chocolate, Woven Fabrics,	Ice Cream, Meat of Animals, Towels, Cotton Fabrics, Other Food Products, Leather Without Hair, Hosiery Products, Beverages, Blankets, Other Leather N.E.C, Dairy Products N.E.C, Oil Cakes, Mineral Water,
Other Transportable Goods except Metal Products, Machinery and Equipments	Hard Board, Dyeing Material, Insecticides,	Other Glass Articles,	Pesticides, Plastic Products,	Furnace Oil, Ceramics & Sanitary Fixture, Bricks, Blocks & Tiles, Timber, Matches, Auto Tyres, Soaps & Detergents, Chemicals, Bed Foam, Paints & Varnishes, Fertilizers, Cement, Printing Paper,
Metal Product, Machinery & Equipments	Vacuum Pumps, Cultivators, Engines & Motors,	Steel Products,	Steel Bar & Sheets, Fridge, WashM, SewM, Fans, Iron,	Radio & Television, Motor Vehicles, Pipe Fittings, Bicycles, Motorcycles, Electric Wires, Lathe Machines, Tractors, Air Conditioners, Concrete Mixture, Chuff Cutter, Lighting Equipments,

Table A22: International Commodity Prices/Indices				
Commodity/Indices	Jun-21	Dec-21	Nov-22	Dec-22
Energy				
Crude Oil (US\$ per barrel)*	71.8	72.9	87.4	78.1
Energy Index (2010 = 100)	93.9	112.4	139.4	130.8
Food				
Rice (\$/MT)	466.0	400.0	440.0	467.0
Wheat (\$/MT)##	285.6	376.8	422.7	386.3
Sugar, World (\$/KG)	0.4	0.4	0.4	0.4
Palm Oil (\$/MT)	1,004.4	1,270.3	945.7	940.4
Soybean Oil (\$/MT)	1,518.2	1,411.2	1,651.6	1,409.2
Non-Food Non-Energy				
Cotton Outlook 'A' Index (\$/KG) #	2.1	2.6	2.2	2.2
Metal Price Index (2010 = 100)	119.0	125.2	109.5	114.8
Copper (\$/MT)	9,631.5	9,551.2	8,049.9	8,375.4
Aluminum (\$/MT)	2,446.7	2,695.5	2,350.7	2,401.7
Iron Ore (\$ cents/dry MT)	214.4	117.0	93.3	111.8
Tin (\$/MT)	32,502.6	39,422.5	21,249.5	24,172.4
Nickel (\$/MT)	17,979.6	20,015.6	25,562.7	28,946.8
Zinc (\$/MT)	2,951.9	3,399.2	2,938.9	3,129.5
Lead (\$/MT)	2,191.0	2,301.7	2,100.0	2,216.5
Uranium (\$/MT)@	32.3	42.1	49.9	47.7
DAP (\$/MT)	604.8	745.0	665.6	625.0
Urea (\$/MT)	393.3	890.0	588.8	519.4

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

@ Data has been taken from Cameco website, as it is not available in World Bank dataset.

* 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 Jun 1968 to December 1981 strict middling 1-1/16 inch staple. Prior to 1968, Mexican 1-1/16.2/

Wheat, US HRW (Hard Red Winter) reported by World Bank.

DAP: Di-ammonium Phosphate

Table A23: National CPI Data Series Original and Seasonally Adjusted

Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	114.29	123.86	135.38	146.76	183.35
Aug	113.93	125.89	136.23	147.61	187.84
Sep	113.90	126.86	138.32	150.74	185.68
Oct	116.32	129.16	140.67	153.61	194.42
Nov	116.18	130.90	141.83	158.18	195.89
Dec	115.82	130.45	140.86	158.16	196.86
Jan	116.12	133.04	140.56	158.78	
Feb	117.12	131.64	143.09	160.61	
Mar	119.46	131.69	143.61	161.88	
Apr	120.33	130.59	145.09	164.50	
May	121.05	131.01	145.24	165.23	
Jun	121.63	132.08	144.82	175.71	
Seasonally Adjusted Series					
Jul	114.11	123.72	135.29	146.71	183.35
Aug	113.78	125.78	136.17	147.58	187.82
Sep	113.47	126.41	137.85	150.24	185.06
Oct	115.21	127.90	139.26	152.03	192.38
Nov	115.01	129.53	140.29	156.44	193.68
Dec	115.69	130.23	140.55	157.77	196.31
Jan	116.38	133.32	140.86	159.11	
Feb	117.75	132.26	143.69	161.21	
Mar	120.08	132.32	144.25	162.56	
Apr	120.45	130.75	145.29	164.74	
May	121.82	131.88	146.24	166.39	
Jun	122.55	133.17	146.12	177.41	

