

Inflation Monitor

October 2021
(Base Year: 2015-16)



State Bank of Pakistan
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1. Inflation in Brief

1. National CPI Inflation as measured by year-on-year (YoY) basis increased from 9.0 percent in September 2021 to 9.2 percent in October 2021 and 8.9 percent in the corresponding month of last year. However, on month-on-month basis, National CPI inflation stood at 1.9 percent in October 2021 as compared to 2.1 percent in previous month and 1.7 percent during corresponding month of last year.
2. Urban CPI inflation increased from 9.1 percent (on year-on-year basis) in September 2021 to 9.6 percent in October 2021. It stood at 7.3 percent during the corresponding month of last year. On Contrary, Urban CPI inflation (on month-on-month basis) decreased from 2.0 percent in September 2021 to 1.7 percent in October 2021. It stood at 1.3 percent during corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at 1.1 percent in October 2021 compared to 1.8 percent in the previous month.
3. Rural CPI inflation is recorded at 8.7 percent on year-on year basis in October 2021 as compared to 8.8 percent during the previous month and 11.3 percent during the corresponding month of last year. Rural CPI inflation on month-on-month basis decreased slightly to 2.2 percent in October 2021 from 2.3 percent in the previous month stood at 2.4 percent during the corresponding month of last year. Seasonally adjusted month-on-month CPI inflation is recorded at 1.0 percent in October 2021 compared to 1.5 percent in the previous month.
4. Urban Core Inflation (trimmed) on year-on-year basis remained steady at 8.7 percent in October 2021 and September 2021 compared to 6.5 percent during the corresponding month of last year. On month-on-month basis, Urban Core Inflation (trimmed) is recorded at 1.1 percent in October 2021 as compared to 0.9 percent in previous month and 0.6 percent during the corresponding month of last year.
5. Rural Core Inflation (trimmed) on year-on-year basis remained steady at 8.2 percent in October 2021 and September 2021 and recorded at 9.5 percent during the corresponding month of last year. On month-on-month basis, Rural Core Inflation (trimmed) is recorded at 1.6 percent in October 2021 as compared to 1.2 percent in previous month and 1.1 percent during corresponding month of last year.
6. Urban Core (Non-food, Non-energy (NFNE)) inflation on year-on-year basis inched up from 6.4 in September 2021 to 6.7 percent in October 2021 and recorded 5.6 percent during corresponding month of last year. On month-on-month basis, it increased from 0.4 percent in September 2021 to 0.9 percent in October 2021 and recorded 0.6 percent during the corresponding month of last year.
7. Rural Core (NFNE) inflation on year-on-year basis is recorded at 6.7 percent in October 2021 as compared to 6.2 percent in previous month and 7.6 percent during the corresponding month of last year. Whereas on month-on-month basis, it increased from 0.5 percent in September 2021 to 1.0 percent in October 2021. It stood at 0.6 percent during the corresponding month of last year.
8. WPI Inflation on year-on-year basis increased from 19.6 percent in September 2021 to 21.2 percent in October 2021. It stood at 5.1 percent during the corresponding month of last year. WPI Inflation on

month-on-month basis inched up to 4.2 percent in October 2021 from 3.2 percent in previous month. It stood at 2.9 percent in the corresponding month of last year.

9. SPI Inflation on year-on-year basis slightly increased from 13.8 percent in September 2021 to 14.0 percent in October 2021. During corresponding month of last year, SPI stood at 9.7 percent. On month-on-month basis, SPI Inflation is recorded at 3.0 percent in October 2021 as compared to 2.9 percent both in the previous month and in 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/MoM) and their important sub-indices for the time span of last thirteen months is presented. The inflation is compared with the benchmark of medium-term inflation target of 8.5 percent and 0.75 percent on YoY and MoM basis respectively. Green areas indicate low inflation pressures and increasing order of red (light to dark color spectrum i.e. light green to orange to brown to red) represents higher and higher inflationary pressures.

		Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
Headline	National	8.9	8.3	8.0	5.7	8.7	9.1	11.1	10.9	9.7	8.4	8.4	9.0	9.2
	Urban	7.3	7.0	7.0	5.0	8.6	8.7	11.0	10.8	9.6	8.7	8.3	9.1	9.6
	Rural	11.3	10.5	9.5	6.6	8.8	9.5	11.3	10.9	9.7	8.0	8.4	8.8	8.7
Food	Urban	13.9	13.0	12.6	7.3	10.3	11.5	15.7	15.3	11.0	9.4	10.2	10.8	9.4
	Rural	17.7	16.1	13.4	7.2	9.1	11.1	14.1	12.8	9.8	7.3	9.1	9.1	7.2
Core	Urban	5.6	5.6	5.6	5.4	6.4	6.3	7.0	6.8	6.7	6.9	6.3	6.4	6.7
	Rural	7.6	7.4	7.7	7.8	7.7	7.3	7.7	7.6	7.3	6.9	6.2	6.2	6.7

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key: **<6** **8.5** **>10**

		Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
Headline	National	1.7	0.8	-0.7	-0.2	1.8	0.4	1.0	0.1	-0.3	1.3	0.6	2.1	1.9
	Urban	1.3	0.6	-0.3	-0.2	2.3	0.3	1.3	0.2	-0.4	1.3	0.5	2.0	1.7
	Rural	2.4	1.1	-1.2	-0.3	1.1	0.5	0.6	0.0	-0.1	1.4	0.7	2.3	2.2
Food	Urban	2.8	1.6	-2.1	-2.1	1.3	1.7	2.7	1.1	-1.9	1.5	0.5	3.6	1.5
	Rural	4.3	2.0	-3.4	-2.2	0.2	1.5	0.9	0.2	-0.8	1.6	0.8	3.7	2.6
Core	Urban	0.6	0.3	0.4	0.9	1.1	0.2	0.9	0.2	0.3	0.8	0.2	0.4	0.9
	Rural	0.6	0.3	0.5	1.1	0.5	0.3	0.7	0.3	0.4	0.7	0.2	0.5	1.0

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key: **<0.00** **0.75** **>1.50**

	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	8.9	8.3	8.0	5.7	8.7	9.1	11.1	10.9	9.7	8.4	8.4	9.0	9.2
Food and Non-Alcoholic Beverages	34.58	16.6	15.1	13.3	6.7	9.7	11.6	15.9	14.8	10.5	8.2	10.0	10.2	8.3
Alcoholic Beverages, Tobacco	1.02	6.0	5.9	6.0	5.8	5.7	5.9	4.9	5.0	5.0	3.1	2.1	2.0	1.9
Clothing and Footwear	8.60	9.0	9.5	9.6	9.5	11.3	10.7	11.9	10.7	10.0	9.5	9.3	9.2	9.3
Housing, Water, Elec., Gas and Other Fuels	23.63	2.7	2.6	3.5	3.4	10.6	8.8	9.7	8.4	9.1	9.2	8.0	9.8	12.0
Furnishing and Household Equipment Maintenance	4.10	8.0	7.7	7.7	7.6	8.5	8.9	9.5	9.6	9.8	9.8	9.6	9.3	9.2
Health	2.79	7.8	7.6	8.1	8.5	9.2	8.8	9.0	9.0	9.4	8.6	8.5	8.0	8.0
Transport	5.91	-1.5	-4.1	-3.5	-2.6	-1.0	2.9	6.5	14.0	16.4	10.5	8.1	9.1	14.4
Communication	2.21	0.3	0.6	0.5	0.5	0.6	0.6	1.5	1.5	1.6	2.8	2.8	2.8	2.8
Recreation and Culture	1.59	3.9	4.2	4.4	4.6	4.8	4.6	4.6	4.9	6.2	5.9	6.4	6.9	7.5
Education	3.79	1.4	1.3	1.2	1.3	1.2	1.0	1.6	1.6	1.8	2.0	2.9	2.6	2.2
Restaurants and Hotels	6.92	8.9	9.3	9.9	8.9	8.0	8.1	8.2	8.6	8.8	8.5	7.3	7.8	8.3
Misc. Goods and Services	4.87	11.6	11.9	11.9	11.5	12.3	10.6	10.0	10.7	10.9	9.4	5.9	7.4	8.7

