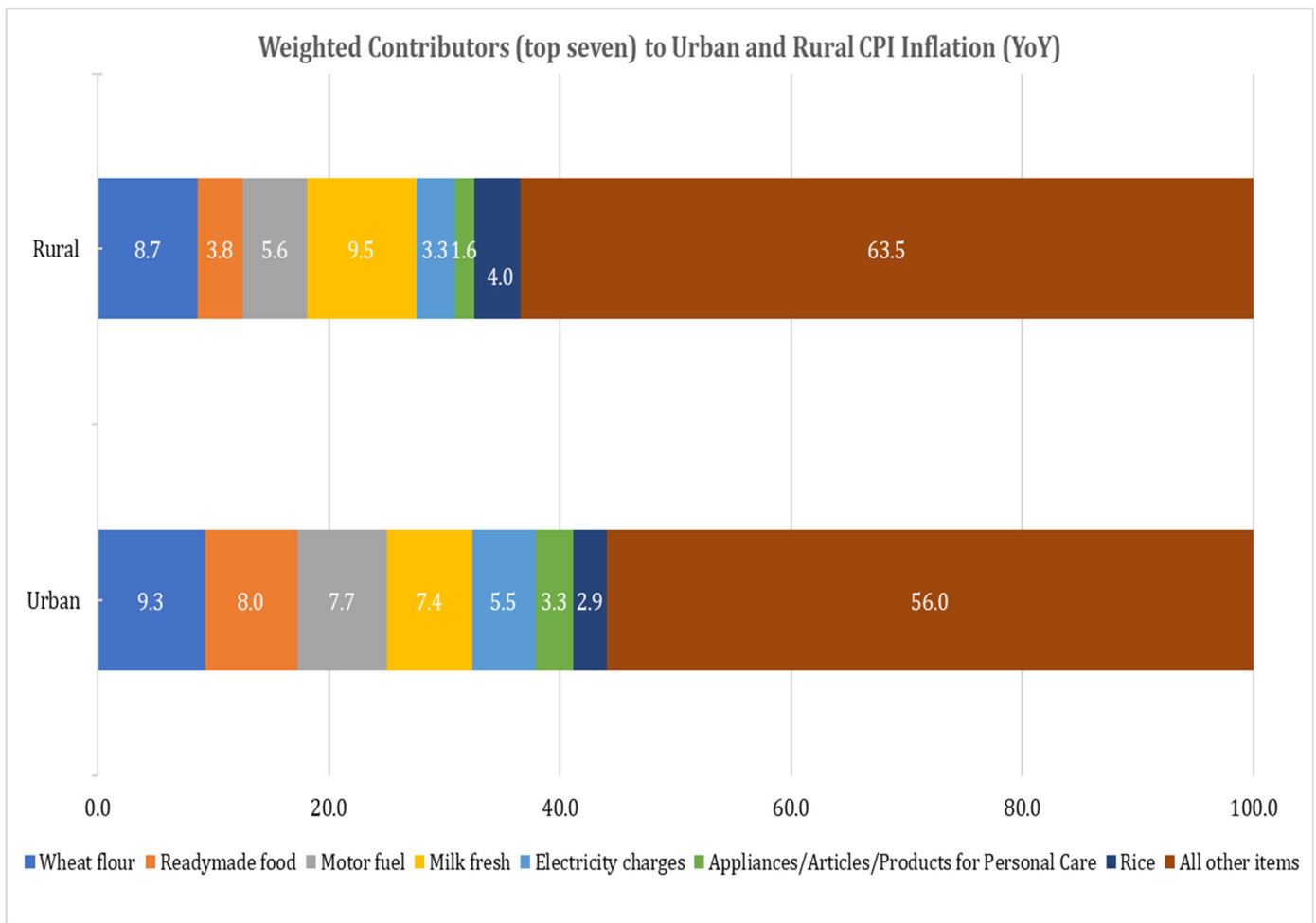




Inflation Monitor

May 2023



ISSN 1992-8327 (print)

ISSN 1992-8335 (online)

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

For feedback and queries: feedback.statistics@sbp.org.pk



Table of Contents

1.	Inflation in Brief	8
2.	Heat Maps of CPI inflation	10
3.	Trends in Inflation	14
4.	Movement in Price Indices (Moving Averages)	15
5.	Movement in Price Indices (Month-on-Month)	16
6.	Trends in Consumer Price Indices and Inflation	18
7.	Weighted Contribution	21
8.	Inflation Diffusion Index	23
9.	Domestic Food Commodity Prices (Growth)	25
10.	Inflation in Global Context	26
11.	Global Commodity Prices and Indices (Growth)	27
12.	Seasonal Adjustment in CPI	28
	List of Illustrations	32
	Tables	32
	Table A0: Inflation – Summary	32
	Table A1: National CPI Inflation by Groups (YoY and MoM in percent)	33
	Table A2: Urban CPI Inflation by Groups (YoY and MoM in percent)	33
	Table A3: Rural CPI Inflation by Groups (YoY and MoM in percent)	34
	Table A4: National CPI Inflation by Groups	35
	Table A5: Urban CPI Inflation by Groups	36
	Table A6: Rural CPI Inflation by Groups	37
	Table A7: Top Ten Contributors to Urban CPI Inflation (YoY)	38
	Table A8: Top Ten Contributors to Urban CPI Inflation (MoM)	39
	Table A9: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY)	40
	Table A10: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM)	41
	Table A11: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation	42
	Table A12: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation	43
	Table A13: Top Ten Contributors to Rural CPI Inflation (YoY)	44
	Table A14: Top Ten Contributors to Rural CPI Inflation (MoM)	45
	Table A15: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY)	46
	Table A16: Top and Bottom Fifteen Contributors to Rural CPI (MoM) Inflation	47
	Table A17: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation	48
	Table A18: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation	49
	Table A19: Distribution of Price Changes (YoY) - Selected Urban CPI Item	50
	Table A20: Distribution of Price Changes (YoY) - Selected Rural CPI Items	51
	Table A21: Distribution of Price Changes (YoY) - WPI Items	52
	Table A22: International Commodity Prices/Indices	53
	Table A23: National CPI Data Series Original and Seasonally Adjusted	54
	Table A24: Urban CPI Data Series Original and Seasonally Adjusted	55
	Table A25: Rural CPI Data Series Original and Seasonally Adjusted	56
	Table A26: National CPI Monthly & Average Seasonal Factors	57
	Table A27: Urban CPI Monthly & Average Seasonal Factors	57

Table A28: Rural CPI Monthly & Average Seasonal Factors	58
Table A29: National CPI (Month-on-Month) Original & Seasonally Adjusted	59
Table A30: Urban CPI (Month-on-Month) Original & Seasonally Adjusted Series	60
Table A31: Rural CPI (Month-on-Month) Original & Seasonally Adjusted Series	61
Figures	62

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

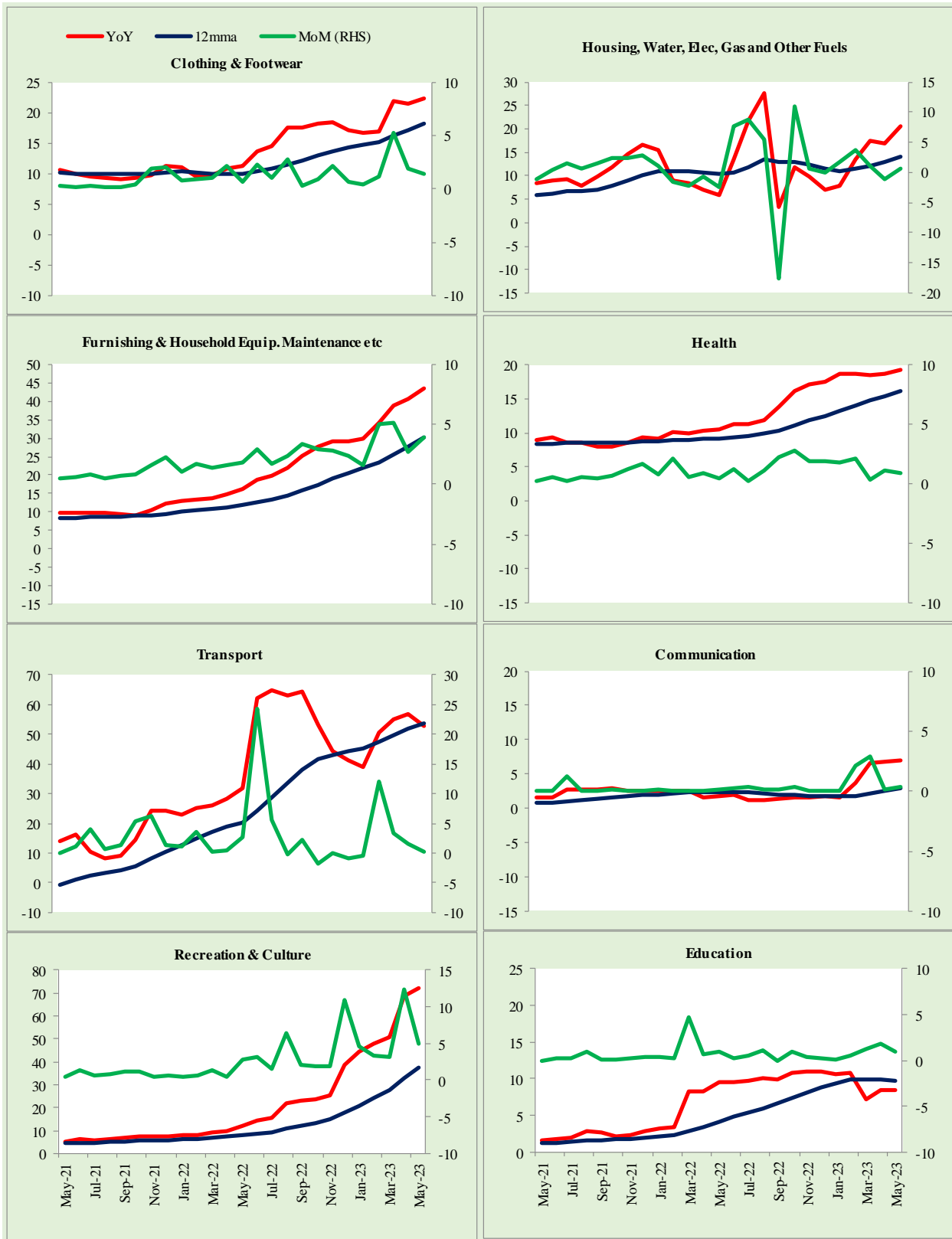


Figure A2: Urban CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent) 62
 63

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

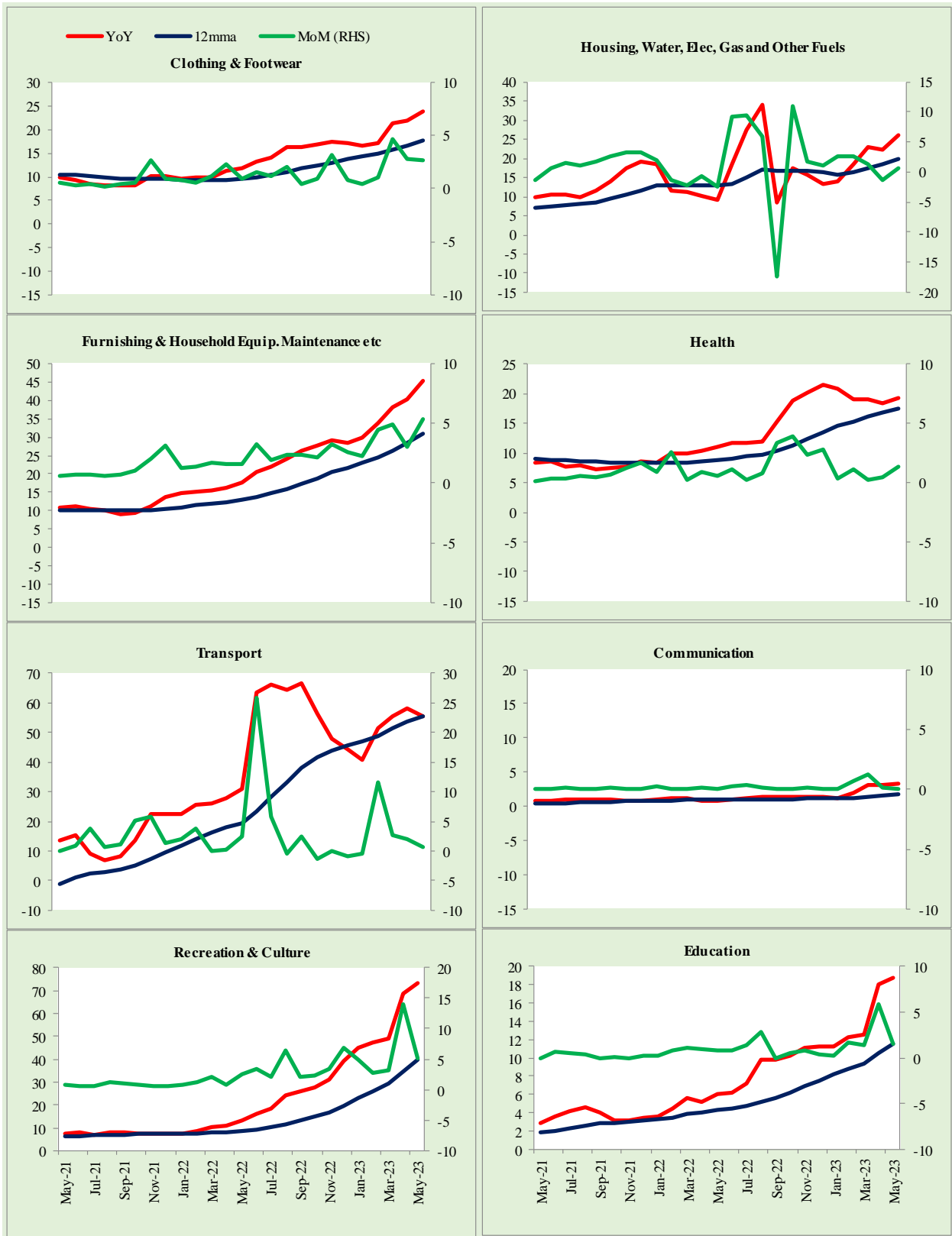


Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)..... 64
 65

Figure A5: Frequency Distribution of Price Changes of Rural CPI Items (YoY)	66
Figure A6: Frequency Distribution of Price Changes of Urban CPI Items (MoM)	67
Figure A7: Frequency Distribution of Price Changes of Rural CPI Items (MoM)	68
Figure A8: Frequency Distribution of Price Changes of WPI Commodities (YoY)	69
Technical Notes	70
Methodology for Estimating Inflation Diffusion Index for Pakistan	72

Team

Syed Aamir Ali Bokhari

Joint Director

Publication Manager

Mazhar Hussain

Sr. Joint Director

Publication Reviewer

Shahid Hussain Javaid

Sr. Joint Director

Data Support

We are thankful to Pakistan Bureau of Statistics (PBS) for data support

For data related feedback and queries: feedback.statistics@sbp.org.pk

1. Inflation in Brief

- I. National CPI Inflation on year-on-year (YoY) basis increased to 38.0 percent in May 2023 from 36.4 percent in previous month. It stood at 13.8 percent in the corresponding month of last year. On month-on-month (MoM) basis, National CPI Inflation decreased to 1.6 percent in May 2023 from 2.4 percent in previous month. It was recorded 0.4 percent during the corresponding month of last year.
- II. Urban CPI Inflation (YOY) increased to 35.1 percent in May 2023 from 33.5 percent in previous month. It stood at 12.4 percent during the corresponding month of last year. On MoM basis, Urban CPI Inflation decreased to 1.5 percent in May 2023 from 2.0 percent in the previous month. It stood at 0.3 percent during the corresponding month of last year. Seasonally adjusted MoM CPI showed an inflation of 1.9 percent in May 2023 compared to an inflation of 1.6 percent in the previous month.
- III. Rural CPI Inflation (YoY) increased to 42.2 percent in May 2023 from 40.7 percent in previous month. It was recorded 15.9 percent during the corresponding month of last year. Rural CPI Inflation (on MoM basis) decreased to 1.7 percent in May 2023 from 3.0 percent in the previous month. It stood at 0.6 percent during the corresponding month of last year. Seasonally adjusted (MoM) CPI showed an inflation of 2.5 percent in May 2023 as compared to an inflation of 3.1 percent in previous month.
- IV. Urban Core (Non-food, Non-energy (NFNE)) Inflation on YoY basis increased to 20.0 percent in May 2023 from 19.5 percent in previous month. It stood at 9.7 percent during the corresponding month of last year. On MoM basis, Urban Core (NFNE) Inflation decreased to 1.2 percent in May 2023 from 1.8 percent in previous month. It stood at 0.7 percent during the corresponding month of last year.
- V. Rural Core (Non-food, Non-energy (NFNE)) Inflation on YOY basis increased to 26.9 percent in May 2023 from 24.9 percent in previous month. It stood at 11.5 percent during the corresponding month of last year. On MoM basis, Urban Core (NFNE) Inflation decreased to 2.5 percent in May 2023 from 2.7 percent in previous month. It was recorded 0.9 percent during the corresponding month of last year.
- VI. Urban Core Inflation (trimmed) on YoY basis increased to 30.5 percent in May 2023 from 28.6 percent in previous month. It stood at 10.7 percent during the corresponding month of last year. On MoM basis, Urban Core Inflation (trimmed) recorded at 1.5 percent both in May 2023 and in previous month. It stood at 0.8 percent during the corresponding month of last year.
- VII. Rural Core Inflation (trimmed) on YoY basis increased to 38.8 percent in May 2023 from 37.3 percent in previous month. It was recorded 14.1 percent during the corresponding month of last year. On MoM basis, Rural Core Inflation (trimmed) recorded at 2.0 percent in May 2023 same as the previous month. It stood at 1.4 percent during the corresponding month of last year.

- VIII. WPI Inflation on YoY basis decreased to 32.8 percent in May 2023 from 33.4 percent in previous month. It stood at 29.6 percent during the corresponding month of last year. On MoM basis, it increased to 1.0 percent in May 2023 from 0.1 percent in previous month. WPI Inflation stood at 1.4 percent during the corresponding month of last year.
- IX. SPI (combined) Inflation on YoY basis increased to 47.0 percent in May 2023 from 45.9 percent in previous month. During the corresponding month of last year, SPI Inflation stood at 16.1 percent. On MoM basis, SPI inflation decreased to 1.3 percent in May 2023 from 2.4 percent in previous month. SPI Inflation stood at 0.6 percent during the 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.

National, Urban and Rural CPI inflation (YoY)														
		May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Headline	National	13.8	21.3	24.9	27.3	23.2	26.6	23.8	24.5	27.6	31.5	35.4	36.4	38.0
	Urban	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6	24.4	28.8	33.0	33.5	35.1
	Rural	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8	32.3	35.6	38.9	40.7	42.2
Food	Urban	15.5	24.0	27.4	28.8	30.8	34.7	29.7	32.7	39.0	41.9	47.1	46.8	48.1
	Rural	19.0	27.0	29.6	30.2	32.7	37.2	33.5	37.9	45.2	47.0	50.2	52.2	52.4
Core (NFNE)	Urban	9.7	11.5	12.0	13.8	14.4	14.9	14.6	14.7	15.4	17.1	18.6	19.5	20.0
	Rural	11.5	13.6	14.6	16.5	17.6	18.2	18.5	19.0	19.4	21.5	23.1	24.9	26.9

Source: Pakistan Bureau of Statistics



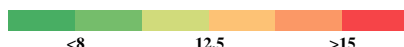
National, Urban and Rural CPI inflation (MoM)														
		May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Headline	National	0.4	6.3	4.3	2.4	-1.2	4.7	0.8	0.5	2.9	4.3	3.7	2.4	1.6
	Urban	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3	2.4	4.5	3.9	2.0	1.5
	Rural	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7	3.6	4.0	3.5	3.0	1.7
Food	Urban	1.0	5.3	4.3	1.6	5.2	4.5	0.0	0.0	3.9	4.3	5.6	3.4	1.9
	Rural	1.3	6.0	3.7	1.2	5.7	6.1	0.5	0.1	5.7	3.9	4.5	4.2	1.4
Core (NFNE)	Urban	0.7	2.0	1.2	1.8	0.9	1.3	0.8	1.2	1.4	2.2	2.5	1.8	1.2
	Rural	0.9	2.3	1.6	1.8	1.4	1.5	2.1	1.5	1.5	2.6	2.4	2.7	2.5

Source: Pakistan Bureau of Statistics



National CPI inflation (YoY)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	13.8	21.3	24.9	27.3	23.2	26.6	23.8	24.5	27.6	31.5	35.4	36.4	38.0
Food and Non-Alcoholic Beverages	34.58	17.3	25.9	28.8	29.5	31.7	36.2	31.2	35.5	42.9	45.1	47.2	48.1	48.7
Alcoholic Beverages, Tobacco	1.02	10.1	17.6	22.5	25.8	32.7	34.6	35.9	36.2	36.3	49.2	140.0	133.5	124.0
Clothing and Footwear	8.60	11.3	13.7	14.6	17.6	17.7	18.3	18.6	17.1	16.8	17.0	21.9	21.6	22.5
Housing, Water, Elec., Gas and Other Fuels	23.63	5.8	13.5	21.8	27.6	3.4	11.9	9.9	7.0	7.8	13.6	17.5	16.9	20.5
Furnishing and Household Equipment Maintenance	4.10	16.1	18.8	19.7	21.9	25.1	27.6	29.1	29.2	29.9	34.0	39.0	40.5	43.5
Health	2.79	10.6	11.3	11.2	11.9	13.8	16.2	17.1	17.5	18.7	18.8	18.5	18.8	19.3
Transport	5.91	31.8	62.2	64.7	63.1	64.5	53.4	44.2	41.2	39.1	50.5	54.9	56.8	52.9
Communication	2.21	1.8	2.0	1.2	1.2	1.3	1.6	1.6	1.7	1.6	3.7	6.6	6.7	7.0
Recreation and Culture	1.59	12.3	14.4	15.4	21.8	22.8	23.7	25.6	38.5	44.1	48.1	50.6	68.6	72.2
Education	3.79	9.5	9.5	9.8	10.0	10.0	10.9	11.1	10.9	10.6	10.8	7.2	8.5	8.4
Restaurants and Hotels	6.92	16.0	21.9	25.0	27.4	28.8	30.4	28.4	27.4	30.1	34.5	38.5	39.0	42.3
Misc. Goods and Services	4.87	13.3	15.8	17.2	20.0	22.9	22.4	23.0	25.8	28.7	33.3	34.4	38.8	43.3

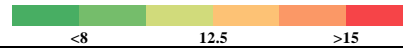
Source: Pakistan Bureau of Statistics



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

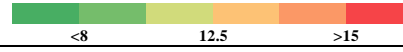
Urban CPI inflation (YoY)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6	24.4	28.8	33.0	33.5	35.1
Food and Non-Alcoholic Beverages	30.42	15.8	24.6	27.8	28.9	30.7	34.8	28.9	32.6	39.5	42.1	45.5	45.1	45.8
Alcoholic Beverages, Tobacco	0.85	9.4	18.3	21.7	25.8	34.1	35.4	37.2	37.3	54.9	140.8	133.7	124.5	
Clothing and Footwear	8.01	11.0	14.2	15.0	18.8	18.9	19.5	19.6	17.0	16.8	16.8	22.4	21.5	21.3
Housing, Water, Elec., Gas and Other Fuels	27.03	4.4	11.3	19.2	24.8	1.0	9.5	7.3	4.1	5.0	11.2	15.0	14.5	18.0
Furnishing and Household Equipment Maintenance	4.09	15.2	17.6	18.2	20.3	24.3	27.6	29.0	29.7	30.0	34.1	39.6	40.8	42.1
Health	2.31	10.3	10.9	10.8	11.8	12.3	13.6	14.1	13.5	16.7	18.5	17.9	19.1	19.4
Transport	6.14	32.2	61.5	63.8	62.4	63.3	51.7	42.1	39.2	38.0	49.9	54.6	55.9	51.4
Communication	2.35	2.3	2.5	1.1	1.2	1.2	1.7	1.8	1.8	1.8	4.6	8.5	8.6	9.0
Recreation and Culture	1.73	11.9	13.3	13.9	20.4	21.1	21.4	22.3	38.0	43.6	48.4	51.4	68.5	71.6
Education	4.88	10.4	10.4	10.5	10.1	10.0	11.1	11.1	10.8	10.4	10.4	5.8	6.0	5.7
Restaurants and Hotels	7.41	14.5	21.2	24.7	27.4	29.1	31.8	29.5	28.6	32.4	35.2	39.8	40.4	46.1
Misc. Goods and Services	4.77	12.2	15.1	16.8	20.1	23.1	23.7	23.8	25.9	28.8	33.3	34.3	39.1	43.0