Table A24: Urban CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	114.94	124.95	134.73	146.41	180.97
Aug	114.58	126.77	135.82	147.12	185.72
Sep	114.49	127.72	137.53	150.08	181.90
Oct	117.04	129.75	139.27	152.59	190.08
Nov	116.94	131.05	140.16	156.96	190.80
Dec	116.57	130.57	139.67	157.46	191.46
Jan	117.07	132.77	139.45	157.56	
Feb	118.08	131.32	142.61	159.03	
Mar	120.29	131.49	142.99	160.07	
Apr	121.29	130.60	144.91	162.63	
May	122.11	130.99	145.19	163.13	
Jun	122.52	131.89	144.55	173.23	
Seasonally Adjusted Series					
Jul	114.56	124.59	134.39	146.08	180.62
Aug	114.27	126.48	135.54	146.84	185.36
Sep	114.12	127.34	137.14	149.66	181.40
Oct	116.21	128.82	138.27	151.48	188.69
Nov	116.09	130.08	139.11	155.78	189.36
Dec	116.73	130.69	139.75	157.51	191.50
Jan	117.39	133.13	139.83	157.98	
Feb	118.74	131.97	143.25	159.68	
Mar	120.93	132.12	143.62	160.72	
Apr	121.17	130.48	144.77	162.47	
May	122.55	131.48	145.75	163.76	
Jun	123.26	132.76	145.60	174.61	

Table A25: Rural CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	113.30	122.22	136.36	147.28	186.94
Aug	112.96	124.56	136.84	148.34	191.04
Sep	113.01	125.55	139.51	151.74	191.38
Oct	115.23	128.28	142.79	155.15	200.96
Nov	115.03	130.67	144.34	160.03	203.57
Dec	114.70	130.28	142.65	159.21	205.00
Jan	114.68	133.44	142.23	160.62	
Feb	115.68	132.13	143.82	162.99	
Mar	118.21	132.00	144.55	164.62	
Apr	118.89	130.58	145.37	167.31	
May	119.45	131.03	145.32	168.39	
Jun	120.29	132.36	145.24	179.45	
Seasonally Adjusted Series					
Jul	113.42	122.42	136.65	147.65	187.47
Aug	113.04	124.74	137.12	148.70	191.54
Sep	112.49	125.01	138.93	151.11	190.59
Oct	113.71	126.51	140.75	152.87	197.95
Nov	113.39	128.70	142.07	157.44	200.19
Dec	114.13	129.54	141.76	158.15	203.58
Jan	114.86	133.62	142.43	160.82	
Feb	116.26	132.70	144.36	163.52	
Mar	118.80	132.62	145.20	165.34	
Apr	119.36	131.16	146.07	168.17	
May	120.72	132.48	146.97	170.35	
Jun	121.49	133.79	146.91	181.65	

Table A26: National CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	100.16	100.11	100.06	100.04	100.00	100.07
Aug	100.14	100.08	100.05	100.02	100.01	100.06
Sep	100.38	100.35	100.34	100.33	100.33	100.35
Oct	100.96	100.99	101.01	101.04	101.06	101.01
Nov	101.01	101.05	101.10	101.11	101.14	101.08
Dec	100.11	100.17	100.22	100.25	100.28	100.20
Jan	99.77	99.79	99.78	99.79		99.78
Feb	99.46	99.53	99.58	99.63		99.55
Mar	99.48	99.52	99.56	99.58		99.54
Apr	99.90	99.88	99.86	99.85		99.87
May	99.37	99.34	99.32	99.30		99.33
Jun	99.25	99.18	99.11	99.04		99.14

Table A27: Urban CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	100.33	100.29	100.25	100.23	100.19	100.26
Aug	100.27	100.23	100.21	100.19	100.19	100.22
Sep	100.32	100.30	100.28	100.28	100.28	100.29
Oct	100.72	100.72	100.73	100.73	100.74	100.73
Nov	100.73	100.74	100.75	100.76	100.76	100.75
Dec	99.87	99.91	99.94	99.97	99.98	99.93
Jan	99.72	99.73	99.73	99.74		99.73
Feb	99.44	99.51	99.55	99.59		99.52
Mar	99.47	99.52	99.56	99.59		99.54
Apr	100.10	100.09	100.10	100.10		100.10
May	99.64	99.63	99.61	99.61		99.62
Jun	99.40	99.34	99.28	99.21		99.31

Table A28: Rural CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	99.89	99.84	99.79	99.75	99.71	99.80
Aug	99.93	99.85	99.80	99.76	99.74	99.82
Sep	100.46	100.43	100.42	100.42	100.41	100.43
Oct	101.34	101.40	101.45	101.49	101.52	101.44
Nov	101.45	101.53	101.60	101.64	101.69	101.58
Dec	100.50	100.57	100.63	100.67	100.70	100.61
Jan	99.85	99.85	99.86	99.88		99.86
Feb	99.50	99.57	99.63	99.68		99.59
Mar	99.50	99.53	99.55	99.57		99.54
Apr	99.61	99.56	99.52	99.49		99.54
May	98.95	98.91	98.87	98.85		98.90
Jun	99.01	98.93	98.86	98.79		98.90