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key: **<6** **8.5** **>10**

Heat-map of Urban CPI inflation (YoY)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	7.3	7.0	7.0	5.0	8.6	8.7	11.0	10.8	9.6	8.7	8.3	9.1	9.6
Food and Non-Alcoholic Beverages	30.42	14.9	13.8	13.1	6.7	10.5	11.9	17.0	16.3	11.1	9.2	10.6	11.1	9.4
Alcoholic Beverages, Tobacco	0.85	6.2	6.7	6.6	6.2	6.3	6.9	6.0	6.1	6.1	3.8	2.8	2.6	2.1
Clothing and Footwear	8.01	8.0	9.1	8.8	8.5	12.3	11.5	12.7	11.2	10.5	10.4	10.3	10.0	10.2
Housing, Water, Elec., Gas and Other Fuels	27.03	2.3	2.2	2.8	2.9	10.0	8.2	9.3	7.9	8.4	8.5	7.2	8.9	11.1
Furnishing and Household Equipment Maintenance	4.09	6.6	6.4	6.1	6.4	7.4	7.9	8.6	8.8	8.9	9.5	9.4	9.5	9.1
Health	2.31	7.3	7.1	7.4	7.4	8.7	8.9	9.4	9.6	10.3	9.5	9.1	8.7	8.4
Transport	6.14	-1.7	-4.5	-3.6	-2.8	-0.8	3.2	6.8	14.2	17.0	11.4	8.8	9.7	15.0
Communication	2.35	0.3	0.7	0.6	0.6	0.7	0.7	2.0	2.0	2.0	3.8	3.8	3.8	3.8
Recreation and Culture	1.73	2.9	3.2	3.3	3.3	3.6	3.3	3.2	3.4	5.1	5.4	5.5	6.3	7.6
Education	4.88	1.2	1.1	1.0	1.1	1.1	0.9	1.2	1.2	1.3	1.5	2.5	2.3	1.9
Restaurants and Hotels	7.41	8.8	9.3	10.0	8.7	7.9	8.4	8.5	9.1	9.4	9.5	7.6	8.5	8.6
Misc. Goods and Services	4.77	9.7	10.4	10.6	10.4	11.8	10.3	9.8	10.8	10.9	9.3	6.1	8.0	9.3

Source: Pakistan Bureau of Statistics and SBP staff estimates

<6 8.5 >10

Heat-map of Rural CPI inflation (YoY)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	11.3	10.5	9.5	6.6	8.8	9.5	11.3	10.9	9.7	8.0	8.4	8.8	8.7
Food and Non-Alcoholic Beverages	40.87	18.4	16.7	13.5	6.6	8.9	11.2	14.7	13.2	9.8	7.2	9.3	9.3	7.1
Alcoholic Beverages, Tobacco	1.28	5.7	5.0	5.4	5.3	5.0	4.8	3.7	3.8	3.8	2.4	1.4	1.3	1.6
Clothing and Footwear	9.48	10.1	9.9	10.6	10.7	10.1	9.7	10.8	10.0	9.3	8.4	8.1	8.2	8.2
Housing, Water, Elec., Gas and Other Fuels	18.49	3.7	3.6	4.9	4.5	12.2	10.1	10.7	9.7	10.7	10.6	9.7	11.6	14.0
Furnishing and Household Equipment Maintenance	4.10	10.1	9.6	10.0	9.5	10.1	10.3	10.8	10.8	11.0	10.3	10.0	8.9	9.3
Health	3.51	8.3	8.2	8.8	9.6	9.8	8.8	8.6	8.4	8.6	7.7	7.8	7.3	7.5
Transport	5.56	-1.1	-3.5	-3.3	-2.2	-1.2	2.4	6.1	13.5	15.5	9.0	6.9	8.2	13.4
Communication	1.99	0.4	0.4	0.4	0.4	0.3	0.4	0.8	0.8	0.9	1.0	1.0	0.9	1.0
Recreation and Culture	1.38	5.8	6.0	6.6	7.0	7.0	7.0	7.0	7.5	8.0	6.9	8.0	7.9	7.3
Education	2.13	2.1	2.1	2.0	2.1	1.8	1.5	2.9	2.9	3.6	4.1	4.5	4.1	3.2
Restaurants and Hotels	6.19	9.0	9.3	9.6	9.3	8.2	7.8	7.6	7.6	7.7	6.8	6.9	6.6	7.6
Misc. Goods and Services	5.02	14.3	14.1	13.8	13.2	12.8	11.1	10.3	10.6	10.9	9.5	5.7	6.5	7.9