Source: Pakistan Bureau of Statistics



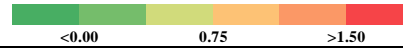
Rural CPI inflation (YoY)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8	32.3	35.6	38.9	40.7	42.2
Food and Non-Alcoholic Beverages	40.87	19.0	27.4	29.9	30.2	32.8	37.9	33.7	38.7	46.8	48.3	49.0	51.4	51.9
Alcoholic Beverages, Tobacco	1.28	11.0	16.9	23.4	25.8	31.1	33.7	34.4	35.0	35.2	42.7	139.1	133.3	123.3
Clothing and Footwear	9.48	11.7	13.1	14.0	16.2	16.3	16.8	17.4	17.2	16.7	17.2	21.3	21.8	23.9
Housing, Water, Elec., Gas and Other Fuels	18.49	9.1	18.4	27.6	33.9	8.6	17.3	15.6	13.2	14.0	18.6	22.9	22.2	26.0
Furnishing and Household Equipment Maintenance	4.10	17.5	20.5	22.0	24.2	26.2	27.7	29.2	28.6	29.8	33.9	38.1	40.2	45.5
Health	3.51	10.9	11.8	11.7	12.0	15.2	18.9	20.2	21.4	20.7	19.1	19.0	18.4	19.3
Transport	5.56	31.0	63.4	66.3	64.2	66.6	56.4	47.9	44.6	41.0	51.4	55.5	58.4	55.5
Communication	1.99	0.8	1.0	1.2	1.4	1.4	1.3	1.4	1.4	1.2	1.9	3.2	3.2	3.2
Recreation and Culture	1.38	13.0	16.3	18.2	24.3	25.7	27.7	31.3	39.4	45.1	47.4	49.2	68.9	73.2
Education	2.13	6.0	6.2	7.2	9.8	9.8	10.2	11.1	11.3	11.2	12.2	12.5	18.0	18.8
Restaurants and Hotels	6.19	18.5	23.0	25.4	27.5	28.2	27.9	26.4	25.2	26.0	33.4	36.1	36.6	35.9
Misc. Goods and Services	5.02	14.9	16.8	17.7	19.7	22.6	20.5	21.9	25.6	28.5	33.3	34.6	38.5	43.8

Source: Pakistan Bureau of Statistics



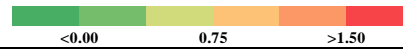
National CPI inflation (MoM)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	0.4	6.3	4.3	2.4	-1.2	4.7	0.8	0.5	2.9	4.3	3.7	2.4	1.6
Food and Non-Alcoholic Beverages	34.58	0.9	5.5	4.1	1.3	5.8	5.6	0.1	-0.1	5.0	4.1	3.7	4.4	1.3
Alcoholic Beverages, Tobacco	1.02	4.9	7.0	4.1	2.7	5.9	1.8	1.1	0.5	0.2	9.7	60.9	0.3	0.6
Clothing and Footwear	8.60	0.7	2.3	1.1	2.8	0.3	1.0	2.2	0.7	0.5	1.2	5.3	1.9	1.4
Housing, Water, Elec., Gas and Other Fuels	23.63	-2.3	7.7	8.8	5.5	-17.7	10.9	0.6	0.0	1.8	3.7	1.1	-1.1	0.7
Furnishing and Household Equipment Maintenance	4.10	1.8	2.9	1.7	2.3	3.4	2.9	2.8	2.4	1.6	5.0	5.1	2.7	3.9
Health	2.79	0.5	1.2	0.2	1.2	2.2	2.8	1.9	1.9	1.8	2.1	0.3	1.1	0.9
Transport	5.91	2.7	24.4	5.7	-0.3	2.2	-1.8	-0.1	-0.8	-0.5	12.0	3.3	1.6	0.2
Communication	2.21	0.1	0.2	0.4	0.1	0.1	0.4	0.0	0.1	0.0	2.1	2.9	0.1	0.4
Recreation and Culture	1.59	2.8	3.2	1.6	6.3	2.0	1.9	2.0	10.9	4.5	3.3	3.1	12.4	5.0
Education	3.79	1.0	0.3	0.5	1.1	0.0	1.0	0.4	0.3	0.1	0.5	1.3	1.9	0.9
Restaurants and Hotels	6.92	1.8	5.8	2.9	2.3	2.2	2.5	1.9	1.3	3.1	5.1	3.8	0.6	4.2
Misc. Goods and Services	4.87	1.2	3.3	1.6	2.7	3.8	0.9	2.3	3.0	3.2	4.7	2.5	4.1	4.4

Source: Pakistan Bureau of Statistics



Urban CPI inflation (MoM)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3	2.4	4.5	3.9	2.0	1.5
Food and Non-Alcoholic Beverages	30.42	0.9	5.0	4.3	1.4	5.4	4.8	-0.3	-0.3	4.1	4.2	4.5	4.0	1.4
Alcoholic Beverages, Tobacco	0.85	4.6	8.2	2.9	3.4	6.8	1.3	1.6	0.2	0.1	13.0	55.6	0.3	0.5
Clothing and Footwear	8.01	0.5	3.0	1.0	3.4	0.1	1.0	1.3	0.7	0.6	1.3	5.8	1.1	0.4
Housing, Water, Elec., Gas and Other Fuels	27.03	-2.3	7.0	8.6	5.2	-17.8	10.9	-0.1	-0.5	1.4	4.3	1.1	-1.1	0.7
Furnishing and Household Equipment Maintenance	4.09	2.0	2.6	1.5	2.3	4.1	3.3	2.6	2.3	1.1	5.3	5.2	2.5	2.9
Health	2.31	0.4	1.4	0.1	1.6	1.0	1.7	1.6	1.1	3.4	3.2	0.4	1.9	0.6
Transport	6.14	2.9	23.5	5.6	-0.2	2.0	-2.2	-0.1	-0.7	-0.4	12.3	3.6	1.4	0.0
Communication	2.35	0.2	0.2	0.4	0.0	0.1	0.6	0.0	0.1	0.0	2.8	3.7	0.2	0.6
Recreation and Culture	1.73	3.0	3.1	1.2	6.3	2.0	1.7	1.1	13.4	4.3	3.6	3.0	11.5	4.9
Education	4.88	1.1	0.1	0.3	0.7	0.0	1.1	0.2	0.2	0.1	0.1	1.3	0.8	0.8
Restaurants and Hotels	7.41	0.6	6.6	3.3	2.3	2.8	3.0	1.8	1.6	3.6	4.2	4.2	0.6	4.7
Misc. Goods and Services	4.77	1.1	3.7	1.4	3.4	3.9	1.4	1.7	2.4	3.1	4.7	2.6	4.2	3.9

Source: Pakistan Bureau of Statistics



Rural CPI inflation (MoM)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	100.00	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7	3.6	4.0	3.5	3.0	1.7
Food and Non-Alcoholic Beverages	40.87	0.8	6.1	3.8	1.2	6.2	6.6	0.4	0.0	6.0	3.9	2.9	4.7	1.1
Alcoholic Beverages, Tobacco	1.28	5.3	5.6	5.5	1.9	4.8	2.5	0.6	0.9	0.4	5.9	67.5	0.3	0.8
Clothing and Footwear	9.48	0.9	1.6	1.2	2.0	0.5	1.0	3.2	0.8	0.4	1.0	4.7	2.8	2.6
Housing, Water, Elec., Gas and Other Fuels	18.49	-2.5	9.2	9.4	6.0	-17.5	10.9	1.8	1.1	2.6	2.6	1.2	-1.3	0.6
Furnishing and Household Equipment Maintenance	4.10	1.5	3.3	2.0	2.4	2.4	2.2	3.2	2.6	2.3	4.5	4.9	3.1	5.4
Health	3.51	0.6	1.1	0.3	0.8	3.4	3.9	2.3	2.8	0.4	1.1	0.2	0.4	1.3
Transport	5.56	2.5	25.9	5.7	-0.5	2.5	-1.3	0.0	-0.9	-0.5	11.6	2.7	2.0	0.6
Communication	1.99	0.0	0.2	0.4	0.2	0.1	0.0	0.1	0.0	0.1	0.7	1.3	0.1	0.0
Recreation and Culture	1.38	2.5	3.4	2.2	6.4	2.2	2.4	3.4	6.8	4.9	2.7	3.3	14.1	5.2
Education	2.13	0.8	0.9	1.4	2.8	0.0	0.5	0.8	0.4	0.2	1.7	1.4	5.9	1.5
Restaurants and Hotels	6.19	3.9	4.4	2.2	2.4	1.2	1.7	2.3	0.7	2.3	6.9	3.3	0.7	3.4
Misc. Goods and Services	5.02	1.3	2.8	2.0	1.9	3.7	0.2	3.2	3.9	3.3	4.6	2.4	3.9	5.2

Source: Pakistan Bureau of Statistics

<0.00 0.75 >1.50

Rural CPI inflation (YoY)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Rural	100.00	15.9	23.6	26.9	28.8	26.1	29.5	27.2	28.8	32.3	35.6	38.9	40.7	42.2
Food	45.95	19.0	27.0	29.6	30.2	32.7	37.2	33.5	37.9	45.2	47.0	50.2	52.2	52.4
<i>Non-perishable</i>	40.16	17.0	25.5	29.3	29.6	29.7	31.9	31.8	35.7	44.4	47.6	48.2	54.8	54.4
<i>Perishable</i>	5.79	33.7	41.2	33.5	34.3	52.6	74.2	43.8	59.5	64.3	53.1	54.5	31.9	35.3
Non Food	54.05	13.1	20.4	24.5	27.5	20.1	22.4	21.4	20.7	20.9	25.3	28.5	29.9	32.5
Energy	11.41	19.3	46.6	61.2	67.8	28.8	36.9	30.7	26.2	25.7	37.5	46.6	47.3	52.6
NFNE (Core)	42.64	11.5	13.6	14.6	16.5	17.6	18.2	18.5	19.0	19.4	21.5	23.1	24.9	26.9
HRI	8.61	5.7	5.7	5.9	5.9	5.9	5.9	5.9	5.9	6.9	6.9	6.9	7.1	7.1
Core Excl HRI	34.03	12.9	15.5	16.8	19.1	20.4	21.2	21.5	22.1	22.4	24.9	26.9	29.0	31.4

Source: Pakistan Bureau of Statistics

<8 12.5 >15

Urban CPI inflation (YoY)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Urban	100.00	12.4	19.8	23.6	26.2	21.2	24.6	21.6	21.6	24.4	28.8	33.0	33.5	35.1
Food	36.80	15.5	24.0	27.4	28.8	30.8	34.7	29.7	32.7	39.0	41.9	47.1	46.8	48.1
<i>Non-perishable</i>	32.34	15.0	23.5	27.1	28.2	27.9	29.4	27.1	29.6	36.7	42.0	44.9	48.5	47.9
<i>Perishable</i>	4.46	20.6	32.4	32.4	33.5	48.3	67.0	38.6	52.9	59.3	42.9	49.4	26.9	32.3
Non Food	63.20	10.4	17.3	21.3	24.7	15.2	18.2	16.4	14.8	15.6	20.8	24.1	24.9	26.6
Energy	9.47	14.1	48.8	70.2	80.7	18.9	34.1	24.5	15.4	16.3	37.1	50.3	52.1	61.2
NFNE (Core)	53.73	9.7	11.5	12.0	13.8	14.4	14.9	14.6	14.7	15.4	17.1	18.6	19.5	20.0
HRI	19.26	5.6	5.6	5.6	5.6	5.6	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.3
Core Excl HRI	34.47	11.9	14.7	15.5	18.2	19.2	20.1	19.6	19.7	20.8	23.3	25.4	26.8	27.5

Source: Pakistan Bureau of Statistics

<8 12.5 >15

Rural CPI inflation (MoM)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Rural	100.00	0.6	6.6	4.2	2.2	0.2	5.0	1.3	0.7	3.6	4.0	3.5	3.0	1.7
Food	45.95	1.3	6.0	3.7	1.2	5.7	6.1	0.5	0.1	5.7	3.9	4.5	4.2	1.4
<i>Non-perishable</i>	40.16	2.8	6.2	3.5	0.7	4.2	3.7	1.7	2.6	7.4	3.6	3.2	5.1	2.6
<i>Perishable</i>	5.79	-10.7	5.2	6.0	3.9	18.4	22.2	-5.5	-13.2	-2.2	5.5	1.5	2.5	-8.4
Non Food	54.05	0.0	7.1	4.6	3.1	-4.9	3.9	2.1	1.4	1.5	4.1	2.4	1.6	2.0
Energy	11.41	-2.8	24.3	13.4	6.4	-21.0	11.8	2.2	0.8	1.5	8.4	2.4	-1.4	0.7
NFNE (Core)	42.64	0.9	2.3	1.6	1.8	1.4	1.5	2.1	1.5	1.5	2.6	2.4	2.7	2.5
HRI	8.61	0.0	0.0	1.4	0.0	0.0	1.3	0.0	0.0	3.1	0.0	0.0	1.2	0.0
Core Excl HRI	34.03	1.0	2.9	1.7	2.2	1.7	1.6	2.5	1.8	1.2	3.2	2.9	3.0	3.0

Source: Pakistan Bureau of Statistics

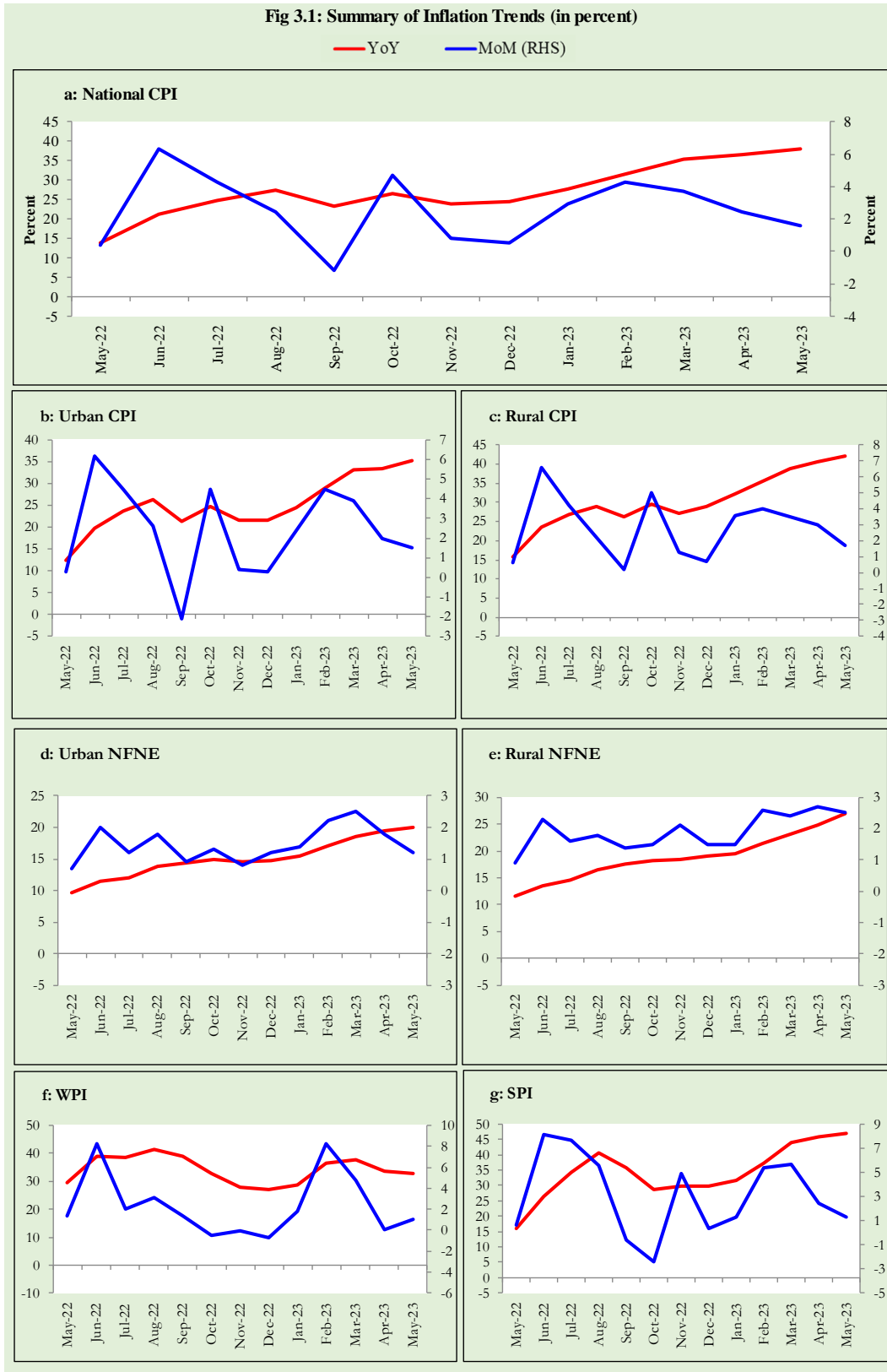
<0.00 0.75 >1.50

Urban CPI inflation (MoM)														
	Weights	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
Urban	100.00	0.3	6.2	4.5	2.6	-2.1	4.5	0.4	0.3	2.4	4.5	3.9	2.0	1.5
Food	36.80	1.0	5.3	4.3	1.6	5.2	4.5	0.0	0.0	3.9	4.3	5.6	3.4	1.9
<i>Non-perishable</i>	32.34	3.1	4.9	3.8	1.2	4.0	2.2	0.7	2.2	5.0	4.4	4.6	4.3	2.7
<i>Perishable</i>	4.46	-10.8	5.5	7.3	2.8	14.0	18.5	-4.4	-12.0	-1.4	2.9	3.5	2.5	-7.0
Non Food	63.20	-0.1	6.8	4.6	3.3	-6.6	4.5	0.6	0.6	1.2	4.7	2.7	1.0	1.2
<i>Energy</i>	9.47	-4.6	32.2	18.3	8.4	-31.1	19.5	-0.2	-1.9	0.4	15.2	3.1	-2.2	1.1
<i>NFNE (Core)</i>	53.73	0.7	2.0	1.2	1.8	0.9	1.3	0.8	1.2	1.4	2.2	2.5	1.8	1.2
<i>HRI</i>	19.26	0.0	0.0	1.5	0.0	0.0	1.1	0.0	0.0	1.7	0.0	0.0	1.0	0.0
<i>Core Excl HRI</i>	34.47	1.1	3.0	1.1	2.7	1.4	1.4	1.2	1.7	1.3	3.3	3.7	2.1	1.7