Table A29: National CPI (Month-on-Month) Original & Seasonally Adjusted					
Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	1.51	1.83	2.50	1.34	4.35
Aug	-0.31	1.64	0.63	0.58	2.45
Sep	-0.03	0.77	1.53	2.12	-1.15
Oct	2.12	1.81	1.70	1.90	4.71
Nov	-0.12	1.35	0.82	2.98	0.76
Dec	-0.31	-0.34	-0.68	-0.02	0.49
Jan	0.26	1.99	-0.21	0.39	
Feb	0.86	-1.05	1.80	1.15	
Mar	2.00	0.04	0.36	0.79	
Apr	0.73	-0.84	1.03	1.62	
May	0.60	0.32	0.10	0.44	
Jun	0.48	0.82	-0.29	6.34	
Seasonally Adjusted Series					
Jul	0.65	0.96	1.59	0.40	3.35
Aug	-0.29	1.67	0.65	0.60	2.44
Sep	-0.27	0.50	1.24	1.80	-1.47
Oct	1.53	1.18	1.02	1.19	3.95
Nov	-0.17	1.28	0.74	2.90	0.67
Dec	0.59	0.54	0.18	0.85	1.36
Jan	0.60	2.37	0.22	0.85	
Feb	1.18	-0.80	2.01	1.32	
Mar	1.98	0.04	0.39	0.84	
Apr	0.31	-1.19	0.72	1.34	
May	1.13	0.87	0.65	1.00	
Jun	0.60	0.98	-0.08	6.63	

Table A30: Urban CPI (Month-on-Month) Original & Seasonally Adjusted Series					
Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	1.41	1.98	2.15	1.29	4.47
Aug	-0.31	1.46	0.81	0.48	2.62
Sep	-0.08	0.75	1.26	2.01	-2.06
Oct	2.23	1.59	1.27	1.67	4.50
Nov	-0.09	1.00	0.64	2.86	0.38
Dec	-0.32	-0.37	-0.35	0.32	0.35
Jan	0.43	1.68	-0.16	0.06	
Feb	0.86	-1.09	2.27	0.93	
Mar	1.87	0.13	0.27	0.65	
Apr	0.83	-0.68	1.34	1.60	
May	0.68	0.30	0.19	0.31	
Jun	0.34	0.69	-0.44	6.19	
Seasonally Adjusted Series					
Jul	0.53	1.08	1.23	0.33	3.45
Aug	-0.25	1.52	0.85	0.52	2.62
Sep	-0.13	0.68	1.18	1.92	-2.14
Oct	1.83	1.16	0.82	1.21	4.02
Nov	-0.10	0.98	0.61	2.84	0.36
Dec	0.55	0.47	0.46	1.11	1.13
Jan	0.57	1.87	0.06	0.29	
Feb	1.15	-0.87	2.45	1.08	
Mar	1.84	0.11	0.26	0.65	
Apr	0.21	-1.24	0.80	1.09	
May	1.13	0.77	0.68	0.80	
Jun	0.58	0.97	-0.11	6.62	

Table A31: Rural CPI (Month-on-Month) Original & Seasonally Adjusted Series					
Original Series					
Period	FY19	FY20	FY21	FY22	FY23
Jul	1.67	1.60	3.02	1.40	4.17
Aug	-0.30	1.91	0.35	0.72	2.19
Sep	0.04	0.79	1.95	2.29	0.18
Oct	1.96	2.17	2.35	2.25	5.01
Nov	-0.17	1.86	1.09	3.15	1.30
Dec	-0.29	-0.30	-1.17	-0.51	0.70
Jan	-0.02	2.43	-0.29	0.89	
Feb	0.87	-0.98	1.12	1.48	
Mar	2.19	-0.10	0.51	1.00	
Apr	0.58	-1.08	0.57	1.63	
May	0.47	0.34	-0.03	0.65	
Jun	0.70	1.02	-0.06	6.57	
Seasonally Adjusted Series					
Jul	0.85	0.77	2.14	0.50	3.21
Aug	-0.33	1.90	0.34	0.71	2.17
Sep	-0.49	0.21	1.32	1.62	-0.49
Oct	1.08	1.20	1.31	1.17	3.86
Nov	-0.28	1.74	0.94	2.99	1.13
Dec	0.66	0.65	-0.22	0.45	1.69
Jan	0.64	3.15	0.47	1.68	
Feb	1.22	-0.69	1.36	1.68	
Mar	2.19	-0.06	0.58	1.11	
Apr	0.47	-1.10	0.60	1.71	
May	1.14	1.01	0.62	1.30	
Jun	0.64	0.99	-0.04	6.63	