Source: Pakistan Bureau of Statistics and SBP staff estimates

<6 8.5 >10

Heat-map of National CPI inflation (MoM)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	1.7	0.8	-0.7	-0.2	1.8	0.4	1.0	0.1	-0.3	1.3	0.6	2.1	1.9
Food and Non-Alcoholic Beverages	34.58	3.9	1.9	-3.2	-2.7	0.8	1.8	2.2	0.7	-1.8	1.8	0.7	4.0	2.1
Alcoholic Beverages, Tobacco	1.02	0.4	0.3	0.2	0.1	0.2	0.3	-0.1	0.2	0.2	-0.1	0.0	0.4	0.4
Clothing and Footwear	8.60	0.4	1.4	0.7	0.8	2.4	1.0	1.1	0.3	0.2	0.3	0.1	0.2	0.5
Housing, Water, Elec., Gas and Other Fuels	23.63	0.4	-0.1	1.2	1.9	4.4	-1.7	0.5	-1.2	0.4	1.4	0.7	1.6	2.4
Furnishing and Household Equipment Maintenance	4.10	0.9	0.5	0.5	0.4	1.4	1.0	0.9	0.5	0.6	0.9	0.5	0.8	0.8
Health	2.79	0.7	0.6	0.9	0.9	1.2	0.7	0.5	0.3	0.6	0.3	0.6	0.5	0.7
Transport	5.91	0.4	-2.3	1.6	1.9	1.9	-0.7	-1.2	0.1	1.1	4.0	0.7	1.3	5.3
Communication	2.21	0.1	0.3	0.0	0.1	0.1	0.0	1.0	0.0	0.0	1.2	0.0	0.0	0.1
Recreation and Culture	1.59	0.7	0.4	0.4	0.3	0.3	0.3	0.1	0.4	1.3	0.6	0.8	1.2	1.2
Education	3.79	0.6	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.2	0.2	0.9	0.0	0.1
Restaurants and Hotels	6.92	0.9	1.0	0.6	0.7	0.4	0.7	0.2	0.6	0.7	0.3	0.3	1.1	1.3
Misc. Goods and Services	4.87	0.1	0.7	0.2	1.0	1.3	-0.5	0.4	0.7	1.0	0.6	0.3	1.4	1.3