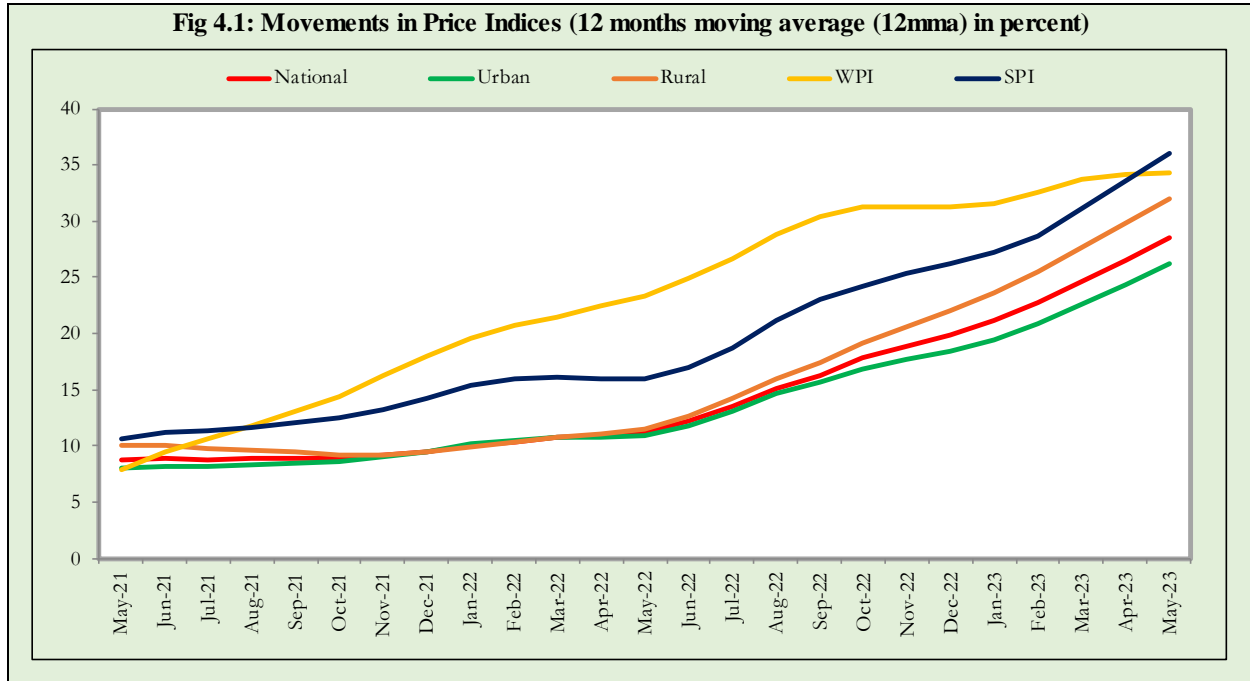
Source: Pakistan Bureau of Statistics

<0.00 0.75 >1.50

3. Trends in Inflation



4. Movement in Price Indices (Moving Averages)



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

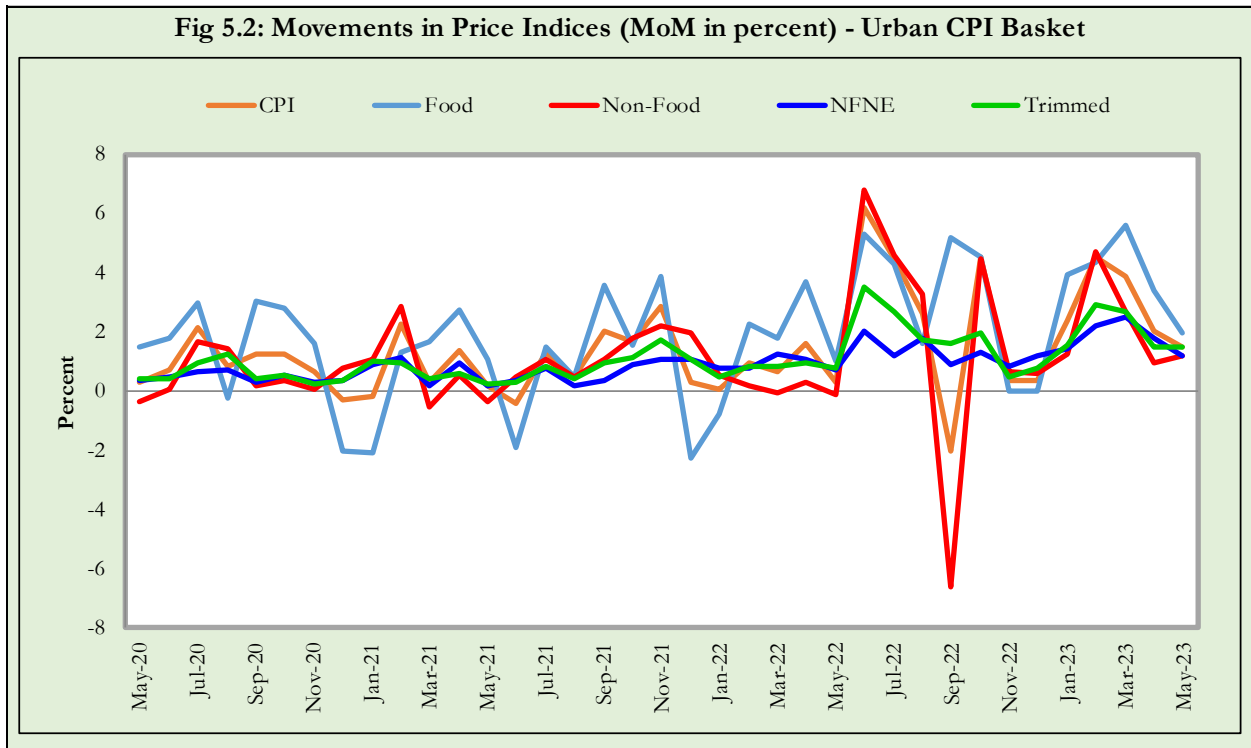
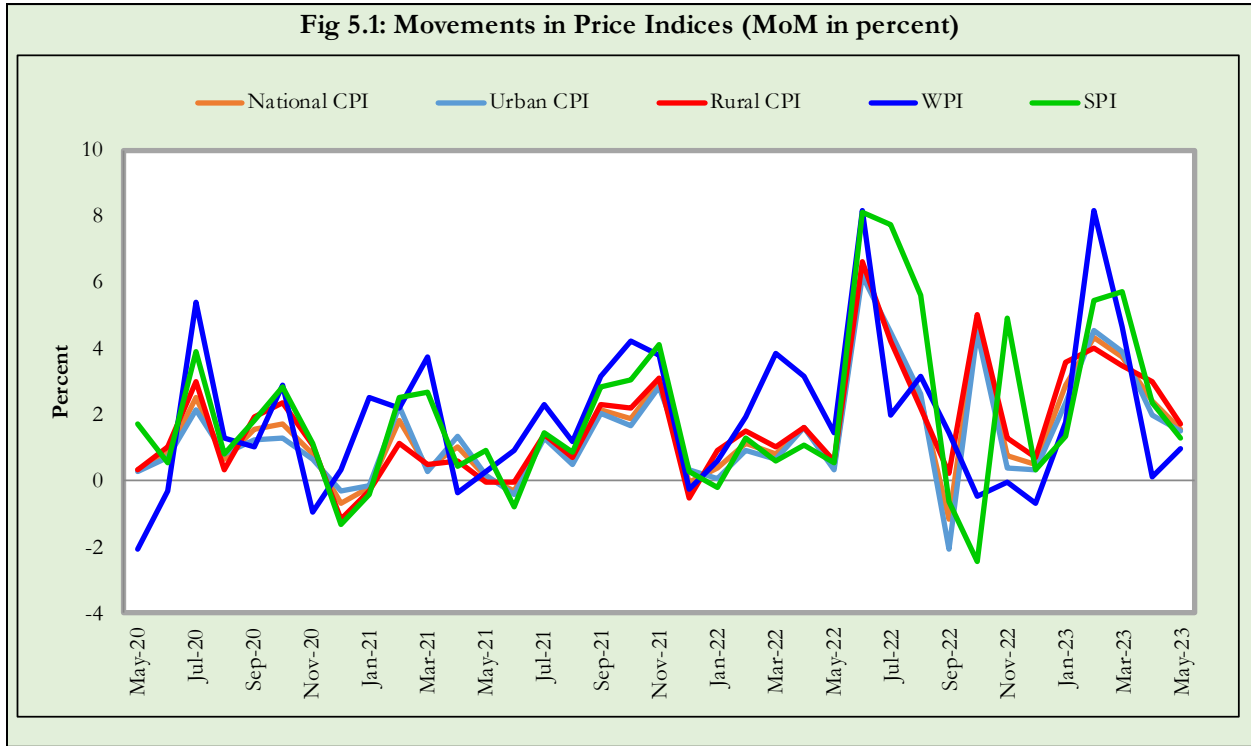
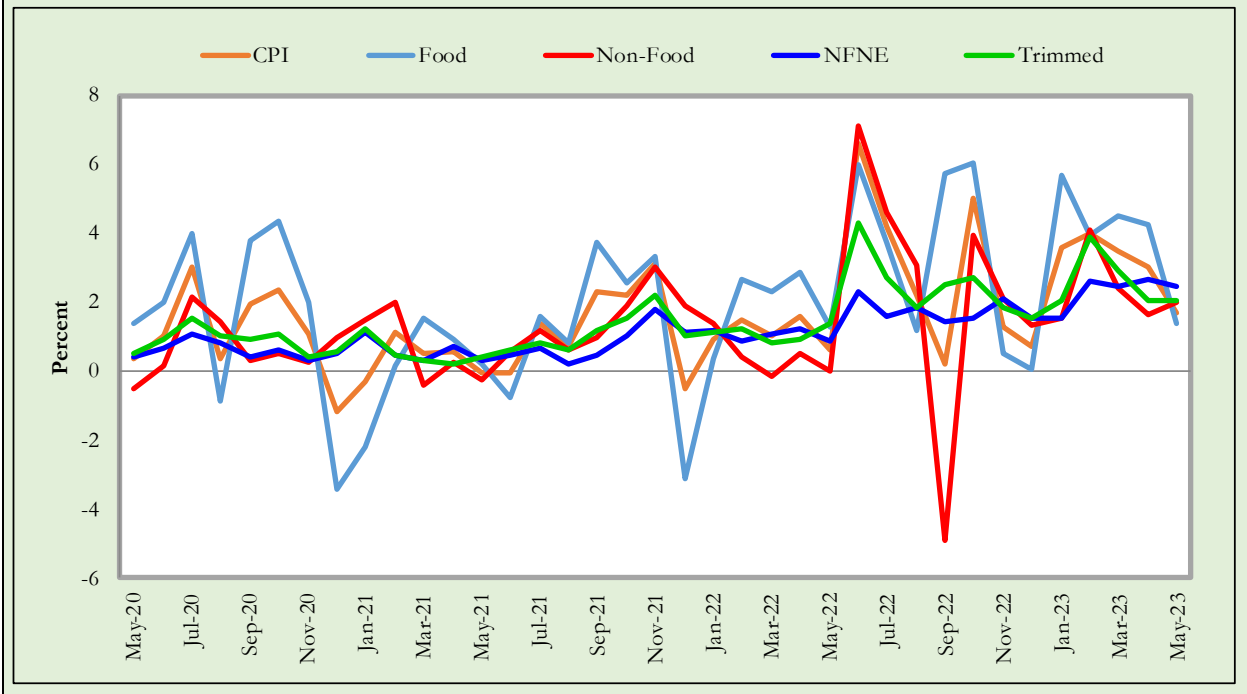
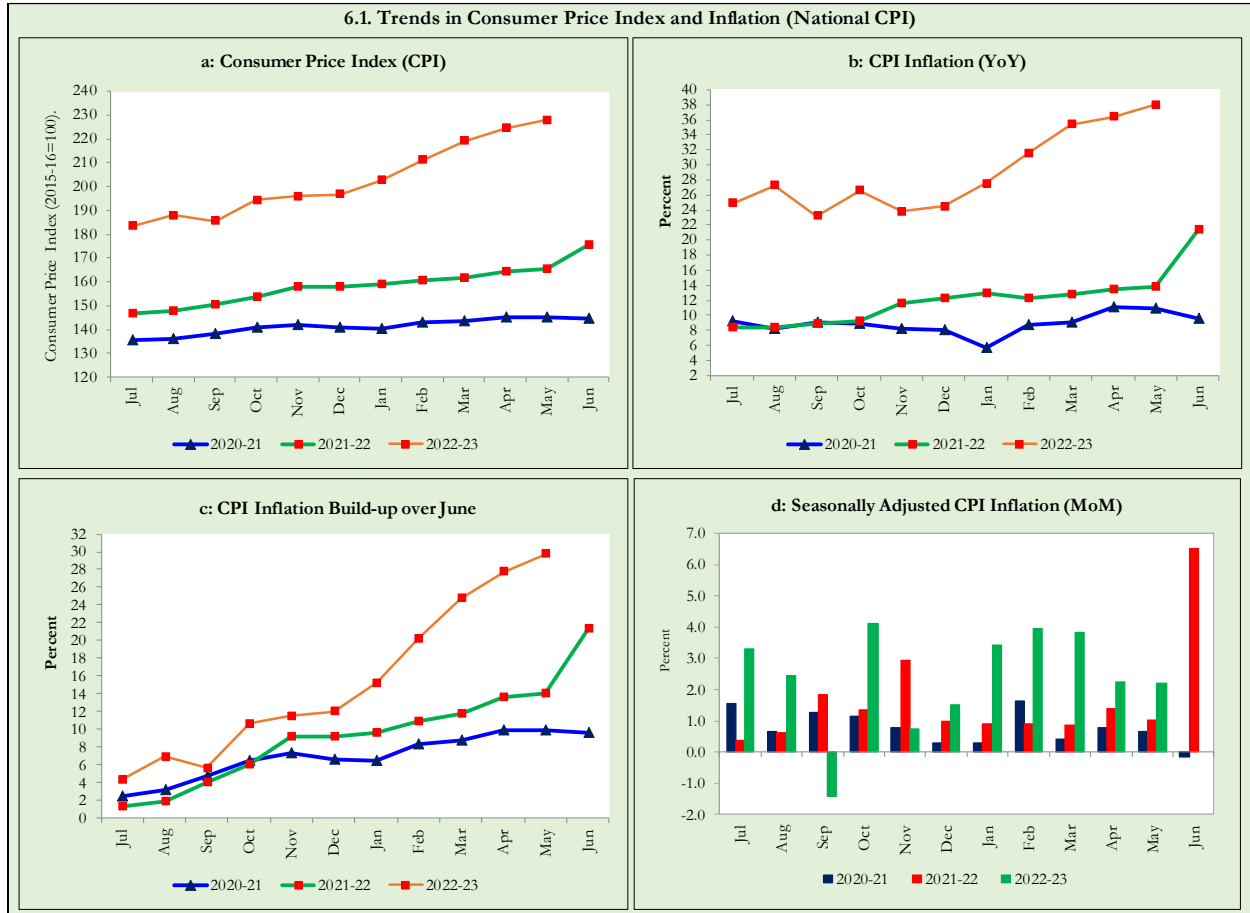


Fig 5.3: Movements in Price Indices (MoM in percent) - Rural CPI Basket

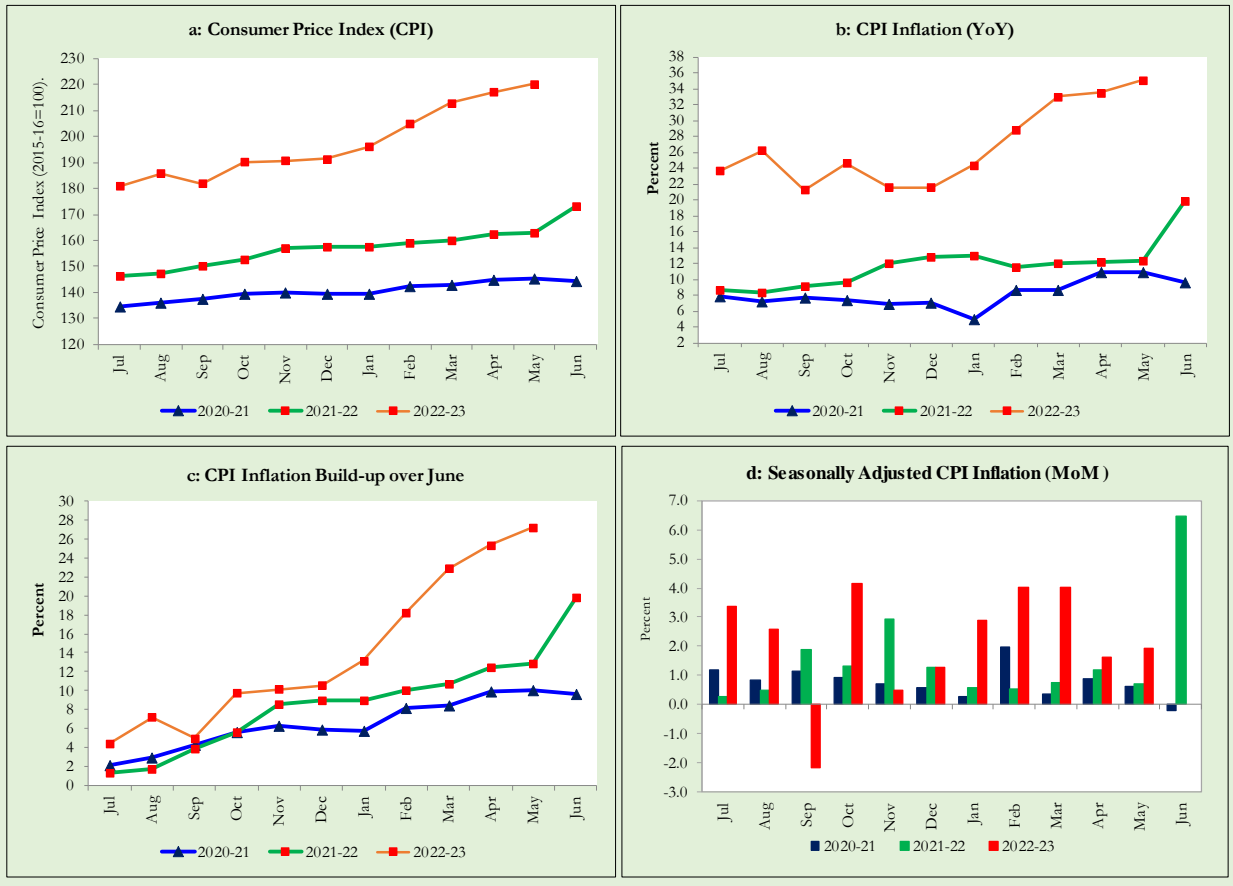


6. Trends in Consumer Price Indices and Inflation

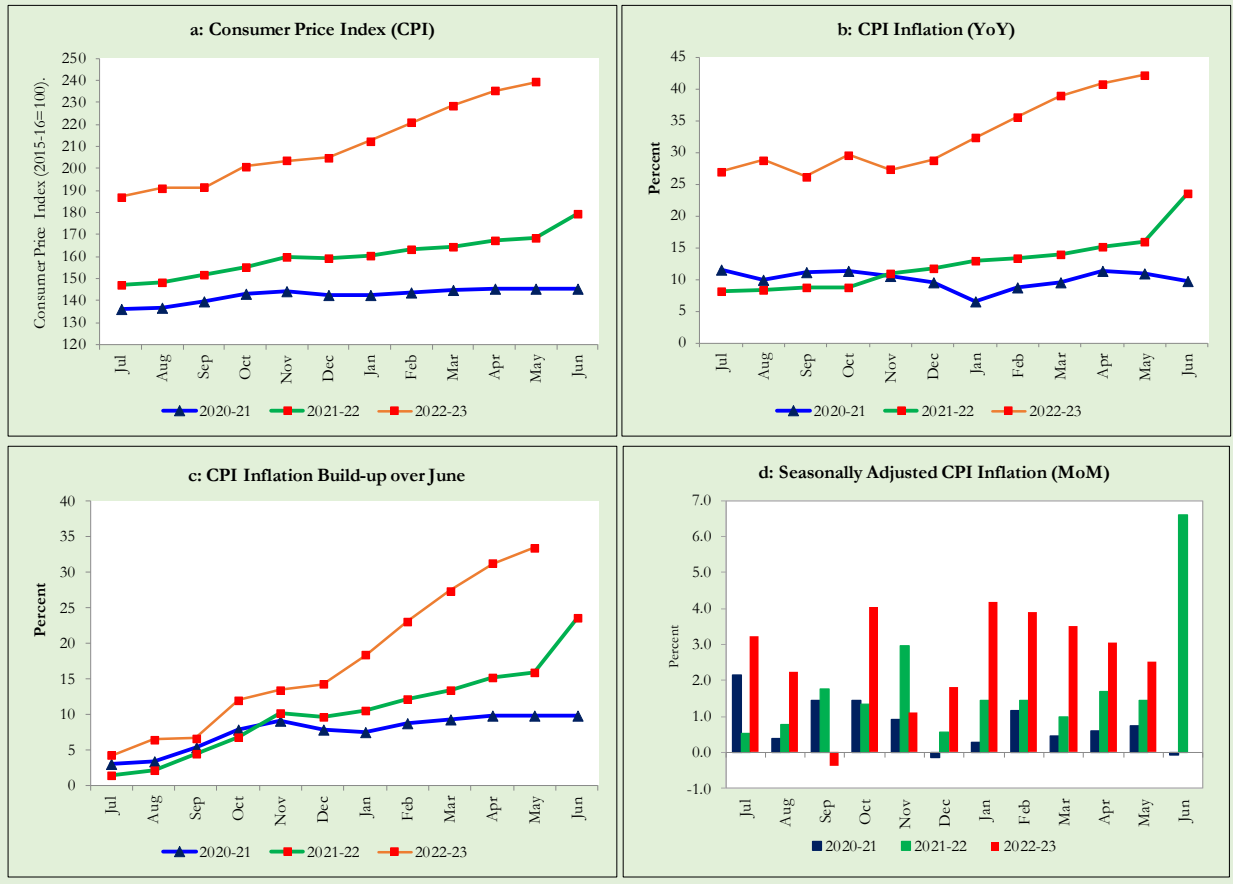
Monthly Consumer Price Indices, CPI inflation (YoY) and inflation build up over June along with seasonally adjusted (MoM) growth rates in CPI (National, Urban and Rural) is summarized in the following graphs (Figure 6.1 to 6.3).



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 decreased to 54.2 percent during May 2023 from 54.7 percent in previous month. It was 48.2 percent during the corresponding month of last year. The weighted contribution of non-food group increased to 45.8 percent in May 2023 from 45.3 percent in previous month. Weighted Contribution of non-food was 51.7 percent during the 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.

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
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
Jan-23	100.0	60.0	9.4	50.6	40.0	7.9	32.1	28.1	3.9
Feb-23	100.0	55.2	6.6	48.6	44.8	14.8	30.0	26.7	3.3
Mar-23	100.0	54.9	6.5	48.4	45.0	16.3	28.7	25.9	2.9
Apr-23	100.0	54.7	4.1	50.6	45.3	15.8	29.4	26.7	2.8
May-23	100.0	54.2	4.2	50.0	45.8	16.9	28.9	26.3	2.6

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 decreased to 60.6 percent during May 2023 from 62.1 percent in previous month. It was 56.7 percent during the corresponding month of last year. The weighted contribution of non-food group increased to 39.4 percent in May 2023 from 37.8 percent in previous month. The weighted contribution of non-food group was 43.3 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
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
Jan-23	100.0	65.5	9.9	55.6	34.5	10.3	24.2	22.6	1.7
Feb-23	100.0	62.5	8.3	54.3	37.5	13.3	24.2	22.7	1.5
Mar-23	100.0	61.8	7.7	54.1	38.2	14.3	23.9	22.5	1.3
Apr-23	100.0	62.1	5.1	57.0	37.8	13.4	24.4	23.1	1.3
May-23	100.0	60.6	4.8	55.7	39.4	13.9	25.5	24.3	1.3

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	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	61.2	75.3	71.1	70.8	62.4	66.3	54.5	56.7	68.8	78.9	73.6	64.9	65.2
Food & Non-Alcoholic Beverages	37.8	57.8	66.7	54.4	56.7	43.3	18.9	26.7	55.6	68.9	66.7	50.0	44.4
Alcoholic Beverages & Tobacco	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	33.3	100.0	100.0	100.0	100.0
Clothing & Footwear	72.5	82.5	62.5	70.0	62.5	72.5	75.0	77.5	77.5	67.5	72.5	70.0	70.0
Housing, Water, Elect, Gas & other Fuels	20.7	72.4	75.9	58.6	3.4	51.7	24.1	10.3	58.6	75.9	48.3	10.3	44.8
Furnishing & Household Equip. Maintenance etc.	97.6	100.0	97.6	95.2	97.6	100.0	100.0	95.2	100.0	100.0	100.0	100.0	100.0
Health	61.3	90.3	61.3	77.4	87.1	80.6	83.9	71.0	80.6	87.1	77.4	67.7	74.2
Transport	53.1	93.8	81.3	50.0	37.5	46.9	34.4	25.0	34.4	90.6	81.3	59.4	37.5
Communication	20.0	40.0	40.0	20.0	40.0	40.0	20.0	40.0	20.0	40.0	40.0	20.0	40.0
Recreation & Culture	76.0	44.0	52.0	80.0	72.0	80.0	24.0	72.0	84.0	80.0	56.0	72.0	64.0
Education	50.0	25.0	31.3	75.0	12.5	37.5	50.0	56.3	31.3	31.3	62.5	56.3	62.5
Restaurant & Hotels	92.9	92.9	85.7	100.0	92.9	100.0	100.0	100.0	85.7	92.9	92.9	92.9	100.0
Miscellaneous	96.6	100.0	86.2	96.6	93.1	89.7	100.0	96.6	100.0	100.0	86.2	100.0	100.0
NFNE	72.8	81.3	71.5	77.4	67.2	76.6	71.5	72.3	76.6	82.6	77.0	75.7	74.5

Groups	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
General	59.0	74.2	76.6	72.5	67.2	68.0	54.5	48.8	67.6	77.9	72.5	63.1	63.1
Food & Non-Alcoholic Beverages	40.5	53.2	64.6	53.2	62.0	55.7	13.9	12.7	57.0	62.0	53.2	39.2	43.0
Alcoholic Beverages & Tobacco	100.0	100.0	100.0	100.0	100.0	60.0	100.0	80.0	80.0	100.0	100.0	100.0	40.0
Clothing & Footwear	88.9	81.5	81.5	88.9	66.7	81.5	96.3	85.2	81.5	96.3	92.6	92.6	92.6
Housing, Water, Elect, Gas & other Fuels	26.1	82.6	95.7	78.3	30.4	56.5	34.8	0.0	82.6	56.5	69.6	21.7	47.8
Furnishing & Household Equip. Maintenance etc.	84.6	92.3	92.3	100.0	88.5	100.0	100.0	96.2	96.2	100.0	100.0	88.5	92.3
Health	42.9	100.0	64.3	71.4	92.9	64.3	100.0	78.6	35.7	85.7	64.3	71.4	64.3
Transport	68.8	87.5	75.0	43.8	68.8	31.3	18.8	25.0	12.5	81.3	81.3	62.5	37.5
Communication	20.0	20.0	40.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Recreation & Culture	76.9	53.8	53.8	84.6	69.2	84.6	46.2	84.6	76.9	92.3	69.2	84.6	84.6
Education	80.0	80.0	100.0	80.0	0.0	100.0	80.0	80.0	80.0	80.0	80.0	100.0	80.0
Restaurant & Hotels	71.4	92.9	85.7	92.9	85.7	85.7	85.7	71.4	85.7	85.7	85.7	78.6	71.4
Miscellaneous	76.5	94.1	94.1	94.1	94.1	88.2	100.0	94.1	94.1	100.0	88.2	100.0	100.0
NFNE	69.9	82.4	78.7	80.9	72.1	76.5	80.9	74.3	72.8	86.8	80.9	81.6	77.2