Figures

Figure A1: National CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022



Figure A2: Urban CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022

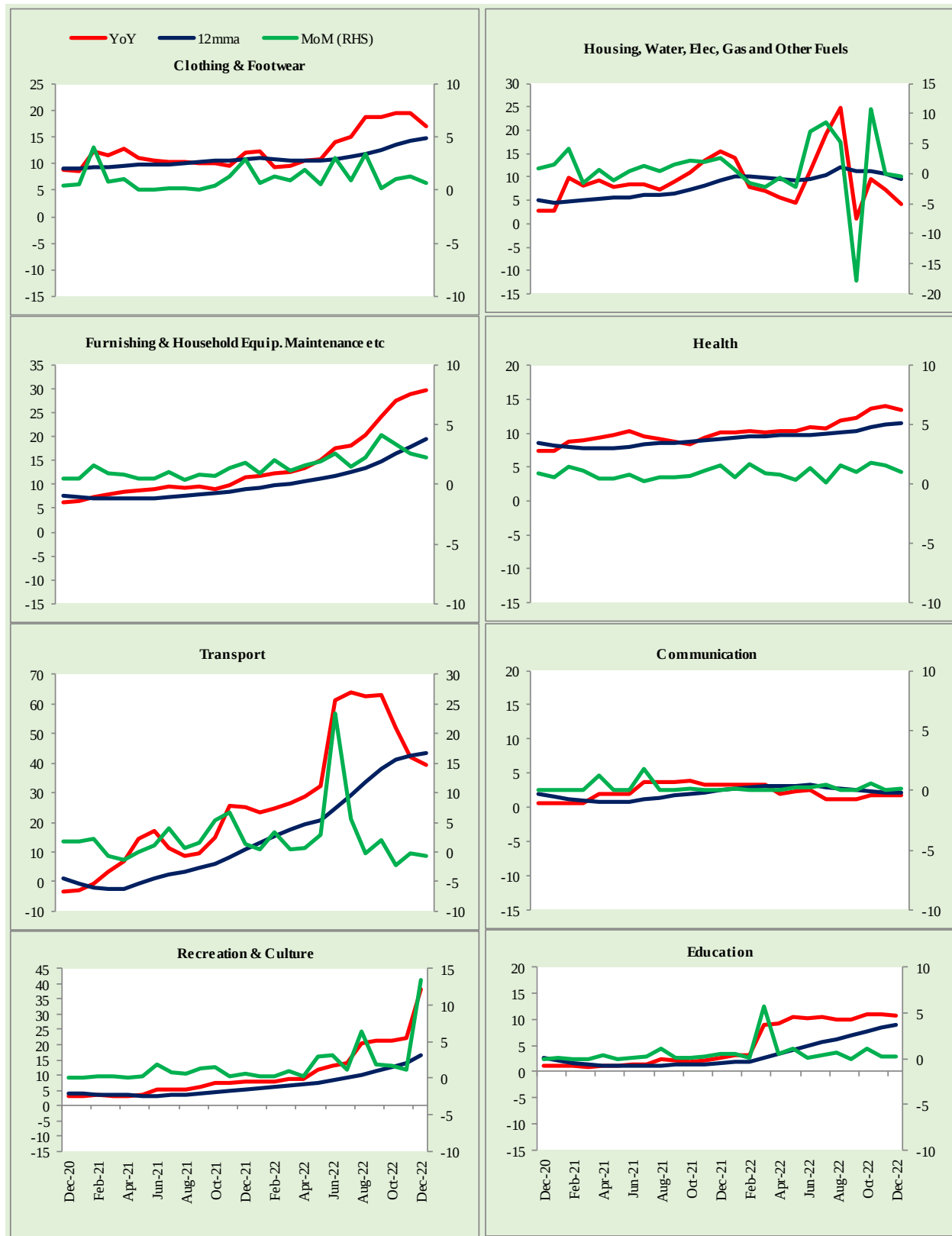
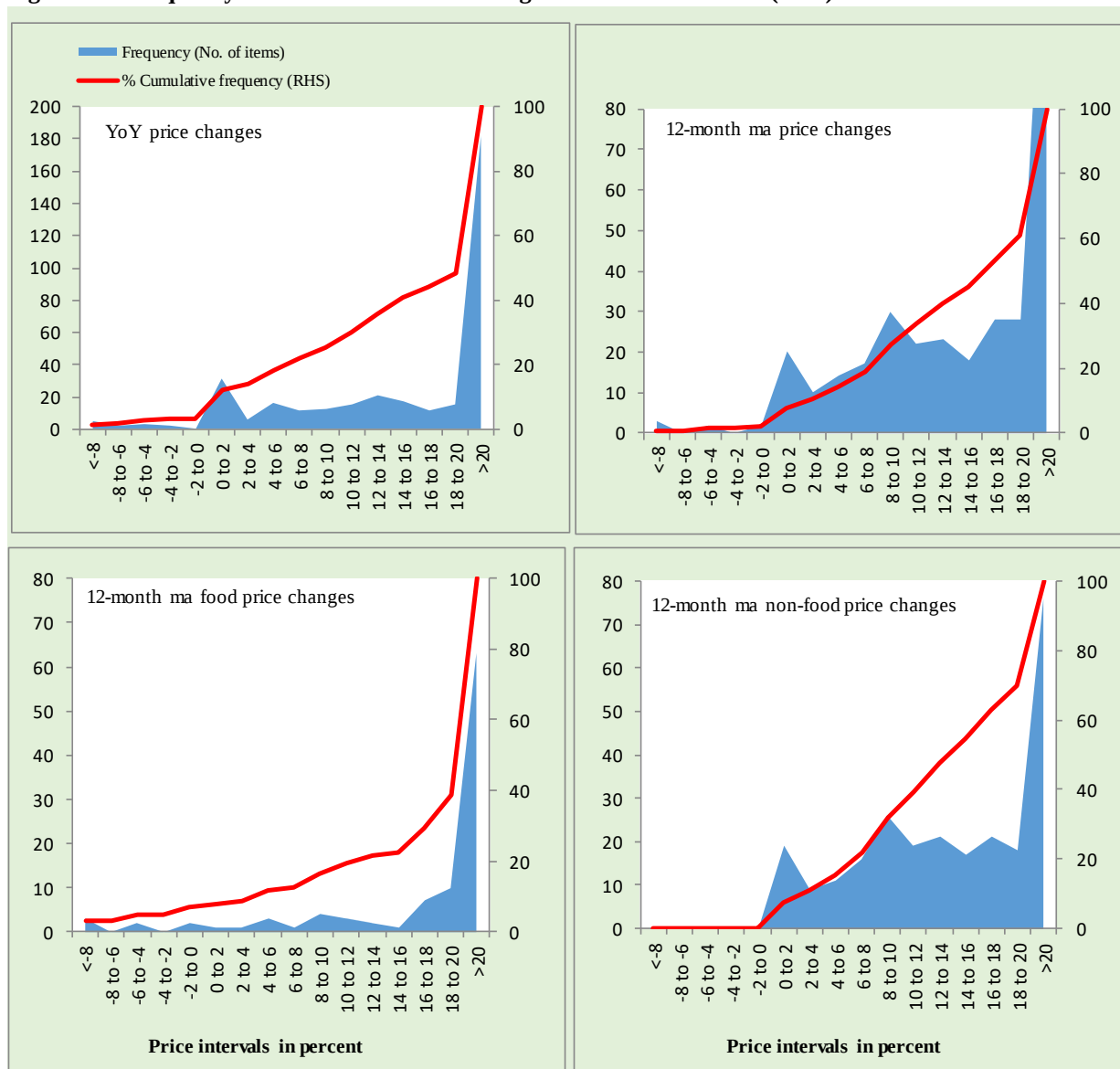
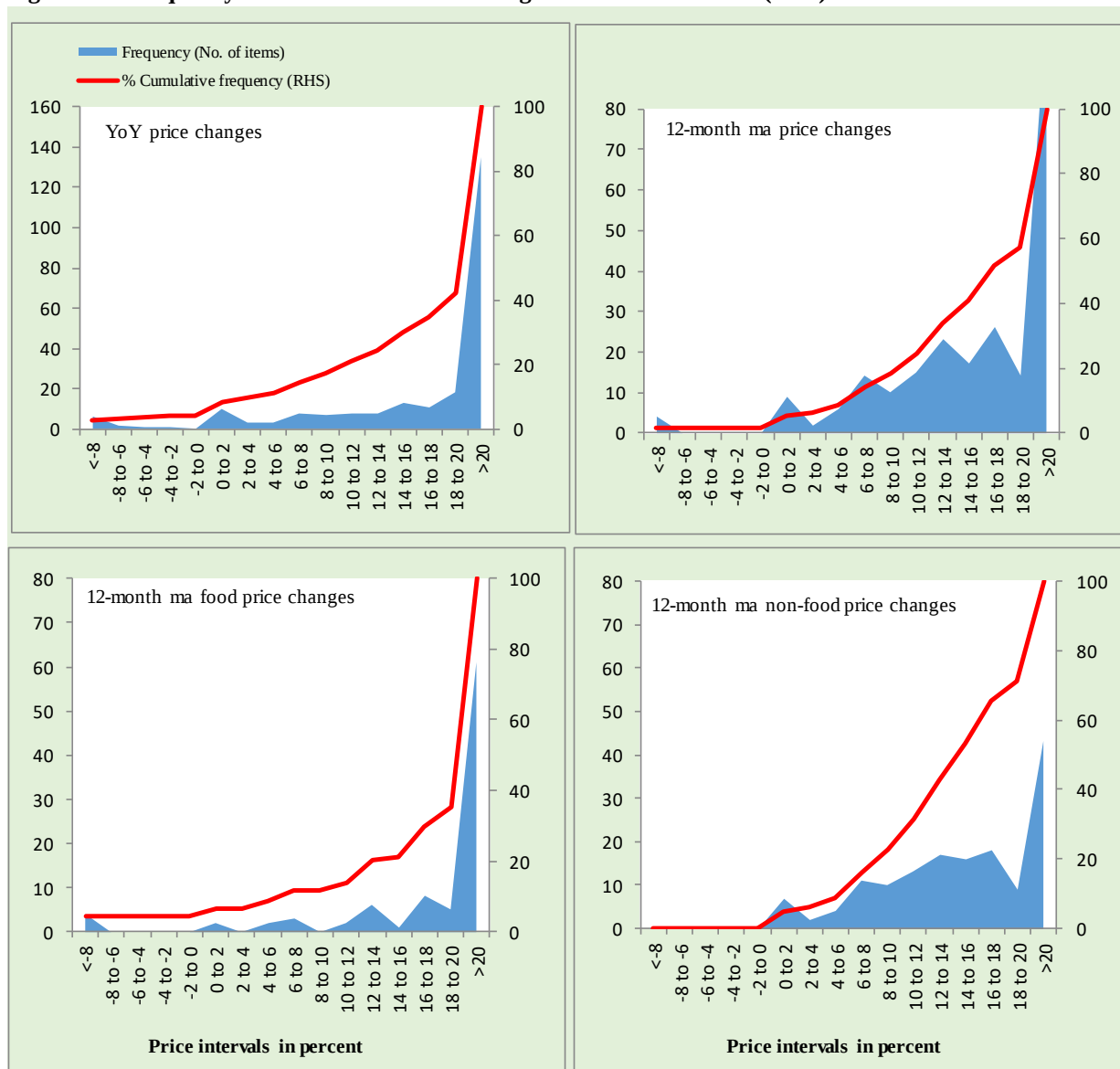


Figure A3: Rural CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) – December 2022

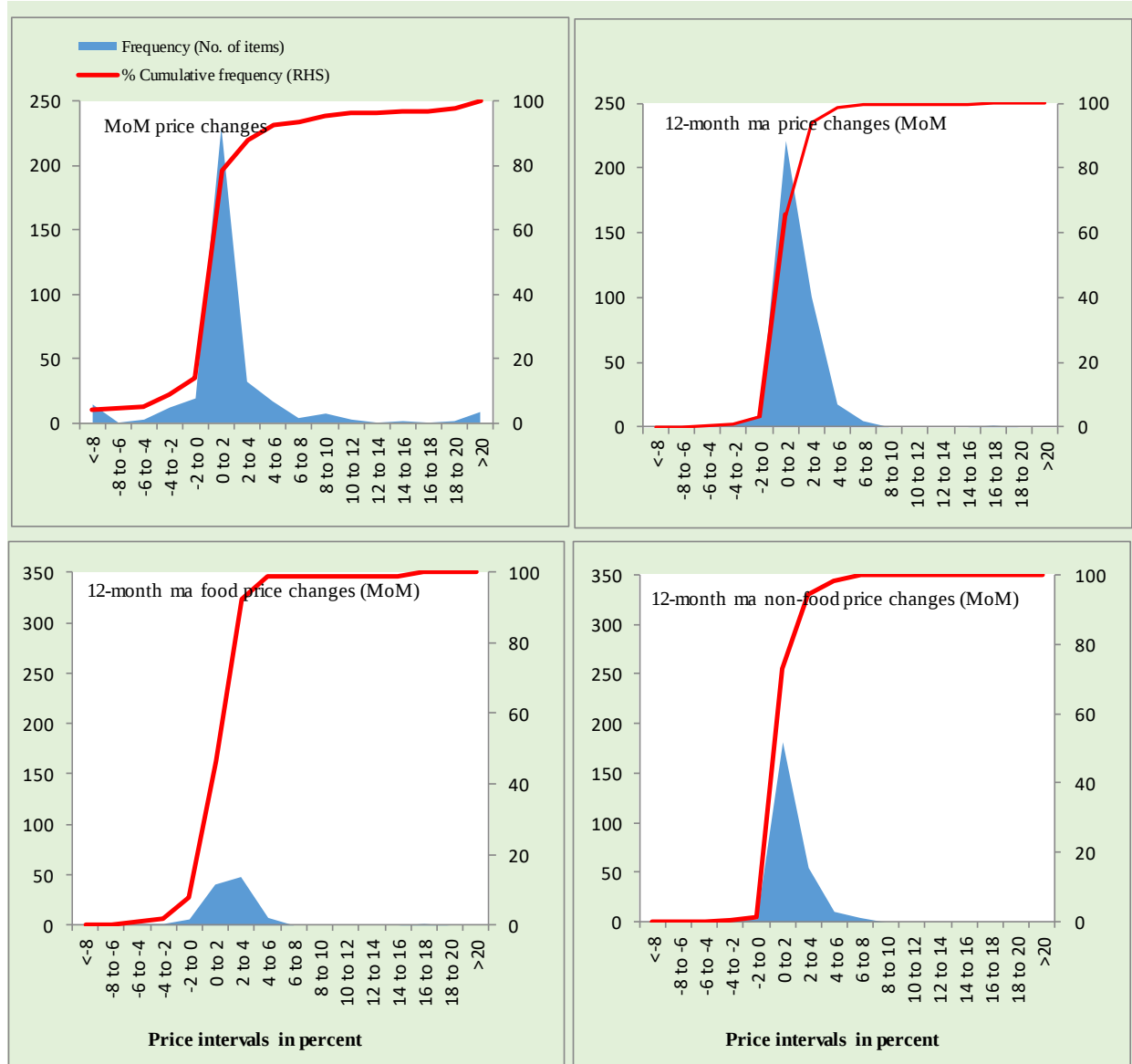


Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY) – December 2022