9. Domestic Food Commodity Prices (Growth)

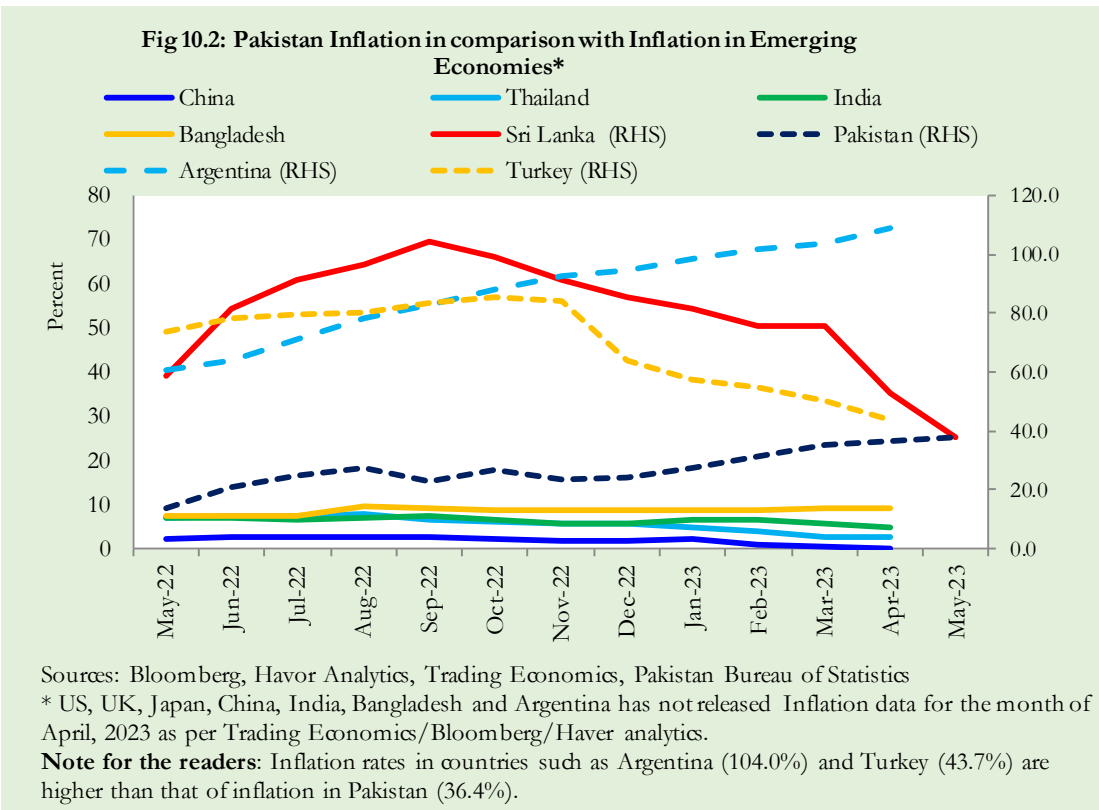
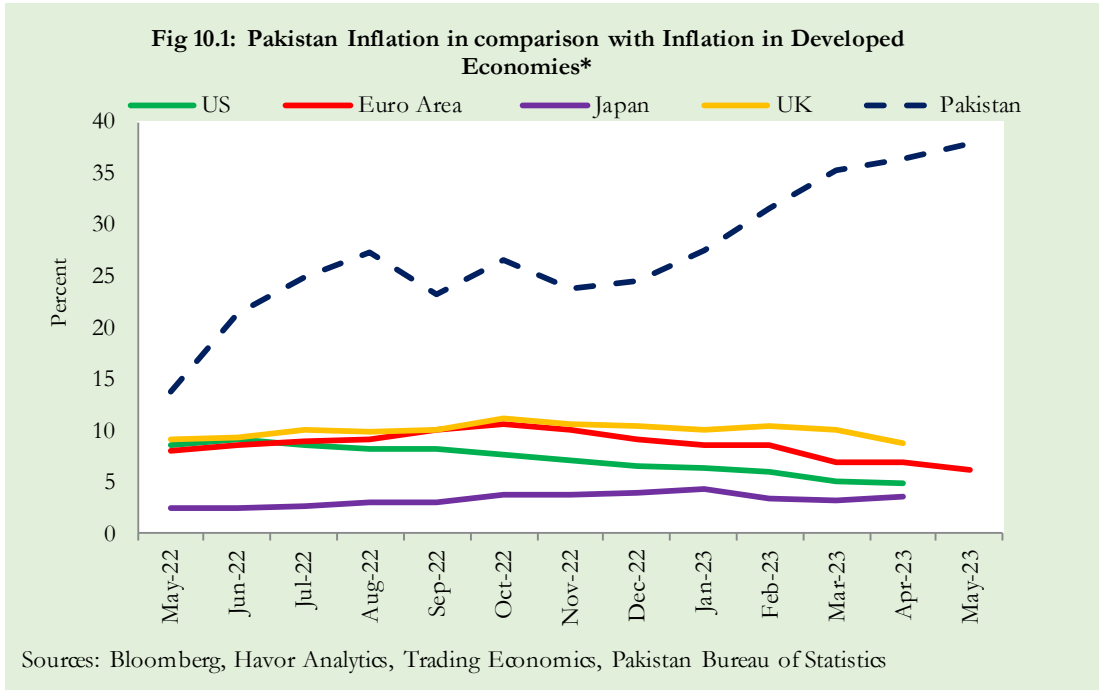
Growth of domestic food commodities (YoY and MoM in percent) for selected essential food items covering both urban and rural CPI baskets is given in table 9.1.

S. No	Item	Unit	Urban CPI		Rural CPI	
			YoY	MoM	YoY	MoM
1	Wheat	10 Kg	94.8	-2.3	93.5	0.6
2	Wheat Flour Bag	20 Kg	99.1	7.2	102.0	4.2
3	Rice Basmati Broken (Superior/Average Quality)*	1 Kg	81.5	0.8	96.2	4.0
4	Beef With Bone (Average Quality)	1 Kg	19.1	3.8	20.4	3.9
5	Mutton (Average Quality)	1 Kg	21.5	5.4	21.6	1.9
6	Chicken Farm Broiler (Live)	1 Kg	36.2	11.3	38.0	9.4
7	Milk Fresh (Un-Boiled)	1 Litre	36.2	1.4	42.6	3.7
8	Eggs Farm	Dozen	90.3	7.1	88.3	6.6
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	26.0	-0.3	23.1	-3.0
10	Pulse Masoor (Washed)	1 Kg	21.3	1.6	22.7	1.1
11	Pulse Moong (Washed)	1 Kg	57.8	1.7	66.3	3.6
12	Pulse Mash (Washed)	1 Kg	58.2	3.7	64.7	2.4
13	Pulse Gram	1 Kg	48.5	1.6	49.4	1.9
14	Potatoes	1 Kg	112.3	17.8	115.6	25.7
15	Onions	1 Kg	-25.2	-33.0	-17.7	-32.0
16	Tomatoes	1 Kg	-40.2	-28.9	-39.6	-30.7
17	Sugar Refined	1 Kg	41.1	-2.8	40.9	-1.8
18	Garlic (Lehsun)	1 Kg	10.0	-2.3	-1.1	-6.6
19	Ginger (Adrak)	500 Gm	177.4	11.0	140.7	3.1
20	Tea Lipton Yellow Label 190 Gm Packet	Each	112.2	1.8	106.4	3.5

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

10. Inflation in Global Context

In global context, inflation trends in selected developed and emerging economies is given in figure 10.1 and 10.2.

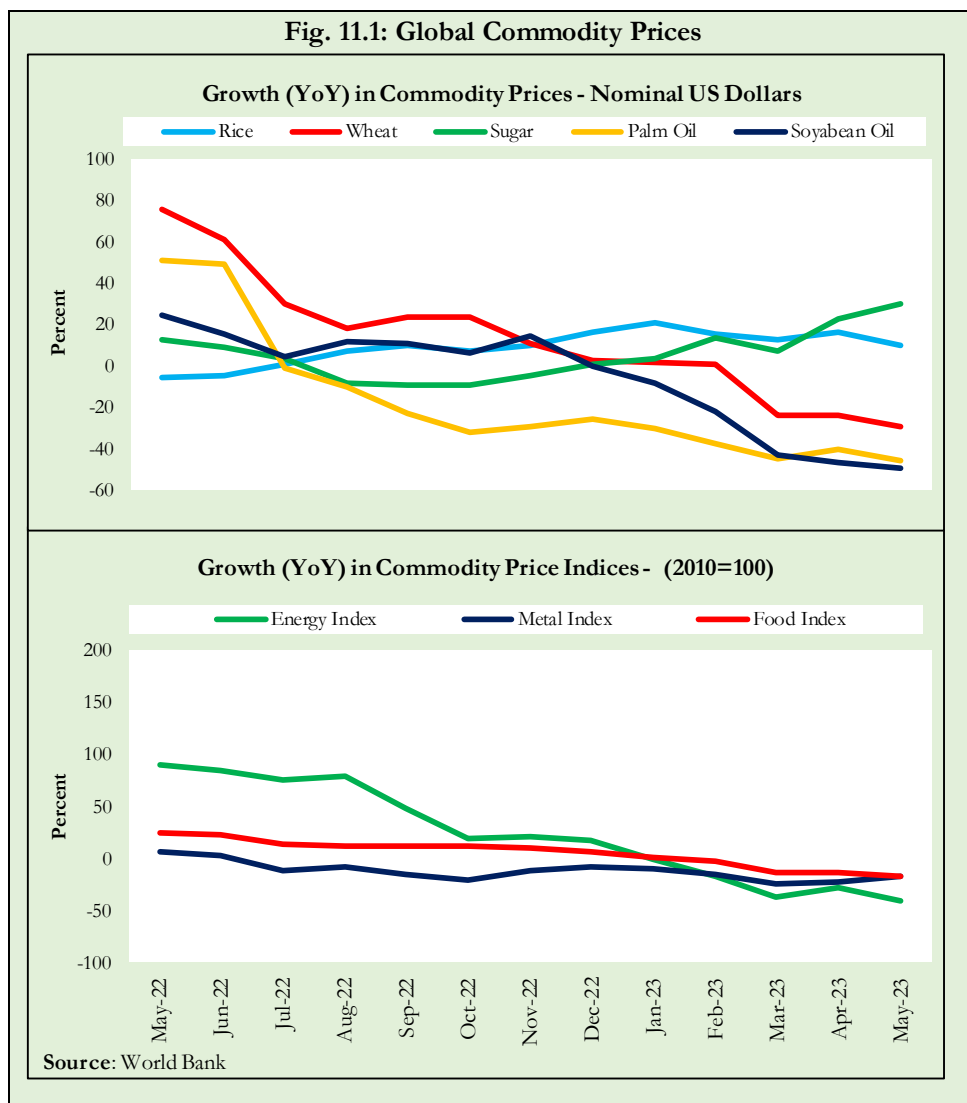


11. Global Commodity Prices and Indices (Growth)

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.

Item/ Group	May-22		Apr-23		May-23	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	24.6	0.1	-13.6	1.9	-16.3	-3.1
Metals	6.6	-11.0	-22.2	0.4	-17.6	-5.7
Energy	89.6	6.8	-28.7	5.6	-40.8	-11.3
Agricultural	19.9	-0.5	-12.2	1.9	-14.0	-2.5
Cotton	80.2	5.4	-38.7	-0.2	-42.6	-1.2

Source: World Bank



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 May 2023 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

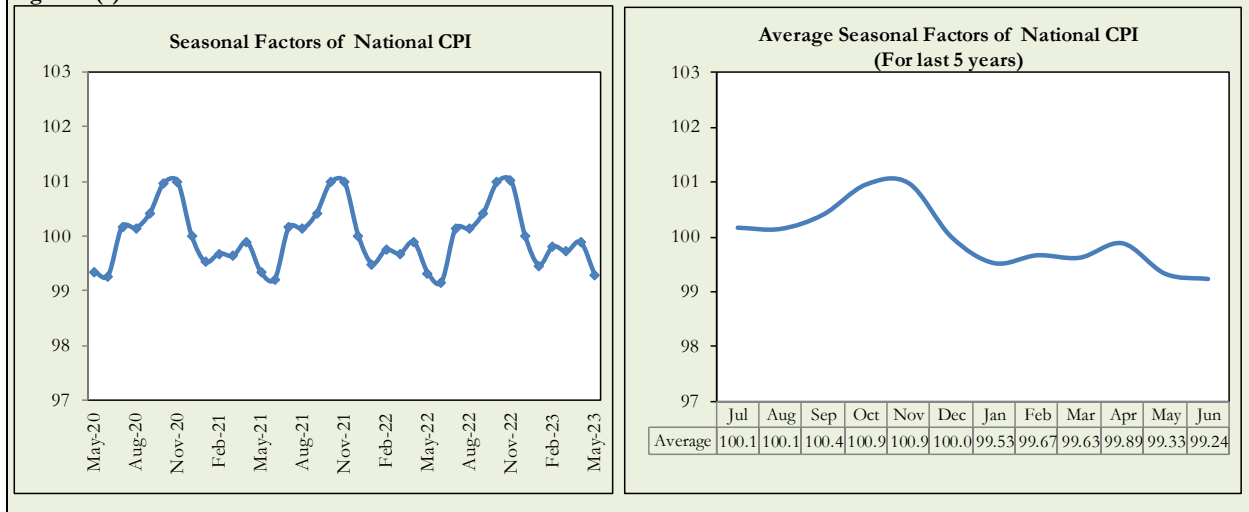


Fig. 12.1 (b): Seasonal Factor of Urban CPI

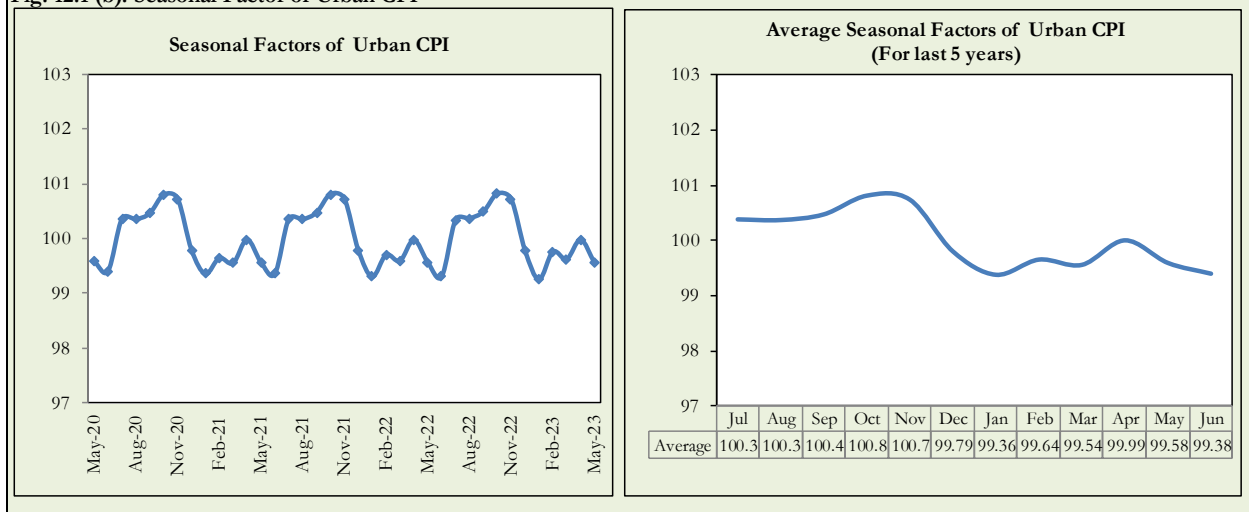
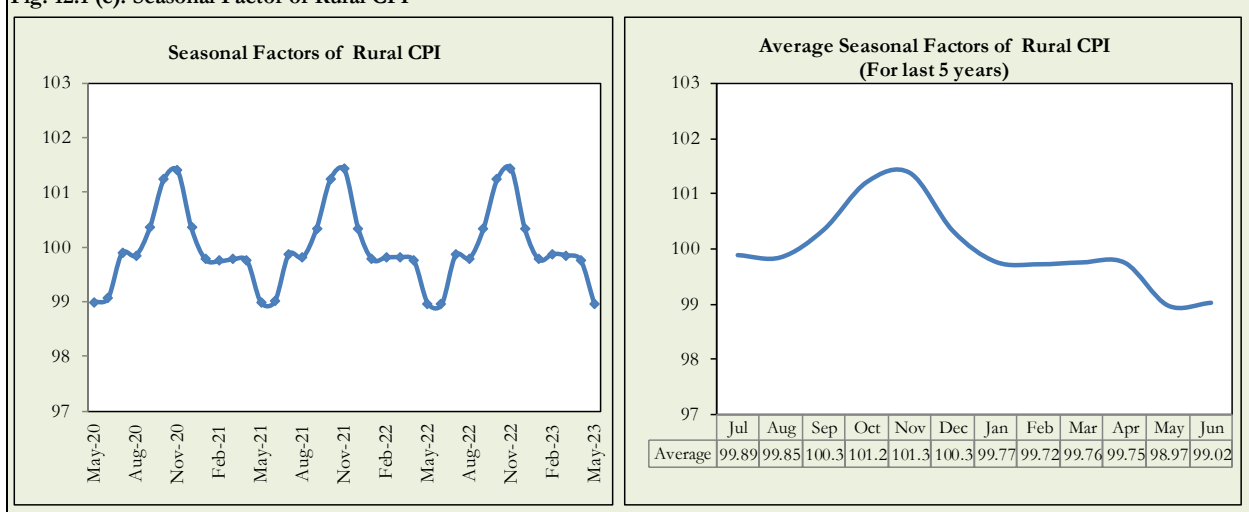
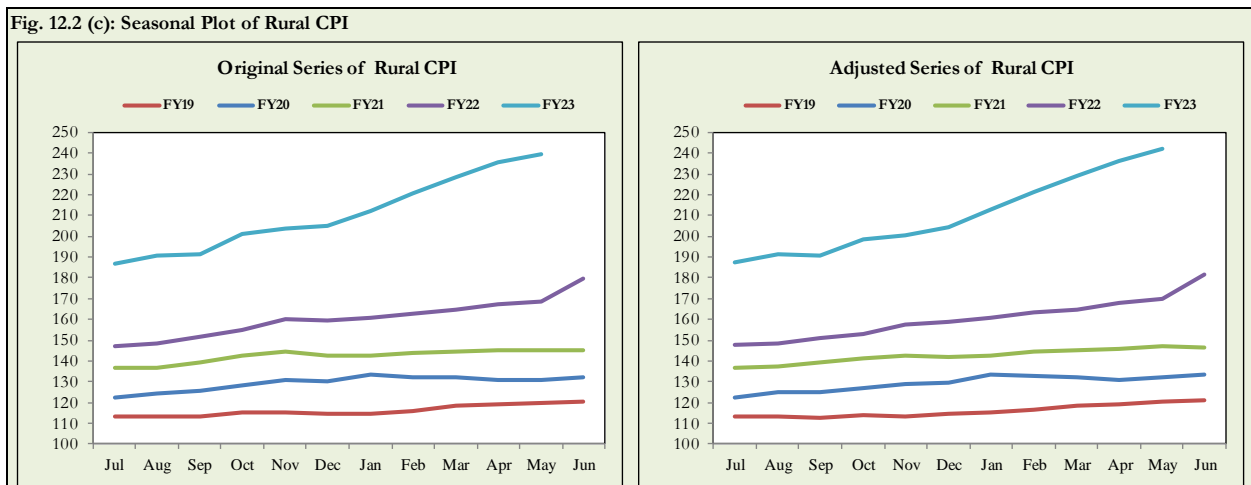
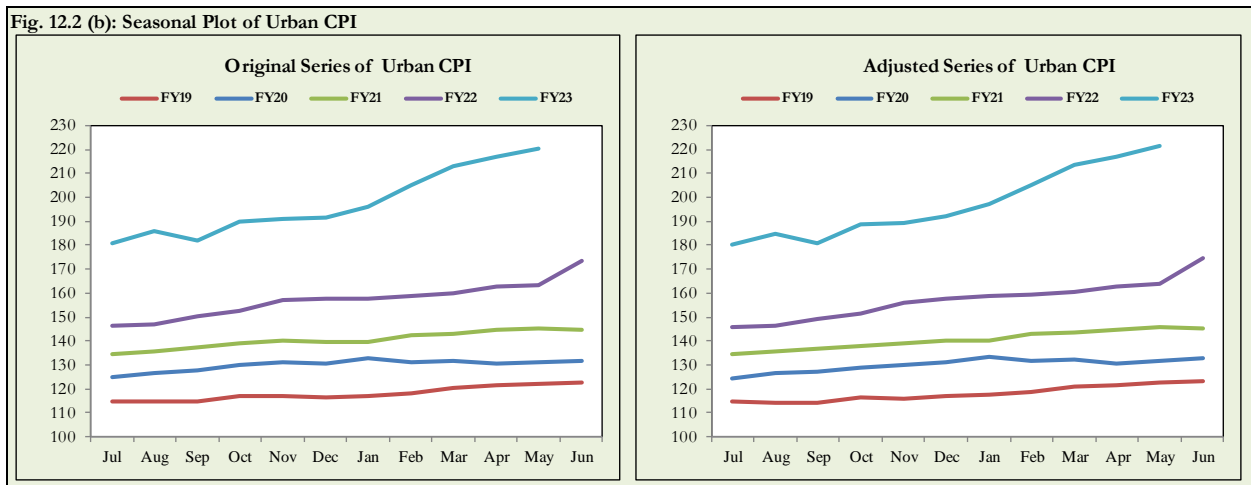
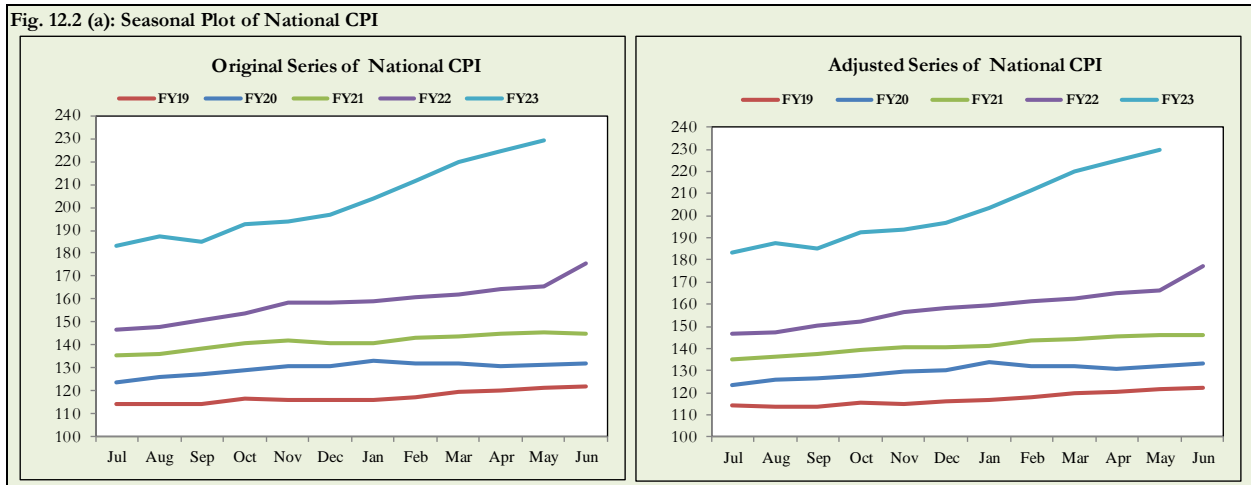


Fig. 12.1 (c): Seasonal Factor of Rural CPI



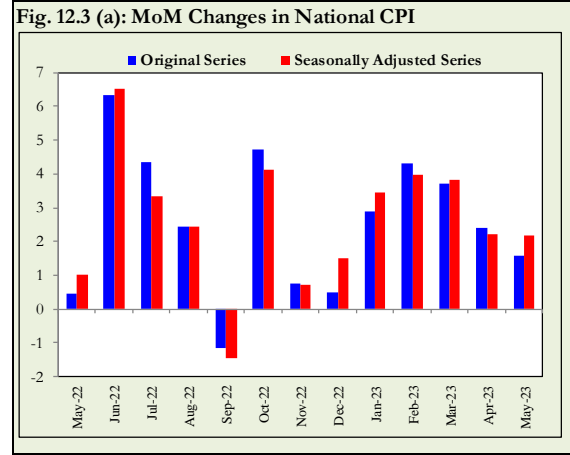
Figures 12.2 shows that seasonally adjusted series are relatively smoother than the original series due to the removal of the seasonal variations. The trend follows the long-term movement in original series and is smoother than the original series because some irregular fluctuations have been removed.



Seasonally adjusted Index of National CPI for May 2023 stood at 229.58 against 227.96 in original series showing an increase of 1.62 because of seasonal adjustment.

Seasonally adjusted Index of Urban CPI for May 2023 stood at 221.35 against 220.37 in original series showing an increase of 0.98 on account of seasonal adjustment.