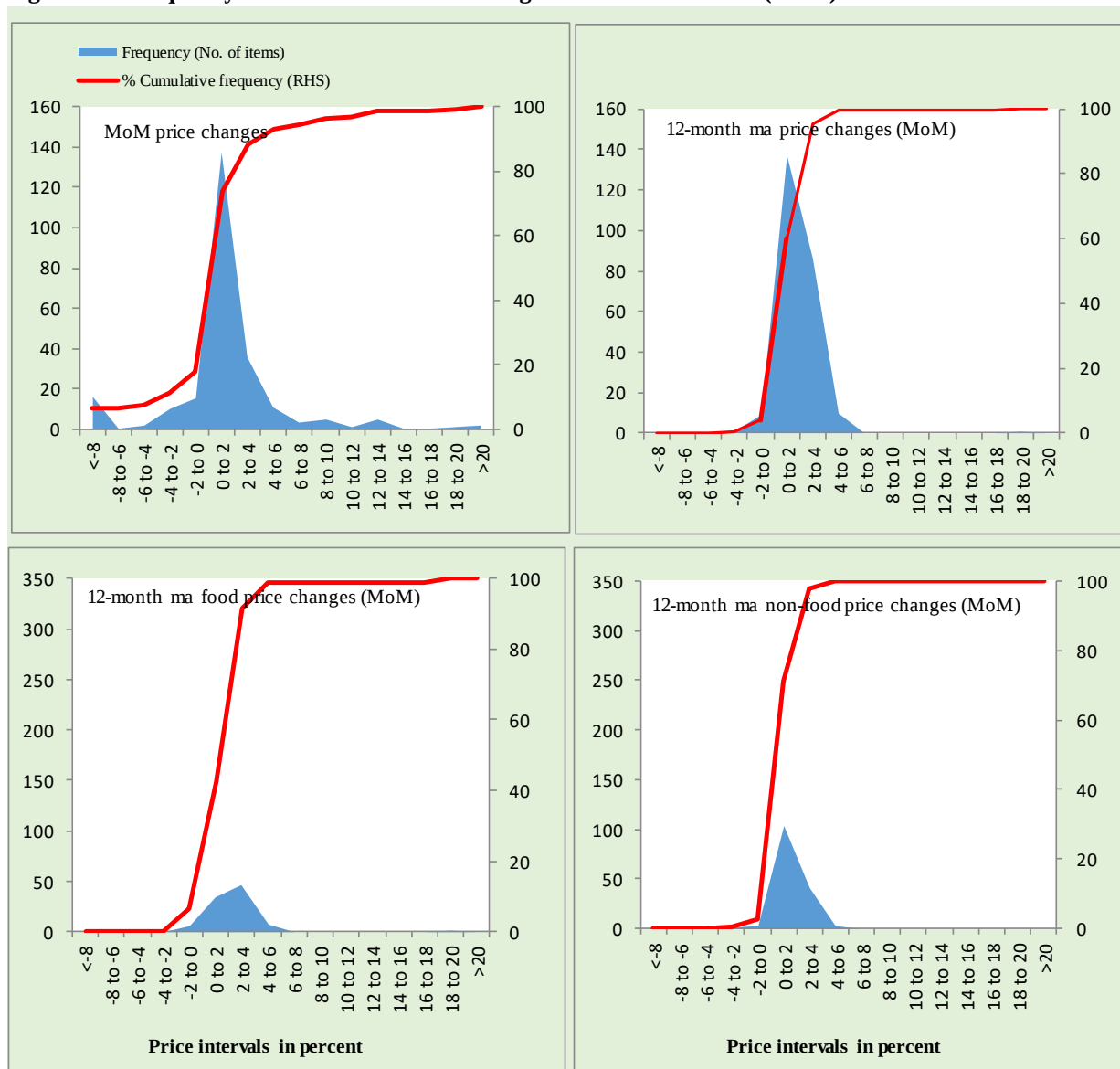
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

Figure A5: Frequency Distribution of Price Changes of Rural CPI Items (YoY) – December 2022