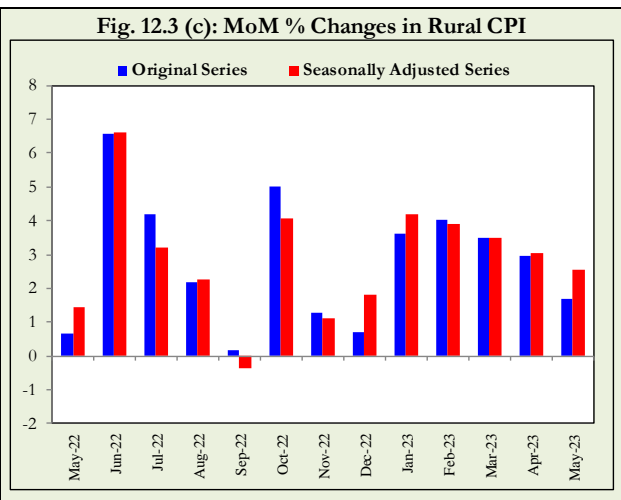
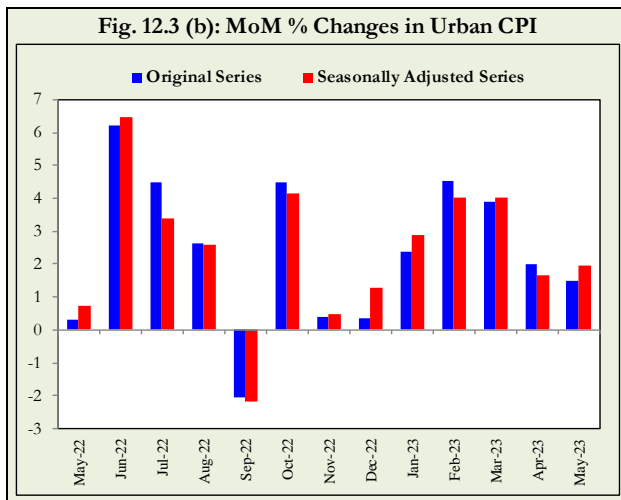
Seasonally adjusted Index of Rural CPI for May 2023 stood at 242.0 against 239.42 in original series showing an increase of 2.58 on account of seasonal adjustment.



Month-on-month change of seasonally adjusted National CPI series showed an inflation of 2.19% during May 2023 over previous month against an inflation of 1.58% in original series.

Month-on-month change of seasonally adjusted Urban CPI series showed an inflation of 1.93% during May 2023 over previous month against an inflation of 1.5% in original series.

Month-on-month change of seasonally adjusted Rural CPI series showed an inflation of 2.54% during May 2023 over previous month against an inflation of 1.69% in original series.



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	Urban
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																
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	
Jan-23	27.6	24.4	32.3	39.0	45.2	15.6	20.9	28.5	35.6	24.9	31.7	15.4	19.4	20.9	27.8	
Feb-23	31.5	28.8	35.6	41.9	47.0	20.8	25.3	36.4	40.7	34.3	37.1	17.1	21.5	25.1	31.6	
Mar-23	35.4	33.0	38.9	47.1	50.2	24.1	28.5	37.5	45.2	33.7	44.0	18.6	23.1	28.7	35.0	
Apr-23	36.4	33.5	40.7	46.8	52.2	24.9	29.9	33.4	44.4	28.0	45.9	19.5	24.9	28.6	37.3	
May-23	38.0	35.1	42.2	48.1	52.4	26.6	32.5	32.8	47.7	25.6	47.0	20.0	26.9	30.5	38.8	
12- Month Moving Average																
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	
Jan-23	21.1	19.4	23.7	25.9	28.7	15.4	19.1	31.5	24.1	35.7	27.2	12.3	15.0	17.7	21.1	
Feb-23	22.7	20.8	25.5	28.2	31.4	16.3	20.2	32.6	26.4	35.9	28.7	13.1	16.0	19.0	23.0	
Mar-23	24.6	22.6	27.6	30.9	34.3	17.5	21.6	33.7	29.0	36.2	31.1	13.9	17.1	20.6	25.0	
Apr-23	26.6	24.4	29.8	33.6	37.3	18.7	23.0	34.1	31.5	35.5	33.6	14.7	18.3	22.3	27.4	
May-23	28.6	26.3	32.0	36.3	40.0	20.0	24.6	34.3	34.3	34.3	36.1	15.6	19.6	24.4	30.0	
Period Average (Since July)																
May-22	11.3	11.1	11.6	12.5	11.7	10.2	11.5	23.6	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	
Jan-23	25.4	23.3	28.5	31.9	35.3	17.9	22.4	33.3	29.5	35.2	32.8	14.3	17.7	21.7	26.5	
Feb-23	26.2	24.0	29.5	33.2	36.8	18.3	22.8	33.7	31.0	35.1	33.4	14.6	18.2	22.1	27.3	
Mar-23	27.3	25.0	30.6	34.8	38.4	19.0	23.5	34.1	32.6	34.9	34.6	15.1	18.8	23.0	28.5	
Apr-23	28.2	25.9	31.6	36.1	39.9	19.6	24.1	34.1	33.9	34.2	35.8	15.5	19.4	23.9	29.6	
May-23	29.2	26.8	32.7	37.3	41.1	20.3	24.9	33.9	35.2	33.3	36.9	16.0	20.1	24.8	30.7	
Month-on-Month																
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	
Jan-23	2.9	2.4	3.6	3.9	5.7	1.2	1.5	1.8	4.0	0.6	1.3	1.4	1.5	1.5	2.1	
Feb-23	4.3	4.5	4.0	4.3	3.9	4.7	4.1	8.2	5.3	9.8	5.4	2.2	2.6	2.9	3.9	
Mar-23	3.7	3.9	3.5	5.6	4.5	2.7	2.4	4.7	6.3	3.8	5.7	2.5	2.4	2.7	2.9	
Apr-23	2.4	2.0	3.0	3.4	4.2	1.0	1.6	0.1	2.2	-1.0	2.4	1.8	2.7	1.5	2.0	
May-23	1.6	1.5	1.7	1.9	1.4	1.2	2.0	1.0	2.4	0.2	1.3	1.2	2.5	1.5	2.0	

* 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		
		May-22	Apr-23	May-23	May-22	Apr-23	May-23
Food & Non-Alcoholic	34.6	0.9	4.4	1.3	17.3	48.1	48.7
Alcoholic Beverages & Tobacco	1.0	4.9	0.3	0.6	10.1	133.5	124.0
Clothing & Footwear	8.6	0.7	1.9	1.4	11.3	21.6	22.5
Housing, Water, Elec, Gas & other Fuels	23.6	-2.3	-1.1	0.7	5.8	16.9	20.5
Furnishing & Household Equip. Maintenance etc	4.1	1.8	2.7	3.9	16.1	40.5	43.5
Health	2.8	0.5	1.1	0.9	10.6	18.8	19.3
Transport	5.9	2.7	1.6	0.2	31.8	56.8	52.9
Communication	2.2	0.1	0.1	0.4	1.8	6.7	7.0
Recreation & Culture	1.6	2.8	12.4	5.0	12.3	68.6	72.2
Education	3.8	1.0	1.9	0.9	9.5	8.5	8.4
Restaurants & Hotels	6.9	1.8	0.6	4.2	16.0	39.0	42.3
Miscellaneous	4.9	1.2	4.1	4.4	13.3	38.8	43.3
Overall National CPI	100.0	0.4	2.4	1.6	13.8	36.4	38.0

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

Groups	Weights	MoM change			YoY change		
		May-22	Apr-23	May-23	May-22	Apr-23	May-23
I. Food Group	36.8	1.0	3.4	1.9	15.5	46.8	48.1
Food & Non-Alcoholic Beverages	30.4	0.9	4.0	1.4	15.8	45.1	45.8
Alcoholic Beverages & Restaurant & Hotels (Food)	0.9	4.6	0.3	0.5	9.4	133.7	124.5
	5.5	0.8	0.6	5.7	15.1	43.3	50.2
II. Non-Food Group	63.2	-0.1	1.0	1.2	10.4	24.9	26.6
Clothing & Footwear	8.0	0.5	1.1	0.4	11.0	21.5	21.3
Housing, Water, Elec, Gas & other Fuels	27.0	-2.3	-1.1	0.7	4.4	14.5	18.0
Furnishing & Household Equip. Maintenance etc	4.1	2.0	2.5	2.9	15.2	40.8	42.1
Health	2.3	0.4	1.9	0.6	10.3	19.1	19.4
Transport	6.1	2.9	1.4	0.0	32.2	55.9	51.4
Communication	2.4	0.2	0.2	0.6	2.3	8.6	9.0
Recreation & Culture	1.7	3.0	11.5	4.9	11.9	68.5	71.6
Education	4.9	1.1	0.8	0.8	10.4	6.0	5.7
Restaurants & Hotels (Non-food Component)	1.9	0.0	0.4	1.4	13.0	31.3	33.1
Miscellaneous	4.8	1.1	4.2	3.9	12.2	39.1	43.0
Overall Urban CPI	100.0	0.3	2.0	1.5	12.4	33.5	35.1

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

Groups	Weights	MoM Change			YoY Change		
		May-22	Apr-23	May-23	May-22	Apr-23	May-23
I. Food Group	45.9	1.3	4.2	1.4	19.0	52.2	52.4
Food and Non-Alcoholic Beverages	40.9	0.8	4.7	1.1	19.0	51.4	51.9
Alcoholic Beverages, Tobacco	1.3	5.3	0.3	0.8	11.0	133.3	123.3
Restaurants and Hotels (Food Component)	3.8	5.9	0.8	5.0	21.2	39.5	38.3
II. Non-Food Group	54.1	0.0	1.6	2.0	13.1	29.9	32.5
Clothing and Footwear	9.5	0.9	2.8	2.6	11.7	21.8	23.9
Housing, Water, Elec., Gas and Other Fuels	18.5	-2.5	-1.3	0.6	9.1	22.2	26.0
Furnishing and Household Equip. Maintenance	4.1	1.5	3.1	5.4	17.5	40.2	45.5
Health	3.5	0.6	0.4	1.3	10.9	18.4	19.3
Transport	5.6	2.5	2.0	0.6	31.0	58.4	55.5
Communication	2.0	0.0	0.1	0.0	0.8	3.2	3.2
Recreation and Culture	1.4	2.5	14.1	5.2	13.0	68.9	73.2
Education	2.1	0.8	5.9	1.5	6.0	18.0	18.8
Restaurants and Hotels (Non-Food Component)	2.4	0.0	0.6	0.0	13.3	31.0	31.0
Miscellaneous	5.0	1.3	3.9	5.2	14.9	38.5	43.8
Overall Rural CPI	100.0	0.6	3.0	1.7	15.9	40.7	42.2

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															
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
Jan-23	27.6	42.9	40.3	61.6	36.3	16.8	7.8	29.9	18.7	39.1	1.6	44.1	10.6	30.1	28.7
Feb-23	31.5	45.1	44.7	47.6	49.2	17.0	13.6	34.0	18.8	50.5	3.7	48.1	10.8	34.5	33.3
Mar-23	35.4	47.2	46.4	51.8	140.0	21.9	17.5	39.0	18.5	54.9	6.6	50.6	7.2	38.5	34.4
Apr-23	36.4	48.1	51.5	29.2	133.5	21.6	16.9	40.5	18.8	56.8	6.7	68.6	8.5	39.0	38.8
May-23	38.0	48.7	51.0	33.7	124.0	22.5	20.5	43.5	19.3	52.9	7.0	72.2	8.4	42.3	43.3
12- Month Moving Average															
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
Jan-23	21.1	27.5	25.2	42.6	21.8	14.7	11.0	21.8	13.3	45.4	1.7	20.7	9.4	23.4	18.9
Feb-23	22.7	30.0	28.0	43.5	25.7	15.3	11.4	23.5	14.0	47.5	1.8	24.1	10.0	25.1	20.8
Mar-23	24.6	32.7	30.8	45.2	37.3	16.3	12.2	25.7	14.8	49.8	2.2	27.6	9.9	27.2	22.7
Apr-23	26.6	35.3	33.8	44.8	48.3	17.3	13.0	27.9	15.5	52.0	2.6	32.6	9.9	29.2	24.9
May-23	28.6	37.9	36.8	45.1	58.2	18.2	14.2	30.2	16.2	53.5	3.0	37.7	9.8	31.4	27.4
Period Average (Since July)															
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
Jan-23	25.4	33.8	31.3	49.4	32.0	17.2	12.6	26.2	15.3	52.2	1.5	27.5	10.5	28.2	22.9
Feb-23	26.2	35.2	33.0	49.2	34.2	17.2	12.7	27.2	15.7	52.0	1.7	30.2	10.5	29.1	24.3
Mar-23	27.3	36.6	34.6	49.5	46.0	17.8	13.2	28.6	16.0	52.3	2.3	32.5	10.1	30.2	25.4
Apr-23	28.2	37.9	36.4	47.0	55.1	18.2	13.6	29.9	16.3	52.8	2.7	36.2	9.9	31.1	26.8
May-23	29.2	38.9	37.8	45.7	61.8	18.6	14.2	31.2	16.6	52.8	3.1	39.7	9.8	32.2	28.4
Month-on-Month															
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
Jan-23	2.9	5.0	6.2	-1.8	0.2	0.5	1.8	1.6	1.8	-0.5	0.0	4.5	0.1	3.1	3.2
Feb-23	4.3	4.1	4.0	4.1	9.7	1.2	3.7	5.0	2.1	12.0	2.1	3.3	0.5	5.1	4.7
Mar-23	3.7	3.7	3.9	2.5	60.9	5.3	1.1	5.1	0.3	3.3	2.9	3.1	1.3	3.8	2.5
Apr-23	2.4	4.4	4.7	2.5	0.3	1.9	-1.1	2.7	1.1	1.6	0.1	12.4	1.9	0.6	4.1
May-23	1.6	1.3	2.6	-7.7	0.6	1.4	0.7	3.9	0.9	0.2	0.4	5.0	0.9	4.2	4.4
3-Years Average (in current month during FY21-FY23)															
YoY	20.9	26.9	28.4	18.7	46.4	14.8	11.6	23.1	13.0	32.9	3.4	29.8	6.5	22.3	22.5
MoM	0.7	0.9	2.6	-9.0	1.9	0.8	-1.0	2.1	0.6	1.0	0.2	2.7	0.7	2.2	2.1

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	Health	Transport	Communication	Recreation and Culture	Education	Restaurants and Hotels	Misc. Goods and Services
Year-on-Year															
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
Jan-23	24.4	39.5	36.7	59.3	37.3	16.8	5.0	30.0	16.7	38.0	1.8	43.6	10.4	32.4	28.8
Feb-23	28.8	42.1	42.0	42.9	54.9	16.8	11.2	34.1	18.5	49.9	4.6	48.4	10.4	35.2	33.3
Mar-23	33.0	45.5	44.9	49.4	140.8	22.4	15.0	39.6	17.9	54.6	8.5	51.4	5.8	39.8	34.3
Apr-23	33.5	45.1	48.5	26.9	133.7	21.5	14.5	40.8	19.1	55.9	8.6	68.5	6.0	40.4	39.1
May-23	35.1	45.8	47.9	32.3	124.5	21.3	18.0	42.1	19.4	51.4	9.0	71.6	5.7	46.1	43.0
12- Month Moving Average															
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
Jan-23	19.4	26.0	23.9	39.8	22.1	15.1	8.9	21.0	12.1	44.6	2.0	19.5	9.7	23.8	18.8
Feb-23	20.8	28.3	26.4	40.5	26.5	15.7	9.1	22.9	12.8	46.6	2.1	23.0	10.3	25.5	20.8
Mar-23	22.6	30.9	29.1	42.1	38.2	16.8	9.8	25.2	13.5	48.9	2.5	26.6	10.0	27.7	22.7
Apr-23	24.4	33.3	32.0	41.9	49.2	17.7	10.5	27.5	14.2	51.0	3.1	31.6	9.7	29.9	24.9
May-23	26.3	35.8	34.7	42.6	59.2	18.5	11.6	29.8	15.0	52.3	3.7	36.6	9.3	32.5	27.5
Period Average (Since July)															
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
Jan-23	23.3	31.9	29.5	47.3	32.7	17.9	9.9	25.7	13.3	50.8	1.5	25.9	10.6	29.1	23.2
Feb-23	24.0	33.3	31.1	46.7	35.5	17.8	10.1	26.8	14.0	50.7	1.9	28.8	10.6	29.9	24.5
Mar-23	25.0	34.7	32.7	47.0	47.3	18.3	10.7	28.3	14.4	51.2	2.6	31.4	10.0	31.1	25.7
Apr-23	25.9	35.8	34.4	44.6	56.2	18.7	11.0	29.6	14.9	51.7	3.2	35.2	9.6	32.1	27.1
May-23	26.8	36.8	35.7	43.4	62.9	18.9	11.7	30.8	15.3	51.6	3.8	38.6	9.2	33.4	28.6
Month-on-Month															
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
Jan-23	2.4	4.1	5.0	-1.4	0.1	0.6	1.4	1.1	3.4	-0.4	0.0	4.3	0.1	3.6	3.1
Feb-23	4.5	4.2	4.4	2.9	13.0	1.3	4.3	5.3	3.2	12.3	2.8	3.6	0.1	4.2	4.7
Mar-23	3.9	4.5	4.6	3.5	55.6	5.8	1.1	5.2	0.4	3.6	3.7	3.0	1.3	4.2	2.6
Apr-23	2.0	4.0	4.3	2.5	0.3	1.1	-1.1	2.5	1.9	1.4	0.2	11.5	0.8	0.6	4.2
May-23	1.5	1.4	2.7	-7.0	0.5	0.4	0.7	2.9	0.6	0.0	0.6	4.9	0.8	4.7	3.9
3-Years Average (in current month during FY21-FY23)															
YoY	19.4	25.9	27.4	17.6	46.7	14.5	10.1	22.0	13.1	32.6	4.4	28.9	5.8	23.3	22.0
MoM	0.7	1.1	2.8	-8.3	1.7	0.3	-0.9	1.8	0.5	1.0	0.3	2.7	0.6	2.0	1.9

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	Health	Transport	Communication	Recreation and Culture	Education	Restaurants and Hotels	Misc. Goods and Services
Year-on-Year															
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
Jan-23	32.3	46.8	44.4	64.3	35.2	16.7	14.0	29.8	20.7	41.0	1.2	45.1	11.2	26.0	28.5
Feb-23	35.6	48.3	47.6	53.1	42.7	17.2	18.6	33.9	19.1	51.4	1.9	47.4	12.2	33.4	33.3
Mar-23	38.9	49.0	48.2	54.5	139.1	21.3	22.9	38.1	19.0	55.5	3.2	49.2	12.5	36.1	34.6
Apr-23	40.7	51.4	54.8	31.9	133.3	21.8	22.2	40.2	18.4	58.4	3.2	68.9	18.0	36.6	38.5
May-23	42.2	51.9	54.4	35.3	123.3	23.9	26.0	45.5	19.3	55.5	3.2	73.2	18.8	35.9	43.8
12- Month Moving Average															
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
Jan-23	23.7	29.2	26.7	45.8	21.5	14.3	15.9	22.9	14.5	46.9	1.2	22.9	8.2	22.7	19.0
Feb-23	25.5	32.0	29.7	47.1	24.8	14.9	16.4	24.5	15.3	49.0	1.3	26.1	8.8	24.4	20.9
Mar-23	27.6	34.7	32.6	48.8	36.4	15.8	17.4	26.4	16.1	51.4	1.4	29.4	9.4	26.2	22.8
Apr-23	29.8	37.5	35.9	48.1	47.3	16.7	18.4	28.5	16.7	53.7	1.6	34.3	10.5	28.0	24.8
May-23	32.0	40.3	39.1	47.9	57.1	17.8	19.7	30.9	17.4	55.5	1.8	39.5	11.6	29.5	27.3
Period Average (Since July)															
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
Jan-23	28.5	35.8	33.3	51.8	31.3	16.4	18.4	26.9	17.2	54.7	1.3	30.4	10.1	26.6	22.4
Feb-23	29.5	37.4	35.2	52.0	32.7	16.5	18.4	27.8	17.5	54.2	1.4	32.6	10.3	27.5	23.8
Mar-23	30.6	38.8	36.7	52.3	44.7	17.1	18.9	29.0	17.7	54.4	1.6	34.5	10.6	28.5	25.1
Apr-23	31.6	40.2	38.6	49.8	53.8	17.6	19.2	30.2	17.7	54.8	1.8	38.1	11.3	29.4	26.5
May-23	32.7	41.3	40.2	48.4	60.7	18.2	19.8	31.7	17.9	54.9	1.9	41.5	12.0	30.0	28.2
Month-on-Month															
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
Jan-23	3.6	6.0	7.4	-2.2	0.4	0.4	2.6	2.3	0.4	-0.5	0.1	4.9	0.2	2.3	3.3
Feb-23	4.0	3.9	3.6	5.5	5.9	1.0	2.6	4.5	1.1	11.6	0.7	2.7	1.7	6.9	4.6
Mar-23	3.5	2.9	3.2	1.5	67.5	4.7	1.2	4.9	0.2	2.7	1.3	3.3	1.4	3.3	2.4
Apr-23	3.0	4.7	5.1	2.5	0.3	2.8	-1.3	3.1	0.4	2.0	0.1	14.1	5.9	0.7	3.9
May-23	1.7	1.1	2.6	-8.4	0.8	2.6	0.6	5.4	1.3	0.6	0.0	5.2	1.5	3.4	5.2
3-Years Average (in current month during FY21-FY23)															
YoY	23.0	28.0	29.4	20.3	46.0	15.2	14.9	24.6	12.9	33.3	1.6	31.2	9.2	20.7	23.1
MoM	0.8	0.7	2.4	-9.8	2.1	1.4	-1.1	2.5	0.7	1.0	0.0	2.8	0.8	2.6	2.3

Source: Pakistan Bureau of Statistics

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

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-22	May-23		
<u>A. Ranked by Weighted Contribution</u>					
1	Wheat Flour	3.01	19.17	99.02	9.28
2	Readymade Food	5.52	15.05	50.19	8.00
3	Motor Fuel	2.91	44.35	69.90	7.71
4	Milk Fresh	7.11	12.62	37.69	7.41
5	Electricity Charges	4.56	-11.81	59.28	5.48
6	Appliances/Articles/Products for Personal	2.98	10.35	40.11	3.29
7	Rice	1.18	13.57	85.18	2.88
8	Cigarettes	0.72	9.28	148.33	2.86
9	Washing Soap/Detergents/Match Box	1.41	18.71	63.70	2.69
10	Tea	0.84	12.89	112.18	2.63
Total		30.24			52.23
<u>B. Ranked by Percentage Change</u>					
1	Cigarettes	0.72	9.28	148.33	2.86
2	Textbooks	0.67	13.78	113.98	1.83
3	Tea	0.84	12.89	112.18	2.63
4	Potatoes	0.45	-21.60	108.17	1.27
5	Wheat Flour	3.01	19.17	99.02	9.28
6	Wheat	0.61	18.42	94.84	1.82
7	Eggs	0.51	3.04	90.27	1.40
8	Rice	1.18	13.57	85.18	2.88
9	Dessert Preparation	0.04	10.32	80.62	0.09
10	Stationery	0.35	21.37	79.38	0.78
Total		8.38			24.84
<u>C. Ranked by Weights</u>					
1	House Rent	19.26	5.58	5.34	2.62
2	Milk Fresh	7.11	12.62	37.69	7.41
3	Readymade Food	5.52	15.05	50.19	8.00
4	Education	4.88	10.39	5.74	0.79
5	Electricity Charges	4.56	-11.81	59.28	5.48
6	Wheat Flour	3.01	19.17	99.02	9.28
7	Appliances/Articles/Products for Personal	2.98	10.35	40.11	3.29
8	Motor Fuel	2.91	44.35	69.90	7.71
9	Cotton Cloth	2.22	12.54	31.53	2.07
10	Meat	2.04	24.79	20.13	1.50
Total		54.49			48.15

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item. This is reported as a share in YoY change in Urban CPI, which is 35.1 percent in May 2023.

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Readymade Food	5.52	0.62	5.68	22.57
2	Wheat Flour	3.01	25.80	6.40	19.71
3	Chicken	1.36	-8.64	11.31	12.67
4	Electricity Charges	4.56	-8.46	2.92	7.34
5	Milk Fresh	7.11	1.67	1.55	7.26
6	Meat	2.04	2.15	4.50	6.77
7	Personal Effects N.E.C.	0.94	6.73	6.82	6.44
8	Potatoes	0.45	26.88	17.22	6.32
9	Washing Soap/Detergents/Match Box	1.41	3.45	4.29	4.99
10	Appliances/Articles/Products for Personal	2.98	3.91	2.44	4.80
Total		29.38			98.87
B. Ranked by Percentage Change					
1	Newspapers	0.07	0.00	32.77	1.14
2	Accommodation Services	0.13	0.06	22.84	1.16
3	Potatoes	0.45	26.88	17.22	6.32
4	Gur	0.04	5.54	15.73	0.31
5	Chicken	1.36	-8.64	11.31	12.67
6	Eggs	0.51	9.81	7.10	3.42
7	Personal Effects N.E.C.	0.94	6.73	6.82	6.44
8	Wheat Flour	3.01	25.80	6.40	19.71
9	Readymade Food	5.52	0.62	5.68	22.57
10	Stationery	0.35	10.15	5.44	1.59
Total		12.38			75.33
C. Ranked by Weights					
1	House Rent	19.26	1.03	0.00	0.00
2	Milk Fresh	7.11	1.67	1.55	7.26
3	Readymade Food	5.52	0.62	5.68	22.57
4	Education	4.88	0.76	0.78	1.99
5	Electricity Charges	4.56	-8.46	2.92	7.34
6	Wheat Flour	3.01	25.80	6.40	19.71
7	Appliances/Articles/Products for Personal	2.98	3.91	2.44	4.80
8	Motor Fuel	2.91	2.33	-0.07	-0.21
9	Cotton Cloth	2.22	1.07	0.15	0.23
10	Meat	2.04	2.15	4.50	6.77
Total		54.49			70.46

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item. This is reported as a share in MoM change in Urban CPI, which is 1.5 percent in May 2023.

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

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-22	May-23		
A. Ranked by Weighted Contribution					
1	Wheat Flour	3.01	19.17	99.02	9.28
2	Readymade Food	5.52	15.05	50.19	8.00
3	Motor Fuel	2.91	44.35	69.90	7.71
4	Milk Fresh	7.11	12.62	37.69	7.41
5	Electricity Charges	4.56	-11.81	59.28	5.48
6	Appliances/Articles/Products for Personal	2.98	10.35	40.11	3.29
7	Rice	1.18	13.57	85.18	2.88
8	Cigarettes	0.72	9.28	148.33	2.86
9	Washing Soap/Detergents/Match Box	1.41	18.71	63.70	2.69
10	Tea	0.84	12.89	112.18	2.63
11	House Rent	19.26	5.58	5.34	2.62
12	Gas Charges	1.08	0.00	62.82	2.57
13	Fresh Fruits	1.44	2.90	53.18	2.42
14	Cotton Cloth	2.22	12.54	31.53	2.07
15	Personal Effects N.E.C.	0.94	17.38	53.35	2.00
Total		55.18			63.91
Bottom 15 Contributors					
1	Onions	0.59	153.44	-25.22	-0.46
2	Tomatoes	0.35	162.22	-40.16	-0.42
3	Therapeutic Appliances and Equipments	0.01	5.39	7.47	0.00
4	Dental Services	0.02	6.26	12.93	0.00
5	Major Tools & Equipments	0.01	17.07	28.52	0.01
6	Postal Services	0.02	1.45	15.51	0.01
7	Motor Vehicle Tax	0.05	7.62	8.92	0.01
8	Carpets	0.03	7.75	17.44	0.01
9	Electrical Appliances for Personal	0.05	13.56	14.53	0.02
10	Mustard Oil	0.01	56.76	30.20	0.02
11	Communication Services	1.88	0.33	0.52	0.02
12	Garbage Collection	0.11	12.89	6.50	0.02
13	Gur	0.04	5.10	28.19	0.03
14	Honey	0.10	19.06	10.60	0.03
15	Plastic Products	0.05	16.28	28.65	0.04
Total		3.32			-0.66

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Readymade Food	5.52	0.62	5.68	22.57
2	Wheat Flour	3.01	25.80	6.40	19.71
3	Chicken	1.36	-8.64	11.31	12.67
4	Electricity Charges	4.56	-8.46	2.92	7.34
5	Milk Fresh	7.11	1.67	1.55	7.26
6	Meat	2.04	2.15	4.50	6.77
7	Personal Effects N.E.C.	0.94	6.73	6.82	6.44
8	Potatoes	0.45	26.88	17.22	6.32
9	Washing Soap/Detergents/Match Box	1.41	3.45	4.29	4.99
10	Appliances/Articles/Products for Personal	2.98	3.91	2.44	4.80
11	Eggs	0.51	9.81	7.10	3.42
12	Textbooks	0.67	19.30	5.15	2.95
13	Condiments And Spices	1.33	1.59	2.52	2.25
14	Personal Grooming Services	0.80	0.99	4.53	2.24
15	Rice	1.18	3.38	1.93	2.08
Total		33.87			111.81
Bottom 15 Contributors					
1	Onions	0.59	-39.34	-32.96	-11.73
2	Fresh Vegetables	1.53	9.30	-10.71	-10.51
3	Tomatoes	0.35	19.32	-28.89	-4.45
4	Fresh Fruits	1.44	10.19	-3.16	-4.00
5	Sugar	1.11	18.18	-2.77	-1.88
6	Wheat	0.61	4.47	-2.29	-1.55
7	Transport Services	1.75	-2.32	-1.01	-1.05
8	Cooking Oil	1.10	-2.30	-0.60	-0.76
9	Vegetable Ghee	1.03	-3.03	-0.23	-0.26
10	Motor Fuel	2.91	2.33	-0.07	-0.21
11	Fish	0.39	-0.13	-1.17	-0.21
12	Besan	0.08	-2.21	-0.27	-0.01
13	Mustard Oil	0.01	-0.22	-1.04	-0.01
14	Solid Fuel	0.42	0.03	-0.04	-0.01
15	Communication Services	1.88	0.00	0.00	0.00
Total		15.20			-36.64

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Wheat flour	3.01	25.80	6.40	19.71
2	Fresh fruits	1.44	10.19	-3.16	-4.00
3	Sugar	1.11	18.18	-2.77	-1.88
4	Fresh vegetables	1.53	9.30	-10.71	-10.51
5	Potatoes	0.45	26.88	17.22	6.32
6	Milk fresh	7.11	1.67	1.55	7.26
7	Eggs	0.51	9.81	7.10	3.42
8	Rice	1.18	3.38	1.93	2.08
9	Meat	2.04	2.15	4.50	6.77
10	Wheat	0.61	4.47	-2.29	-1.55
11	Tomatoes	0.35	19.32	-28.89	-4.45
12	Readymade food	5.52	0.62	5.68	22.57
13	Tea	0.84	1.92	1.79	1.53
14	Condiments and Spices	1.33	1.59	2.52	2.25
15	Beverages	0.89	2.46	1.21	0.65
Total		27.92			50.16
Bottom 15 Contributors					
1	Onions	0.59	-39.34	-32.96	-11.73
2	Chicken	1.36	-8.64	11.31	12.67
3	Vegetable ghee	1.03	-3.03	-0.23	-0.26
4	Cooking oil	1.10	-2.30	-0.60	-0.76
5	Pulse gram	0.17	-2.99	1.63	0.17
6	Besan	0.08	-2.21	-0.27	-0.01
7	Pulse moong	0.17	-0.69	1.67	0.15
8	Gram whole	0.09	-0.48	1.19	0.09
9	Fish	0.39	-0.13	-1.17	-0.21
10	Mustard oil	0.01	-0.22	-1.04	-0.01
11	Ice cream	0.10	0.04	4.61	0.27
12	Honey	0.10	0.21	0.63	0.03
13	Butter	0.09	0.14	3.41	0.31
14	Dry fruits	0.33	0.10	0.51	0.12
15	Cigarettes	0.72	0.04	0.03	0.03
Total		6.34			0.86

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	House rent	19.26	1.03	0.00	0.00
2	Textbooks	0.67	19.30	5.15	2.95
3	Motor fuel	2.91	2.33	-0.07	-0.21
4	Appliances/Articles/Products for Personal	2.98	3.91	2.44	4.80
5	Personal Effects n.e.c.	0.94	6.73	6.82	6.44
6	Washing soap/detergents/match Box	1.41	3.45	4.29	4.99
7	stationery	0.35	10.15	5.44	1.59
8	Tailoring	1.07	3.73	0.10	0.07
9	Household equipments	1.00	3.16	2.62	1.84
10	Education	4.88	0.76	0.78	1.99
11	Cotton cloth	2.22	1.07	0.15	0.23
12	Motor vehicles	0.81	2.51	0.74	0.47
13	Hospitals services	0.57	4.86	0.11	0.03
14	Drugs and medicines	1.07	1.83	0.86	0.59
15	Woolen cloth	0.84	1.19	0.15	0.07
Total		40.99			25.85
Bottom 15 Contributors					
1	Electricity charges	4.56	-8.46	2.92	7.34
2	Transport services	1.75	-2.32	-1.01	-1.05
3	Liquefied Hydrocarbons	0.51	-3.23	3.05	1.60
4	Newspapers	0.07	0.00	32.77	1.14
5	Communication Services	1.88	0.00	0.00	0.00
6	Motor vehicle tax	0.05	0.00	0.00	0.00
7	Woolen readymade garments	0.43	0.00	0.00	0.00
8	Gas charges	1.08	0.00	0.00	0.00
9	Postal services	0.02	0.00	0.05	0.00
10	Dental services	0.02	0.00	0.48	0.00
11	Garbage collection	0.11	0.00	0.00	0.00
12	Doctor (MBBS) clinic fee	0.40	0.00	0.52	0.16
13	Accommodation Services	0.13	0.06	22.84	1.16
14	Therapeutic Appliances and Equipments	0.01	2.39	0.01	0.00
15	Major tools & equipments	0.01	1.12	0.91	0.00
Total		11.01			10.35

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

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-22	May-23		
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	14.09	42.61	9.48
2	Wheat Flour	3.43	20.15	100.50	8.68
3	Wheat	3.47	22.25	93.46	8.26
4	Motor Fuels	2.49	43.73	74.92	5.61
5	Rice	1.55	13.58	86.35	3.98
6	Readymade Food	3.80	21.20	38.27	3.84
7	Solid Fuel	4.48	15.95	36.11	3.73
8	Electricity Charges	3.44	-11.81	59.28	3.34
9	Cigarettes	1.24	10.80	127.23	3.28
10	Tea	1.26	13.19	106.35	2.94
Total		35.54			53.14
B. Ranked by Percentage Change					
1	Textbooks	0.50	14.10	129.44	1.25
2	Cigarettes	1.24	10.80	127.23	3.28
3	Potatoes	0.74	-21.31	113.54	1.94
4	Tea	1.26	13.19	106.35	2.94
5	Wheat Flour	3.43	20.15	100.50	8.68
6	Wheat	3.47	22.25	93.46	8.26
7	Eggs	0.57	0.73	88.31	1.17
8	Rice	1.55	13.58	86.35	3.98
9	Wheat Products	0.11	14.19	81.81	0.21
10	Dessert Preparation	0.01	7.04	77.15	0.02
Total		12.88			31.73
C. Ranked by Weights					
1	Milk Fresh	10.38	14.09	42.61	9.48
2	House Rent	8.61	5.73	7.10	1.26
3	Solid Fuel	4.48	15.95	36.11	3.73
4	Readymade Food	3.80	21.20	38.27	3.84
5	Wheat	3.47	22.25	93.46	8.26
6	Electricity Charges	3.44	-11.81	59.28	3.34
7	Wheat Flour	3.43	20.15	100.50	8.68
8	Cotton Cloth	2.84	11.59	22.50	1.69
9	Motor Fuels	2.49	43.73	74.92	5.61
10	Vegetable Ghee	2.38	59.87	24.84	2.65
Total		45.32			48.54

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item. This is reported as a share in YoY change in Rural CPI, which is 42.2 percent in May 2023.

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	1.20	3.75	20.40
2	Potatoes	0.74	27.85	25.30	13.10
3	Readymade Food	3.80	0.75	4.97	11.68
4	Wheat Flour	3.43	33.80	3.37	10.05
5	Chicken	1.46	-8.30	9.36	9.88
6	Washing Soaps, Detergents and Match Box	1.70	3.27	7.52	8.01
7	Rice	1.55	3.17	4.86	7.10
8	Personal Effects N.E.C.	1.21	6.56	6.10	6.10
9	Appliances/Articles/Products for Personal	2.27	3.16	5.22	5.59
10	Electricity Charges	3.44	-8.46	2.92	4.53
Total		29.98			96.44
B. Ranked by Percentage Change					
1	Newspapers	0.02	0.00	46.34	0.44
2	Potatoes	0.74	27.85	25.30	13.10
3	Gur	0.15	7.88	12.70	0.87
4	Cleaning And Laundering	0.02	0.35	10.16	0.10
5	Chicken	1.46	-8.30	9.36	9.88
6	Ice Cream	0.06	4.12	9.18	0.22
7	Washing Soaps, Detergents and Match Box	1.70	3.27	7.52	8.01
8	Milk Powder	0.11	0.44	6.60	0.32
9	Eggs	0.57	6.30	6.58	2.73
10	Personal Effects N.E.C.	1.21	6.56	6.10	6.10
Total		6.04			41.77
C. Ranked by Weights					
1	Milk Fresh	10.38	1.20	3.75	20.40
2	House Rent	8.61	1.17	0.00	0.00
3	Solid Fuel	4.48	-0.39	-0.14	-0.35
4	Readymade Food	3.80	0.75	4.97	11.68
5	Wheat	3.47	1.20	0.62	1.87
6	Electricity Charges	3.44	-8.46	2.92	4.53
7	Wheat Flour	3.43	33.80	3.37	10.05
8	Cotton Cloth	2.84	2.99	2.37	3.79
9	Motor Fuels	2.49	2.62	-0.04	-0.09
10	Vegetable Ghee	2.38	-0.49	-1.53	-3.70
Total		45.32			48.18

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item. This is reported as a share in MoM change in Rural CPI, which is 1.7 percent in May 2023.

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

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-22	May-23		
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	14.09	42.61	9.48
2	Wheat Flour	3.43	20.15	100.50	8.68
3	Wheat	3.47	22.25	93.46	8.26
4	Motor Fuels	2.49	43.73	74.92	5.61
5	Rice	1.55	13.58	86.35	3.98
6	Readymade Food	3.80	21.20	38.27	3.84
7	Solid Fuel	4.48	15.95	36.11	3.73
8	Electricity Charges	3.44	-11.81	59.28	3.34
9	Cigarettes	1.24	10.80	127.23	3.28
10	Tea	1.26	13.19	106.35	2.94
11	Vegetable Ghee	2.38	59.87	24.84	2.65
12	Washing Soaps, Detergents and Match Box	1.70	20.49	60.96	2.44
13	Fresh Fruits	1.45	27.71	52.84	2.32
14	Personal Effects N.E.C.	1.21	20.92	59.19	2.21
15	Condiments And Spices	1.49	-14.63	64.76	2.17
Total		43.77			64.93
Bottom 15 Contributors					
1	Tomatoes	0.51	147.73	-39.62	-0.40
2	Onions	0.90	151.37	-17.70	-0.36
3	Postal Services	0.01	0.00	0.00	0.00
4	Garbage Collection	0.01	8.99	3.58	0.00
5	Water Supply	0.06	1.63	0.90	0.00
6	Communication Services	1.65	0.09	0.16	0.00
7	Honey	0.03	18.61	8.01	0.01
8	Motor Vehicle Tax	0.02	-5.56	24.88	0.01
9	Dental Services	0.02	8.41	25.21	0.01
10	Mustard Oil	0.01	62.14	25.90	0.01
11	Accommodation Services	0.14	0.00	7.08	0.01
12	Cleaning And Laundering	0.02	22.08	36.04	0.02
13	Dessert Preparation	0.01	7.04	77.15	0.02
14	Major Tools and Equipments	0.03	18.11	35.94	0.02
15	Newspapers	0.02	0.00	46.48	0.02
Total		3.44			-0.63

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Milk Fresh	10.38	1.20	3.75	20.40
2	Potatoes	0.74	27.85	25.30	13.10
3	Readymade Food	3.80	0.75	4.97	11.68
4	Wheat Flour	3.43	33.80	3.37	10.05
5	Chicken	1.46	-8.30	9.36	9.88
6	Washing Soaps, Detergents and Match Box	1.70	3.27	7.52	8.01
7	Rice	1.55	3.17	4.86	7.10
8	Personal Effects N.E.C.	1.21	6.56	6.10	6.10
9	Appliances/Articles/Products for Personal	2.27	3.16	5.22	5.59
10	Electricity Charges	3.44	-8.46	2.92	4.53
11	Personal Grooming Services	1.54	1.98	4.08	3.80
12	Cotton Cloth	2.84	2.99	2.37	3.79
13	Meat	1.71	3.51	3.32	3.49
14	Household Equipments	1.28	4.62	4.64	3.46
15	Tea	1.26	11.65	3.50	3.44
Total		38.61			114.42
Bottom 15 Contributors					
1	Fresh Vegetables	2.09	13.14	-18.18	-21.04
2	Onions	0.90	-41.91	-31.97	-14.07
3	Tomatoes	0.51	0.93	-30.66	-4.84
4	Fresh Fruits	1.45	13.69	-3.13	-3.85
5	Vegetable Ghee	2.38	-0.49	-1.53	-3.70
6	Sugar	2.03	19.91	-1.79	-1.81
7	Cooking Oil	0.60	-1.29	-0.89	-0.55
8	Solid Fuel	4.48	-0.39	-0.14	-0.35
9	Motor Fuels	2.49	2.62	-0.04	-0.09
10	Mustard Oil	0.01	-1.19	-1.13	-0.01
11	Postal Services	0.01	0.00	0.00	0.00
12	Garbage Collection	0.01	0.00	0.00	0.00
13	Communication Services	1.65	0.00	0.00	0.00
14	Accommodation Services	0.14	0.00	0.00	0.00
15	Motor Vehicle Tax	0.02	0.00	0.00	0.00
Total		18.77			-50.31

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Wheat Flour	3.43	33.80	3.37	10.05
2	Sugar	2.03	19.91	-1.79	-1.81
3	Fresh fruits	1.45	13.69	-3.13	-3.85
4	Fresh Vegetables	2.09	13.14	-18.18	-21.04
5	Potatoes	0.74	27.85	25.30	13.10
6	Tea	1.26	11.65	3.50	3.44
7	Milk fresh	10.38	1.20	3.75	20.40
8	Rice	1.55	3.17	4.86	7.10
9	Wheat	3.47	1.20	0.62	1.87
10	Meat	1.71	3.51	3.32	3.49
11	Eggs	0.57	6.30	6.58	2.73
12	Readymade Food	3.80	0.75	4.97	11.68
13	Condiments and Spices	1.49	1.34	1.80	1.74
14	Beverages	0.55	3.51	2.01	0.53
15	Bakery and Confectionary	0.37	2.66	2.66	0.63
Total		34.91			50.06
Bottom 15 Contributors					
1	Onions	0.90	-41.91	-31.97	-14.07
2	Chicken	1.46	-8.30	9.36	9.88
3	Vegetable ghee	2.38	-0.49	-1.53	-3.70
4	Cooking oil	0.60	-1.29	-0.89	-0.55
5	Pulse Gram	0.28	-3.83	1.94	0.28
6	Pulse Moong	0.25	-2.25	3.64	0.43
7	Pulse Masoor	0.21	-0.89	1.15	0.12
8	Gram Whole	0.11	-0.79	3.28	0.25
9	Mustard oil	0.01	-1.19	-1.13	-0.01
10	Besan	0.07	-0.02	0.12	0.01
11	Fish	0.26	0.00	0.79	0.09
12	Honey	0.03	1.02	0.76	0.01
13	Dessert Preparation	0.01	2.47	1.50	0.01
14	Milk powder	0.11	0.44	6.60	0.32
15	Dry fruits	0.25	0.21	0.52	0.09
Total		6.93			-6.85

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

Items/Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-23	May-23		
A. Ranked by Weighted Contribution					
1	Textbooks	0.50	34.62	6.08	2.26
2	Personal Effects n.e.c.	1.21	6.56	6.10	6.10
3	Motor Fuels	2.49	2.62	-0.04	-0.09
4	Education	2.13	5.89	1.50	1.37
5	Cotton Cloth	2.84	2.99	2.37	3.79
6	House Rent	8.61	1.17	0.00	0.00
7	Washing Soaps, Detergents and Match Box	1.70	3.27	7.52	8.01
8	Household Equipments	1.28	4.62	4.64	3.46
9	Appliances/Articles/Products for Personal	2.27	3.16	5.22	5.59
10	Tailoring	1.30	4.47	1.89	1.24
11	Footwear	1.92	2.48	3.83	3.30
12	Personal Grooming Services	1.54	1.98	4.08	3.80
13	Woolen Cloth	1.10	2.62	3.14	1.71
14	Readymade Garments	1.13	2.32	2.72	1.51
15	Mechanical Services	0.36	4.53	5.98	1.10
Total		30.39			43.13
Bottom 15 Contributors					
1	Electricity Charges	3.44	-8.46	2.92	4.53
2	Solid Fuel	4.48	-0.39	-0.14	-0.35
3	Liquefied Hydrocarbons	1.00	-0.81	1.03	0.78
4	Drugs and Medicines	1.58	-0.27	1.53	1.32
5	Transport Services	1.80	-0.05	0.36	0.36
6	Postal Services	0.01	0.00	0.00	0.00
7	Newspapers	0.02	0.00	46.34	0.44
8	Garbage Collection	0.01	0.00	0.00	0.00
9	Communication Services	1.65	0.00	0.00	0.00
10	Accommodation Services	0.14	0.00	0.00	0.00
11	Motor Vehicle Tax	0.02	0.00	0.00	0.00
12	Water Supply	0.06	0.00	0.00	0.00
13	Woolen Readymade Garments	0.54	0.00	0.00	0.00
14	Cleaning and Laundering	0.02	0.35	10.16	0.10
15	Dental Services	0.02	1.83	0.00	0.00
Total		14.78			7.18

Table A19: Distribution of Price Changes (YoY) - Selected Urban CPI Item

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Tomatoes, Lemon, Onions, Cardamom Small (Average Quality), Chilies (Green), Kinnu (Average Quality), Peach (Average Quality), Grapes (Angoor) (Average Quality), Mango Kalmi	Chilies Powder National 200 Gm Packet, Bottlegourd (Loki),	Garlic (Lehsun),	Honey Marhaba Bottle 500 Gm, Cardamom Large (Loose) (Average Quality), Cucumber (Kheera), Almonds (Badam) Kaghazi With Shell (Average Quality), Beef With Bone (Average Quality), Fish Rahu
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,		Pant Cloth Wash & Wear (Average Quality), Socks Nylon Local (Average Quality), Women Shalwar Kameez (Average Quality),	Dopatta Georgette (Average Quality), Vest "Baniyan" For Men Average Quality, Gents Shoes Paul Bata, Shirt Boy Length 24"/26", Dry Cleaning Charges Pant Coat Both, Heavy Weight Suiting Lawrance Pur (Average Quality), Awami Suit Gents Wash & Wear (Average Quality), Tailoring Charges Pant (Men), Gents Sandal Bata, Chaddar (Wash-N-Wear) (2X2.5 Meter),
Housing, Water, Elec, Gas & other Fuels			Water Charges Per House, House Rent Combined, Charges For Refuse/Waste Collection,	Bricks New 1st Class, Mason Wage Rate, Electrician Charges, Electricity Charges Upto 50 Units, Unskilled Labor Wage Rate, Painter Wage Rate, Plumber Wage Rate, Cement (Local) 50 Kg Bag, Gas Charges 6.7438 - 10.1157 Mmbtu Gas Charges 10.1157 - 13.4876 Mmbtu
Furnishing & Household Equip. Maintenance etc				Bed Sheet Double With Two Pillow Covers (Superior Quality), Bed Sheet Single (Superior Quality), Plain Carpet, Air Cooler Super Asia Ecm-4000/Jc-1000, Household Servant Female Part Time, Blanket Single (Sn), Dinner Set Plastic 72 Pieces Superior Quality, Chair Sheesham Wood With Arm.
Health		Ventolin Tablets 2 Mg,	Sugar Test (Random/Fasting) Charges Of Both, Physiotherapist Fee Per Visit, Phenergan Syrup 120 MI Bottle, Cac 1000 Tablets Sandoz Bottle, Daonil Tablets 5 Mg, Glucometer, Amoxil Capsule 250 Mg, Flagyl Tablets 400 Mg.	Lederplex Syrup Bottle, Hydryllin Syrup 120 MI Bottle, Inderal Tablets 10 Mg, Dental Extraction Fee, Ultrasound Abdominal, Urine Test (Dr) Charges, Septran Tablets, Ecg Charges, Dental Surgeon Fee Per Visit, Calpol Syrup 100 MI Bottle, Cost Of Surgery (C-Section), Johar
Transport	Air Fare Economy Class Per Kilometer (National Average), Car Suzuki 800 Cc Without Ac,		Car Tax 800 Cc To 1500 Cc,	Cng, Car Toyota 1300 Cc Xli, Car Service Charges, Bus Fare Outside City (Ac), Mini Bus Fare Maximum Within City, Tire Car Puncture Charges, Bus Fare Outside City (Non Ac), Bus Fare Maximum Within City, Mini Bus Fare Minimum Within City, Motorcycle Service Charges, Bus Fare
Communication	Mobile Call Charges, Telephone Call Charges,	Internet Charges (Dsl) 1 Mb (Unlimited),		Courier Charges Minimum Within Zone Outside City (Tcs), Mobile Set With Rear Camera And Without Touch Screen,
Recreation & Culture	Mag The Weekly (Magazine), Newspaper Daily Dawn,		Recreational Park Charges (Minimum Playland Ticket), Akhbar-E-Jehan Weekly, Urdu Book Ba/B.Sc,	Cable Charges, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, English Book Ba/B.Sc, Laptop Dell/Hp/Acer Core I5, Display (14'-15'), Led Sony/Samsung 32" Colored, Ballpoint Pen Local, Newspaper Daily Jang, Lead Pencil Goldfish, Pen Ink Dollar 57 MI
Education		Government University Fee M.S.C / M.A., Government Medical College/University Tuition Fee For Mbbs (1St Year), Government Engineering University Tuition Fee For Be (1St	Coaching Fee For Class Xi/Xii Science Group, Private College Fee First Year, Private School Fee English Medium Average Standard (Class V), Private School Fee	Coaching Fee For Class Ix/X Science Group,
Restaurant & Hotels				Private Hostel Accommodation Fee For Intermediate College Per Student, Government Hostel Accommodation Fee For Intermediate College Per Student, Pizza Chicken Medium Size (Average Quality), Marriage Hall Service Charges With Food
Miscellaneous			Purse Ladies Medium Size (Average Quality),	Electric Hair Straightener (Philips), Nail Polish Swiss Miss/Medora (Medium), Hair Color (Kala Kola), Perfume Medium Size Broche/Medora, Wall Clock Quartz (Average Quality), Hair Style Charges (At Average Beauty Parlor), Tooth Brush (Shield), Shaving Cream (Touchme