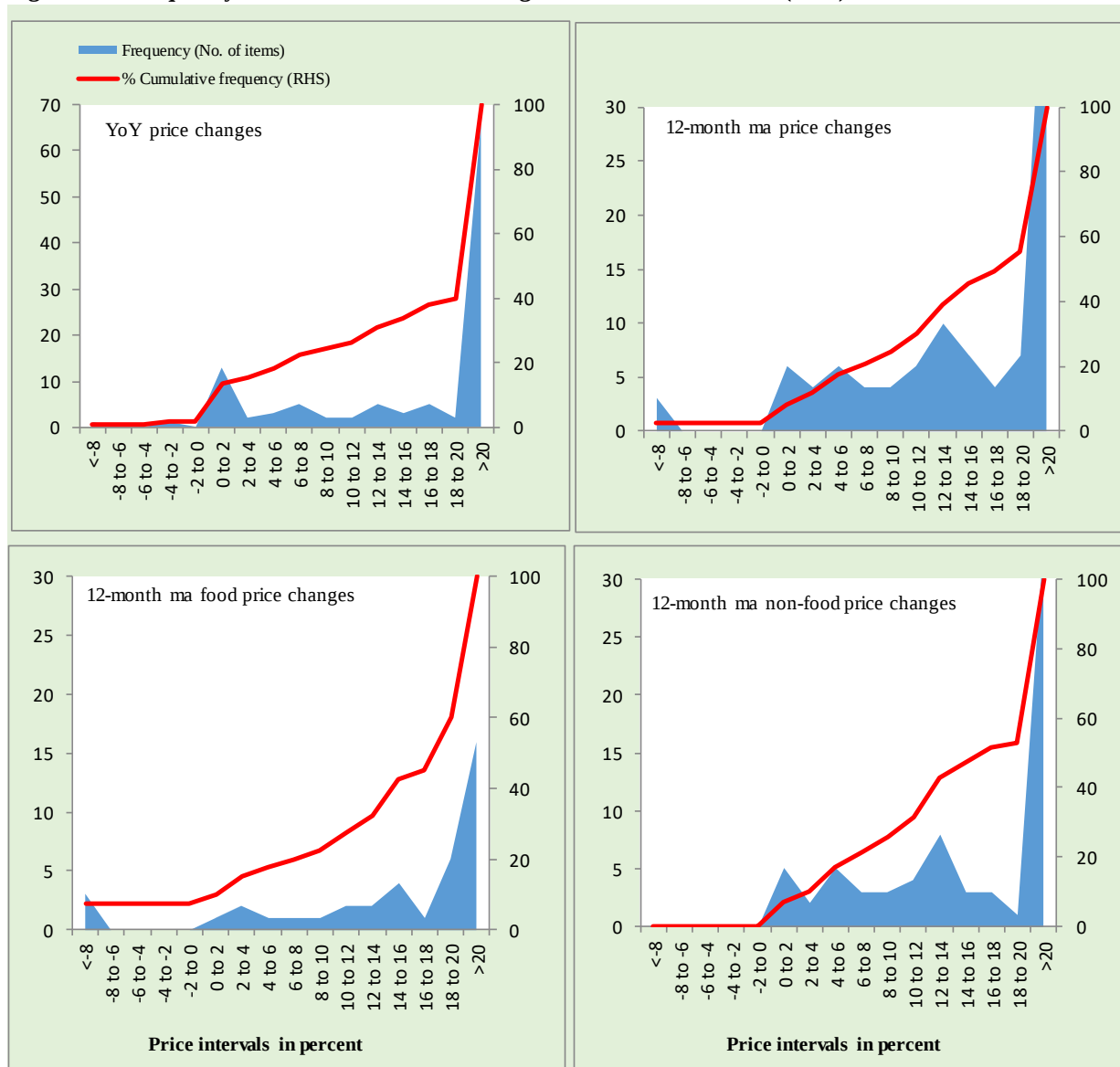
Total Items in CPI Basket (244), Food Items (94) and non-Food Items (150).

Figure A6: Frequency Distribution of Price Changes of Urban CPI Items (MoM) – December 2022

Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

Figure A7: Frequency Distribution of Price Changes of Rural CPI Items (MoM) – December 2022

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) – December 2022

Total Items in WPI Basket (110), Food Items (40) and non-Food Items (70).

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 constant².

Based upon item level prices data from December 2001 to Jun 2011, inflation diffusion indices for overall (general) CPI basket and for all groups in CPI basket (except House Rent Index being single item) were computed. A simple analysis³ suggests that IDI was a leading indicator for Pakistan’s YoY inflation.

² Prices of certain items (like the seasonal items) during certain period may not be observed/available. To calculate the inflation diffusion index, the items for which prices have been reported (irrespective of changed or not) during the month under review are considered.

³ Formal test shows one way ‘Granger’ causality from IDI to YoY inflation.