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

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Tomatoes, Lemon, Onions, Chilies (Green), Garlic (Lehsun),	Bottlegourd (Loki),	Honey Marhaba Bottle 500 Gm,	Jam-E-Shireen Standard Size (800 MI), Beef With Bone (Average Quality), Mutton (Average Quality), Fish Fresh, Pulse Masoor (Washed), Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch, Cucumber (Kheera), Almonds (Badam) Kaghazi With Shell (Average
Alcoholic Beverages & Tobacco				Pan Prepared (Sweet With Beetle Nuts), Chewing Tobacco (Niswar), Tobacco Hukka Twisted, Cigarettes Capstan 20'S Packet, Cigarettes Gold Leaf 20'S Packet,
Clothing & Footwear				Pullover Ladies (Average Quality), Chaddar (Wash-N-Wear) (2X2.5 Meter), Full Pant Boy Length 24"/26", Shirt Boy Length 24"/26", Footware Gents Local (Average Quality), Pullover Gents (Average Quality), Lawn Printed (Average Quality), Tailoring Charges Awami Suit (Male), Tailoring Charges Simple Suit (Female), Long Cloth, School Uniform Girls (Kameez & Shalwar)
Housing, Water, Elec, Gas & other Fuels		Water Charges Per House, Charges For Refuse/Waste Collection,	House Rent Combined,	Carpenter Wage Rate, Mason Wage Rate, Electricity Charges Upto 50 Units, Painter Wage Rate, Unskilled Labor Wage Rate, Plumber Wage Rate, Cement (Local) 50 Kg Bag, Bricks New 1st Class, Coal, Lpg 11.67 Kg Cylinder, Electrician Charges,
Furnishing & Household Equip. Maintenance etc				Blanket Single (Sn), Readymade Quilt (3 Kg), Dinner Set Plastic 72 Pieces Super Quality, Bucket (Balti) Plastic Medium Size, Cot Iron (Charpai), Lota Plastic Medium Size (Average Quality), Towel Medium Size (2' X 3'), Tea Set Pakistani
Health			Daonil Tablets 5 Mg, Physiotherapist Fee Per Visit, Cost Of Surgery (C-Section), Hydryllin Syrup 120 MI Bottle, Amoxil Capsule 250 Mg, Cac 1000 Tablets	Inderal Tablets 10 Mg, Blood Test (Cp) Charges, Johar Joshanda Instant (Sachet) Packet, X-Ray (Chest) Charges, Doctor (Mbbs) Clinic Fee, Dental Surgeon Fee Per Visit, Panadol Tablets Plain, Dettol Medium
Transport	Air Fare Economy Class Per Kilometer, Car Suzuki 800 Cc Without Ac,		Bus Fare Outside City (Non Ac),	Cng, Car Tax 800 Cc To 1500 Cc, Motorcycle Service Charges, Tire Cycle, Tire Car Mehran Tubeless (General), Bicycle, Tire Motorcycle Cd 70 (Back Wheel), Mobil Oil (Havoline 20W-50), Motorcycle Honda Cd 70, Train Fare
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				Cable Charges, Personal Computer With Led Monitor (17") Dell/HP/Acer Core I5, Led Sony/Samsung 32" Colored, Newspaper Daily Jang, Exercise Book (With Lines) 80 To 100 Pages, Lead Pencil Goldfish, Pets Feed, Ballpoint Pen Local, English Books Class VI, English Books
Education			Vocational Training Basic Computer Short Course Fee (3 Months) ,	Private School Fee English Medium Average Standard (Class Vi), Private School Fee English Medium Average Standard (Class V), Coaching Fee For Class Ix/X Science Group, Private School Fee English Medium Average Standard (Class I),
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student,			Pizza Chicken Medium Size (Average Quality), Marriage Hall Charges With Furniture, Private Hostel Accommodation Fee For Intermediate College Per Student, Tea Prepared Ordinary, Marriage Hall Service Charges With Food (Average
Miscellaneous				Tooth Brush (Shield), Tooth Paste Colgate 75 Gm, Hair Color (Kala Kola), Shaving Cream (Touchme Large/Admiral), Talcum Powder Viceroy/Black Cat, Trunk Medium Size (Average Quality), Hair Removing Cream (Eu-Cream) 30MI Tube, Hair Cut Charges For Men, Artificial Jewelry (Locket Set) (Average Quality), Shaving

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

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Agriculture, Forestry & Fisher Product	Fiber Crops,		Vegetables,	Unmanufactured Tobacco, Fish Live Fresh or Chilled, Raw Animal Materials / Wool, Cotton Seeds, Other Oil Seeds, Fuel Wood in Logs, Raw Milk from Bovine Animals, Sorghum / Jowar, Poultry, Hides, Skins & Fur Skins, Raw, Millet / Bajra, Sugar Crops, Pulses,
Ores/Minerals, Elec, Gas & Water				Natural Gas Liquified, Electrical Energy, Coal not Agglomerated, Salt & Pure Sodium Chloride,
Food, Beverages, Tobacco, Textile, Apparel and Leather Product	Spices, Nylon Yarn, Cotton Yarn, Blended Yarn,		Synthetic Carpets,	Woven Fabrics, Woolen Carpets, Chocolate, Sugar Confectionary, Towels, Meat of Animals, Vegetable Ghee, Hosiery Products, Bed Sheets, Other Leather N.E.C, Blankets, Ice Cream, Other Food Products,
Other Transportable Goods except Metal Products, Machinery and Equipments	Furnace Oil,			Other Glass Articles, Bricks, Blocks & Tiles, Cement, Pesticides, Fertilizers, Timber, Bed Foam, Ceramics & Sanitary Fixture, Plastic Products, Kerosene Oil, Chemicals, Insecticides, Hard Board,
Metal Product, Machinery & Equipments	Vacuum Pumps, Engines & Motors,			Concrete Mixture, Fridge, WashM, SewM, Fans, Iron, Motor Vehicles, Steel Bar & Sheets, Lathe Machines, Bicycles, Steel Products, Electric Wires, Radio & Television, Motorcycles, Cultivators, Tractors, Air Conditioners,

Table A22: International Commodity Prices/Indices

Commodity/Indices	Jun-21	May-22	April-23	May-23
Energy				
Crude Oil (US\$ per barrel)*	71.8	110.1	82.5	74.1
Energy Index (2010 = 100)	93.9	163.6	109.3	97.0
Food				
Rice (\$/MT)	466.0	464.0	501.0	510.0
Wheat (\$/MT)##	285.6	522.3	378.2	367.7
Sugar, World (\$/KG)	0.4	0.4	0.5	0.6
Palm Oil (\$/MT)	1,004.4	1,716.9	1,005.2	934.1
Soybean Oil (\$/MT)	1,518.2	1,962.9	1,030.0	988.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index (\$/KG) #	2.1	3.6	2.1	2.1
Metal Price Index (2010 = 100)	119.0	130.0	113.6	107.1
Copper (\$/MT)	9,631.5	9,377.2	8,809.4	8,217.5
Aluminum (\$/MT)	2,446.7	2,830.3	2,343.2	2,268.6
Iron Ore (\$ cents/dry MT)	214.4	131.2	117.4	105.2
Tin (\$/MT)	32,502.6	35,769.4	25,793.8	25,533.8
Nickel (\$/MT)	17,979.6	28,062.6	23,894.6	21,970.4
Zinc (\$/MT)	2,951.9	3,751.5	2,767.6	2,475.7
Lead (\$/MT)	2,191.0	2,142.5	2,149.4	2,083.6
Uranium (\$/MT)@	32.3	47.8	52.9	NA
DAP (\$/MT)	604.8	842.5	637.0	510.0
Urea (\$/MT)	393.3	707.5	313.4	329.3

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. NA: Not Available

* 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	202.53
Feb	117.12	131.64	143.09	160.61	211.28
Mar	119.46	131.69	143.61	161.88	219.14
Apr	120.33	130.59	145.09	164.50	224.41
May	121.05	131.01	145.24	165.23	227.96
Jun	121.63	132.08	144.82	175.71	
Seasonally Adjusted Series					
Jul	114.03	123.62	135.15	146.52	183.09
Aug	113.71	125.68	136.03	147.41	187.59
Sep	113.42	126.33	137.75	150.12	184.90
Oct	115.24	127.94	139.31	152.11	192.51
Nov	115.07	129.62	140.42	156.61	193.92
Dec	115.83	130.44	140.84	158.14	196.85
Jan	116.58	133.62	141.23	159.59	203.62
Feb	117.68	132.15	143.55	161.02	211.69
Mar	120.03	132.24	144.13	162.40	219.76
Apr	120.44	130.73	145.25	164.69	224.66
May	121.81	131.87	146.22	166.36	229.58
Jun	122.46	133.06	145.97	177.20	

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	195.97
Feb	118.08	131.32	142.61	159.03	204.87
Mar	120.29	131.49	142.99	160.07	212.85
Apr	121.29	130.60	144.91	162.63	217.11
May	122.11	130.99	145.19	163.13	220.37
Jun	122.52	131.89	144.55	173.23	
Seasonally Adjusted Series					
Jul	114.48	124.47	134.24	145.89	180.35
Aug	114.17	126.32	135.34	146.60	185.04
Sep	113.99	127.15	136.90	149.37	181.01
Oct	116.14	128.73	138.16	151.36	188.53
Nov	116.09	130.10	139.14	155.83	189.43
Dec	116.83	130.85	139.95	157.78	191.87
Jan	117.68	133.55	140.35	158.66	197.44
Feb	118.67	131.87	143.11	159.50	205.36
Mar	120.96	132.15	143.63	160.72	213.65
Apr	121.28	130.61	144.93	162.67	217.15
May	122.59	131.54	145.82	163.84	221.35
Jun	123.19	132.68	145.48	174.44	

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	212.43
Feb	115.68	132.13	143.82	162.99	220.95
Mar	118.21	132.00	144.55	164.62	228.63
Apr	118.89	130.58	145.37	167.31	235.43
May	119.45	131.03	145.32	168.39	239.42
Jun	120.29	132.36	145.24	179.45	
Seasonally Adjusted Series					
Jul	113.36	122.32	136.52	147.48	187.23
Aug	113.02	124.70	137.07	148.64	191.45
Sep	112.56	125.09	139.03	151.24	190.76
Oct	113.88	126.75	141.06	153.25	198.50
Nov	113.53	128.91	142.35	157.79	200.69
Dec	114.32	129.84	142.17	158.68	204.35
Jan	114.93	133.73	142.56	161.00	212.94
Feb	116.19	132.58	144.20	163.31	221.25
Mar	118.62	132.37	144.89	164.94	229.00
Apr	119.18	130.91	145.74	167.73	236.00
May	120.64	132.37	146.82	170.16	242.00
Jun	121.37	133.63	146.72	181.38	

Table A26: National CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	100.22	100.20	100.17	100.16	100.14	100.18
Aug	100.20	100.17	100.15	100.13	100.13	100.16
Sep	100.42	100.42	100.41	100.42	100.42	100.42
Oct	100.94	100.95	100.97	100.98	100.99	100.97
Nov	100.96	100.98	101.01	101.00	101.02	100.99
Dec	99.99	100.00	100.02	100.01	100.01	100.01
Jan	99.60	99.56	99.52	99.49	99.47	99.53
Feb	99.52	99.61	99.68	99.75	99.81	99.67
Mar	99.53	99.59	99.64	99.68	99.72	99.63
Apr	99.91	99.90	99.89	99.89	99.89	99.89
May	99.37	99.35	99.33	99.32	99.30	99.33
Jun	99.32	99.27	99.21	99.16		99.24

Table A27: Urban CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	100.40	100.38	100.36	100.36	100.34	100.37
Aug	100.36	100.35	100.35	100.35	100.37	100.36
Sep	100.43	100.45	100.46	100.47	100.49	100.46
Oct	100.78	100.79	100.80	100.81	100.82	100.80
Nov	100.73	100.73	100.73	100.73	100.72	100.73
Dec	99.78	99.79	99.80	99.79	99.78	99.79
Jan	99.48	99.41	99.36	99.31	99.26	99.36
Feb	99.50	99.58	99.65	99.71	99.76	99.64
Mar	99.45	99.50	99.55	99.59	99.63	99.54
Apr	100.01	100.00	99.98	99.98	99.98	99.99
May	99.61	99.59	99.57	99.57	99.56	99.58
Jun	99.46	99.41	99.36	99.31		99.38

Table A28: Rural CPI Monthly & Average Seasonal Factors						
Period	FY19	FY20	FY21	FY22	FY23	Average
Jul	99.95	99.92	99.88	99.86	99.85	99.89
Aug	99.95	99.89	99.84	99.80	99.78	99.85
Sep	100.40	100.37	100.34	100.33	100.32	100.35
Oct	101.19	101.21	101.23	101.24	101.24	101.22
Nov	101.32	101.36	101.40	101.42	101.44	101.39
Dec	100.33	100.34	100.34	100.33	100.32	100.33
Jan	99.78	99.77	99.77	99.77	99.76	99.77
Feb	99.56	99.66	99.73	99.80	99.87	99.72
Mar	99.66	99.72	99.77	99.81	99.84	99.76
Apr	99.75	99.75	99.74	99.75	99.76	99.75
May	99.01	98.99	98.98	98.96	98.93	98.97
Jun	99.11	99.05	98.99	98.94		99.02

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	-0.01	0.50
Jan	0.26	1.99	-0.21	0.39	2.88
Feb	0.86	-1.05	1.80	1.15	4.32
Mar	2.00	0.04	0.36	0.79	3.72
Apr	0.73	-0.84	1.03	1.62	2.40
May	0.60	0.32	0.10	0.44	1.58
Jun	0.48	0.82	-0.29	6.34	
Seasonally Adjusted Series					
Jul	0.65	0.94	1.57	0.38	3.32
Aug	-0.28	1.67	0.65	0.61	2.46
Sep	-0.25	0.52	1.27	1.83	-1.44
Oct	1.60	1.27	1.14	1.33	4.11
Nov	-0.14	1.32	0.79	2.96	0.73
Dec	0.66	0.63	0.30	0.98	1.51
Jan	0.65	2.44	0.28	0.92	3.44
Feb	0.94	-1.10	1.64	0.89	3.97
Mar	1.99	0.06	0.41	0.86	3.81
Apr	0.35	-1.14	0.78	1.40	2.23
May	1.14	0.87	0.66	1.01	2.19
Jun	0.53	0.90	-0.17	6.52	

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	2.36
Feb	0.86	-1.09	2.27	0.93	4.54
Mar	1.87	0.13	0.27	0.65	3.90
Apr	0.83	-0.68	1.34	1.60	2.00
May	0.68	0.30	0.19	0.31	1.50
Jun	0.34	0.69	-0.44	6.19	
Seasonally Adjusted Series					
Jul	0.50	1.04	1.18	0.28	3.39
Aug	-0.27	1.49	0.82	0.49	2.60
Sep	-0.15	0.66	1.15	1.89	-2.17
Oct	1.88	1.24	0.92	1.33	4.15
Nov	-0.04	1.06	0.71	2.95	0.48
Dec	0.63	0.58	0.59	1.26	1.29
Jan	0.73	2.07	0.28	0.56	2.90
Feb	0.85	-1.26	1.97	0.53	4.01
Mar	1.93	0.21	0.36	0.77	4.04
Apr	0.27	-1.17	0.90	1.21	1.64
May	1.08	0.71	0.61	0.72	1.93
Jun	0.49	0.87	-0.23	6.47	

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	3.62
Feb	0.87	-0.98	1.12	1.48	4.01
Mar	2.19	-0.10	0.51	1.00	3.48
Apr	0.58	-1.08	0.57	1.63	2.97
May	0.47	0.34	-0.03	0.65	1.69
Jun	0.70	1.02	-0.06	6.57	
Seasonally Adjusted Series					
Jul	0.87	0.79	2.16	0.52	3.23
Aug	-0.30	1.95	0.40	0.78	2.26
Sep	-0.41	0.31	1.43	1.75	-0.36
Oct	1.17	1.32	1.46	1.33	4.06
Nov	-0.30	1.71	0.92	2.96	1.10
Dec	0.70	0.72	-0.13	0.56	1.83
Jan	0.53	3.00	0.28	1.46	4.20
Feb	1.09	-0.86	1.15	1.44	3.90
Mar	2.09	-0.16	0.47	1.00	3.50
Apr	0.48	-1.10	0.59	1.69	3.06
May	1.22	1.12	0.74	1.45	2.54
Jun	0.60	0.95	-0.07	6.59	

Figures

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

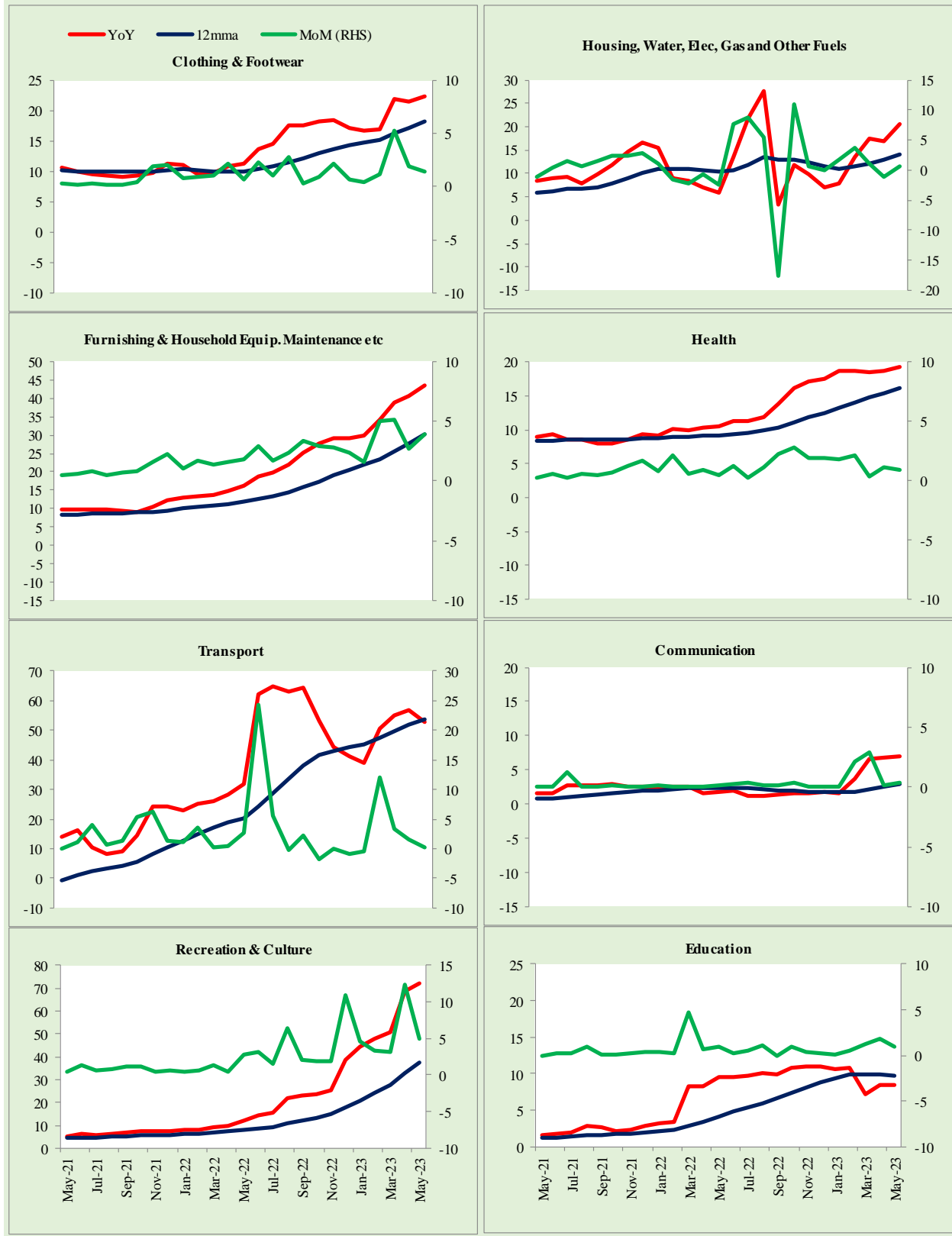


Figure A2: Urban CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent)

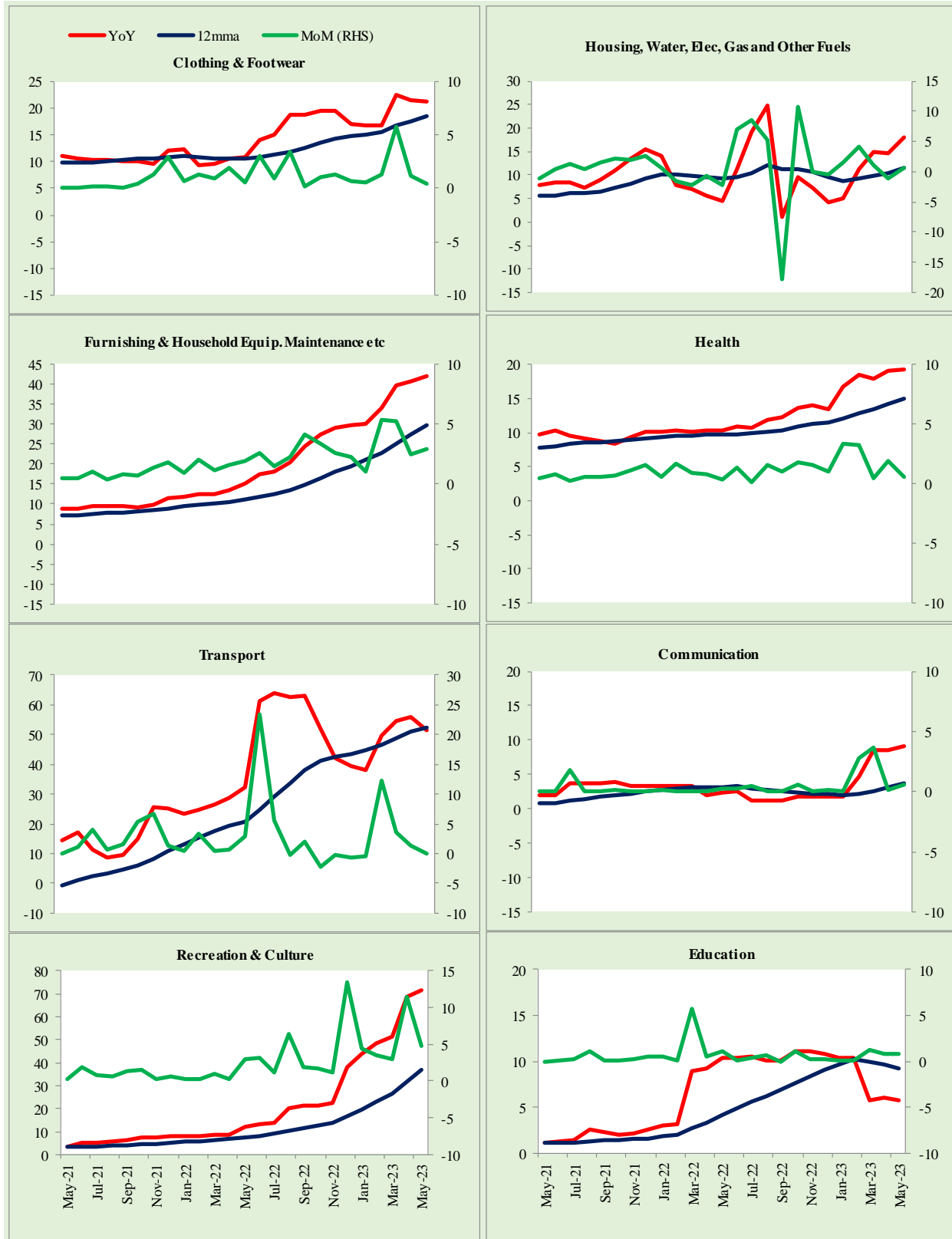


Figure A3: Rural CPI Inflation – Non Food Groups (YoY, 12MMA, MoM in percent)

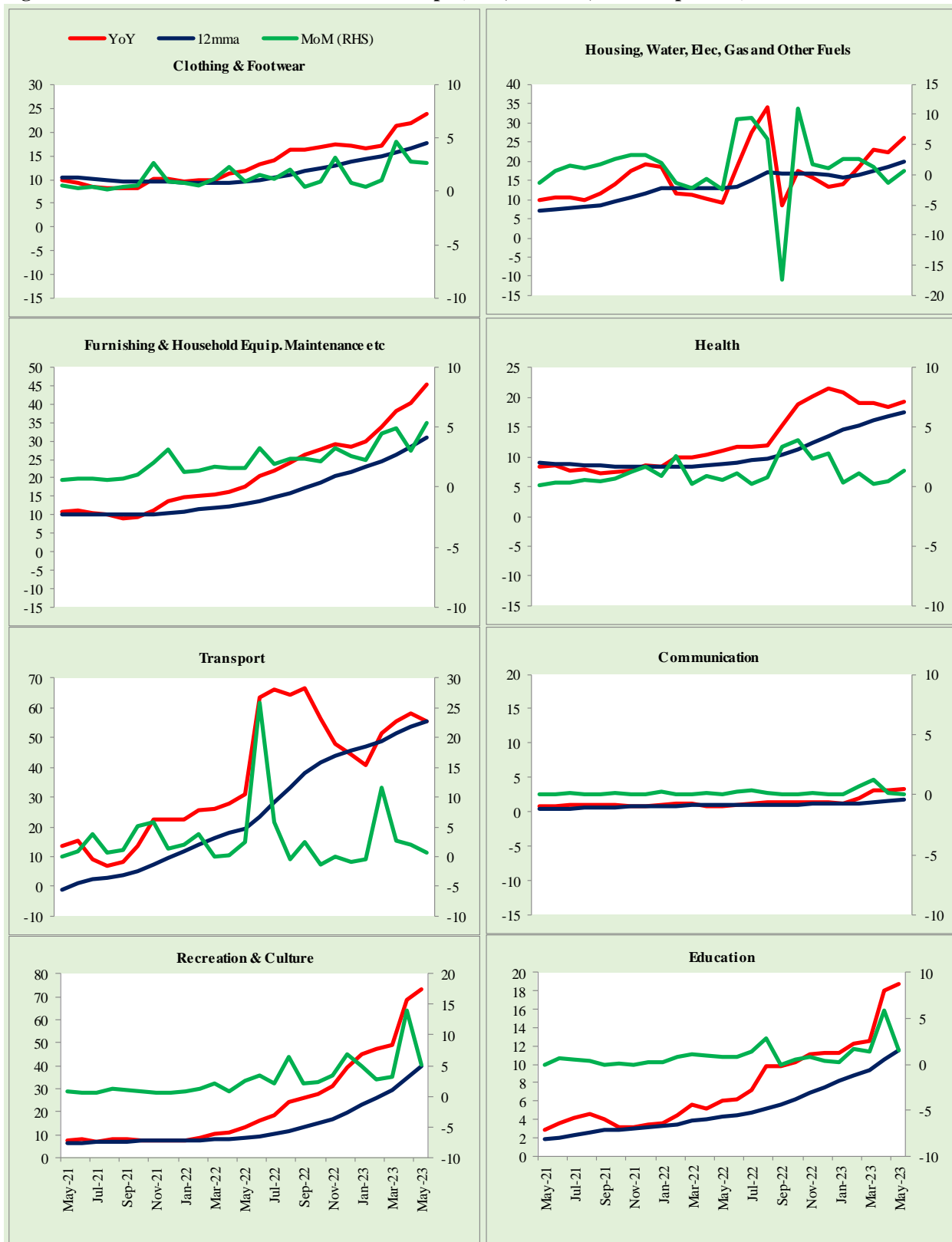
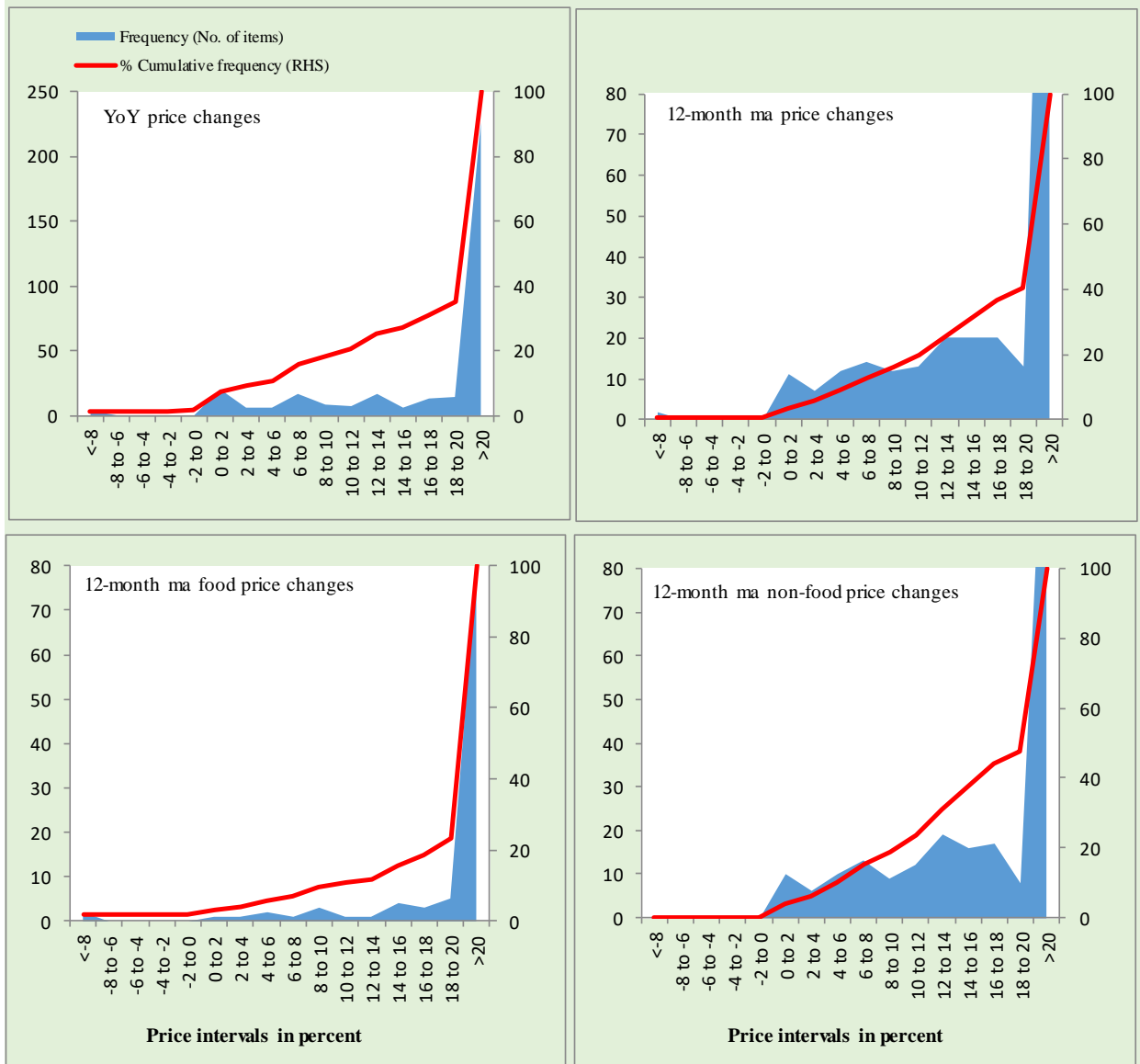
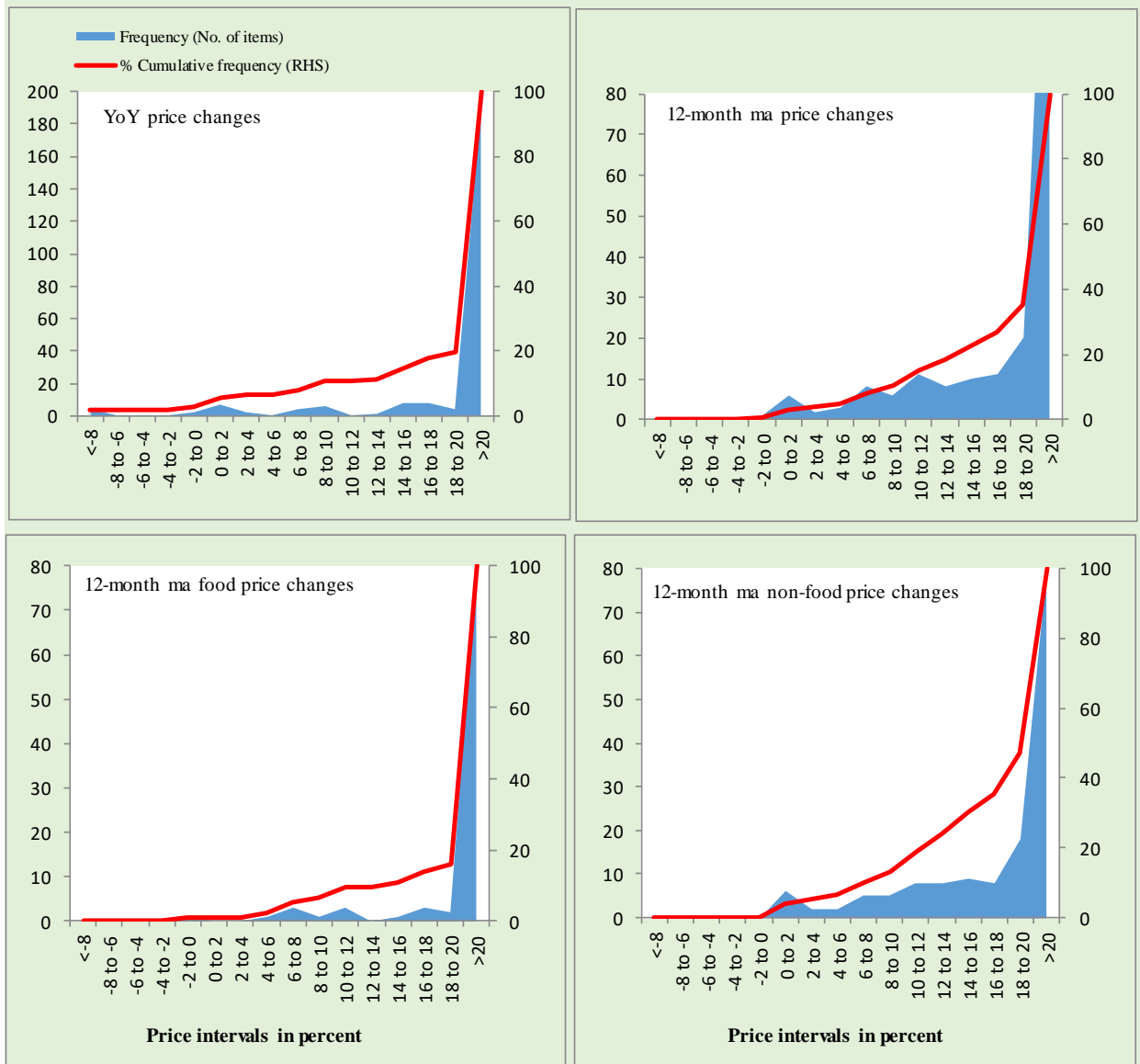


Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)



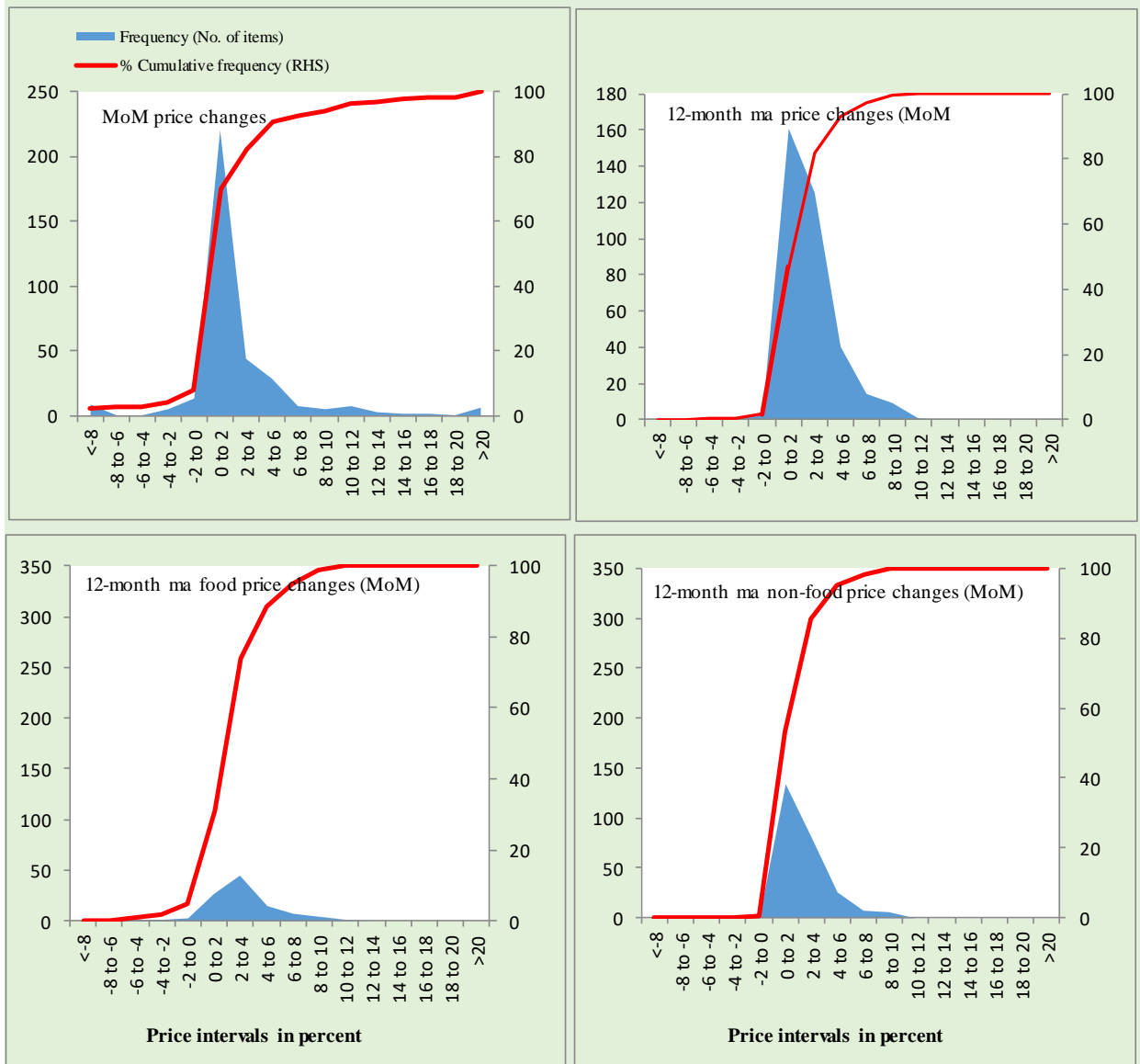
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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



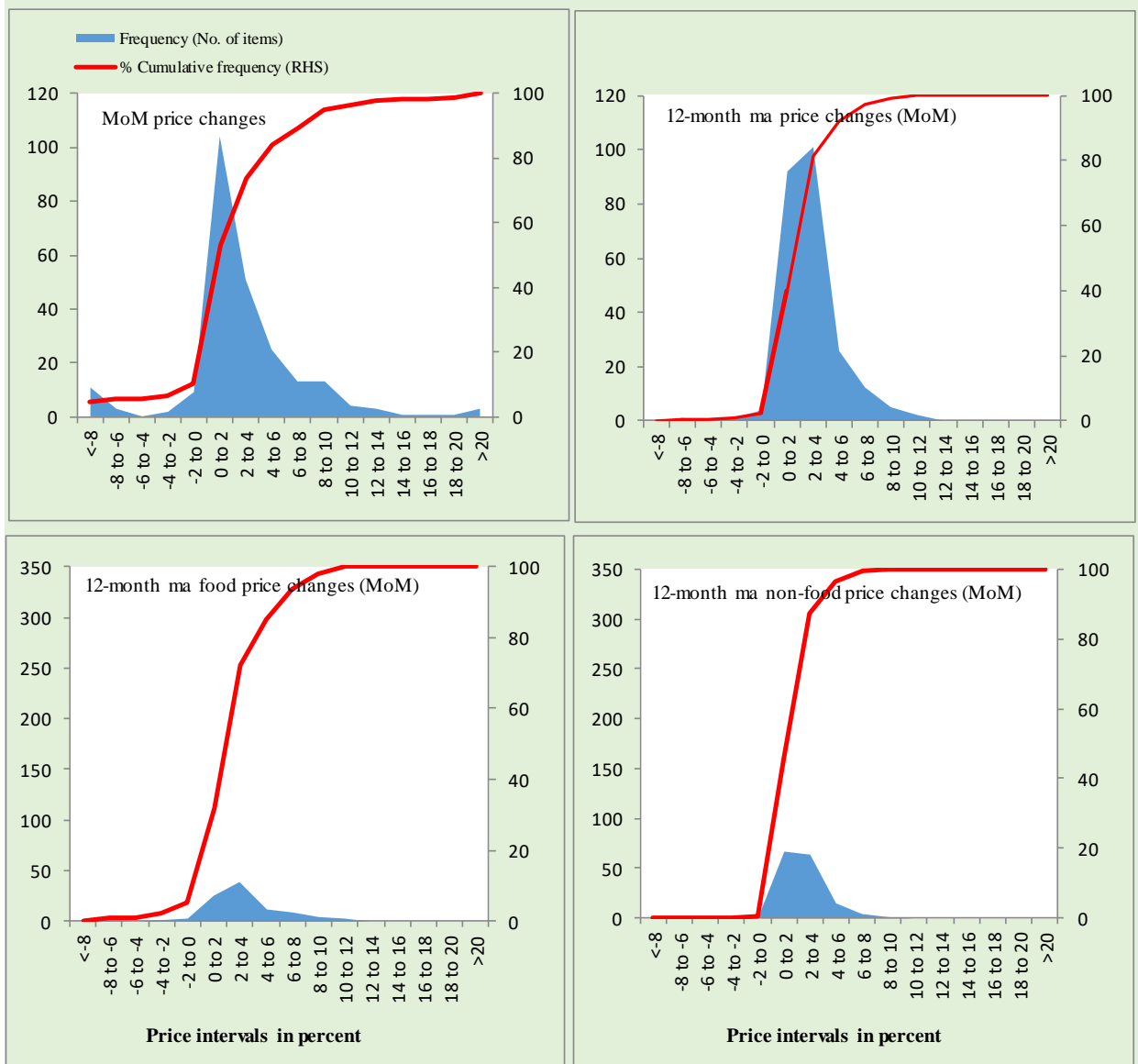
Total Items in CPI Basket (244), Food Items (94) and non-Food Items (150).

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



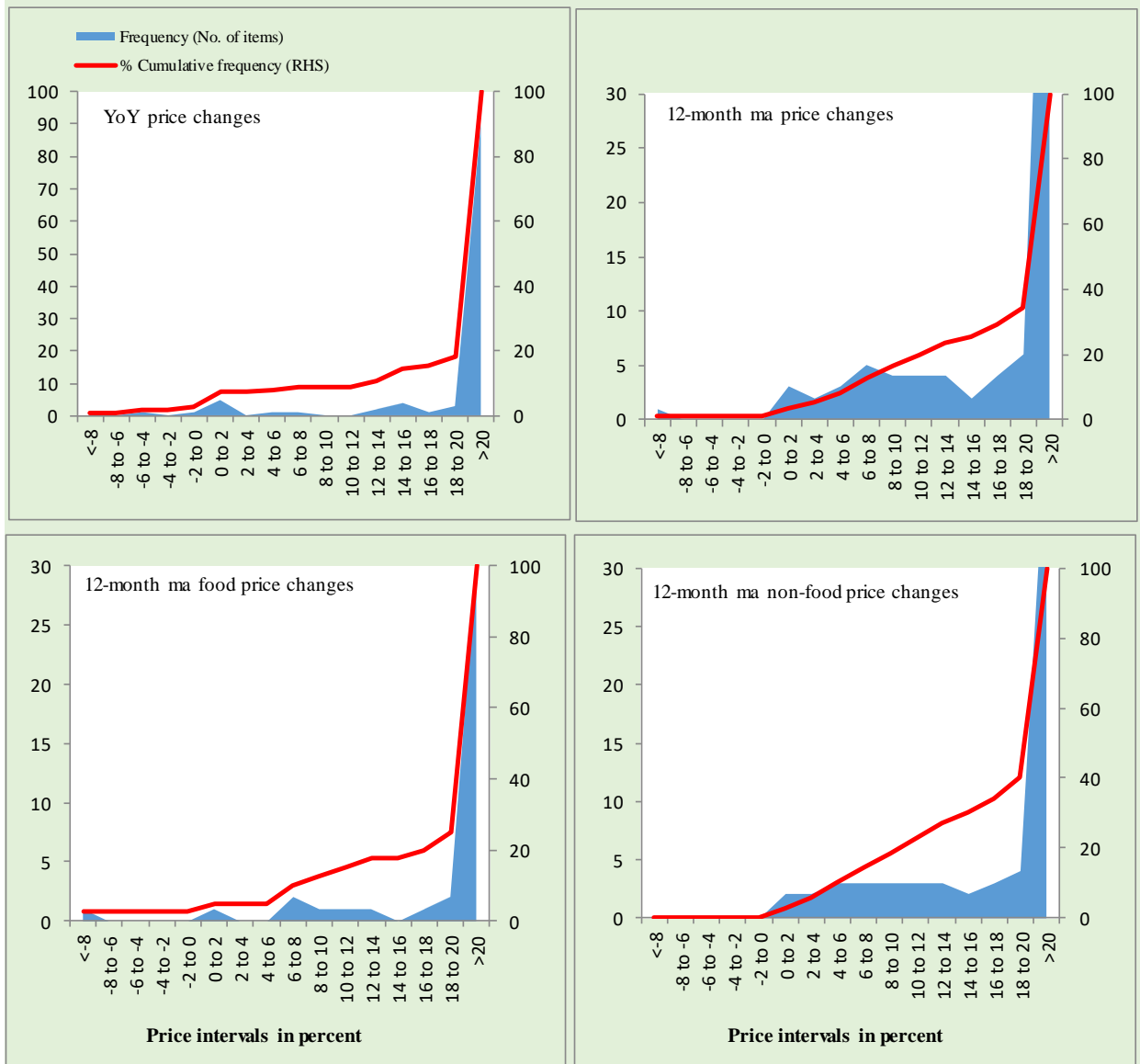
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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



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)



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.

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.