Source: Pakistan Bureau of Statistics and SBP staff estimates

<0.00 0.75 >1.50

Heat-map of Urban CPI inflation (MoM)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	1.3	0.6	-0.3	-0.2	2.3	0.3	1.3	0.2	-0.4	1.3	0.5	2.0	1.7
Food and Non-Alcoholic Beverages	30.42	3.2	1.7	-2.6	-2.7	1.5	1.8	3.2	1.1	-2.5	1.7	0.6	4.0	1.6
Alcoholic Beverages, Tobacco	0.85	0.7	0.5	0.0	0.0	0.2	0.6	0.1	0.2	0.1	0.0	0.0	0.2	0.2
Clothing and Footwear	8.01	0.3	1.9	0.5	0.5	4.1	0.8	1.1	0.1	0.1	0.2	0.1	0.1	0.4
Housing, Water, Elec., Gas and Other Fuels	27.03	0.3	-0.3	0.9	1.6	4.2	-1.6	0.7	-1.1	0.4	1.4	0.5	1.6	2.3
Furnishing and Household Equipment Maintenance	4.09	1.0	0.6	0.5	0.5	1.6	0.9	0.8	0.5	0.5	1.0	0.4	0.8	0.7
Health	2.31	0.9	0.2	0.9	0.6	1.5	1.1	0.5	0.5	0.8	0.2	0.6	0.6	0.6
Transport	6.14	0.4	-2.4	1.9	1.8	2.2	-0.7	-1.2	0.1	1.2	4.1	0.7	1.5	5.3
Communication	2.35	0.0	0.4	0.1	0.1	0.1	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.1
Recreation and Culture	1.73	0.3	0.4	0.2	0.1	0.4	0.3	0.0	0.2	1.8	0.7	0.6	1.3	1.5
Education	4.88	0.5	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.1	0.2	1.1	0.0	0.2
Restaurants and Hotels	7.41	0.9	0.9	0.7	0.7	0.4	1.1	0.2	0.6	0.8	0.4	0.1	1.4	1.0
Misc. Goods and Services	4.77	-0.2	0.9	0.4	1.0	1.6	-0.3	0.6	0.8	0.9	0.1	0.5	1.4	1.0

Source: Pakistan Bureau of Statistics and SBP staff estimates

<0.00 0.75 >1.50

Heat-map of Rural CPI inflation (MoM)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
National	100.00	2.4	1.1	-1.2	-0.3	1.1	0.5	0.6	0.0	-0.1	1.4	0.7	2.3	2.2
Food and Non-Alcoholic Beverages	40.87	4.7	2.1	-3.9	-2.6	0.1	1.7	1.0	0.2	-0.9	1.8	0.9	4.1	2.7
Alcoholic Beverages, Tobacco	1.28	0.2	0.0	0.4	0.2	0.1	0.0	-0.4	0.2	0.3	-0.1	0.0	0.6	0.5
Clothing and Footwear	9.48	0.6	0.9	0.9	1.2	0.3	1.3	1.0	0.5	0.3	0.4	0.1	0.4	0.6
Housing, Water, Elec., Gas and Other Fuels	18.49	0.5	0.3	1.8	2.5	4.6	-1.8	0.0	-1.4	0.6	1.5	1.0	1.7	2.7
Furnishing and Household Equipment Maintenance	4.10	0.7	0.4	0.7	0.4	1.1	1.2	0.9	0.6	0.7	0.7	0.6	0.7	1.0
Health	3.51	0.4	1.0	0.9	1.3	0.9	0.3	0.5	0.1	0.3	0.3	0.5	0.4	0.7
Transport	5.56	0.4	-2.0	1.2	2.0	1.5	-0.6	-1.2	0.1	0.9	3.9	0.8	1.0	5.2
Communication	1.99	0.1	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.2	0.0	0.0	0.2
Recreation and Culture	1.38	1.4	0.3	0.8	0.7	0.1	0.2	0.2	0.8	0.5	0.5	1.2	1.1	0.7
Education	2.13	0.9	0.0	0.0	0.1	0.1	0.0	1.4	0.0	0.7	0.5	0.4	0.0	0.1
Restaurants and Hotels	6.19	0.9	1.0	0.5	0.6	0.4	0.1	0.2	0.6	0.5	0.3	0.7	0.6	1.9
Misc. Goods and Services	5.02	0.5	0.4	-0.1	1.0	0.9	-0.7	0.2	0.5	1.1	1.2	0.1	1.3	1.9

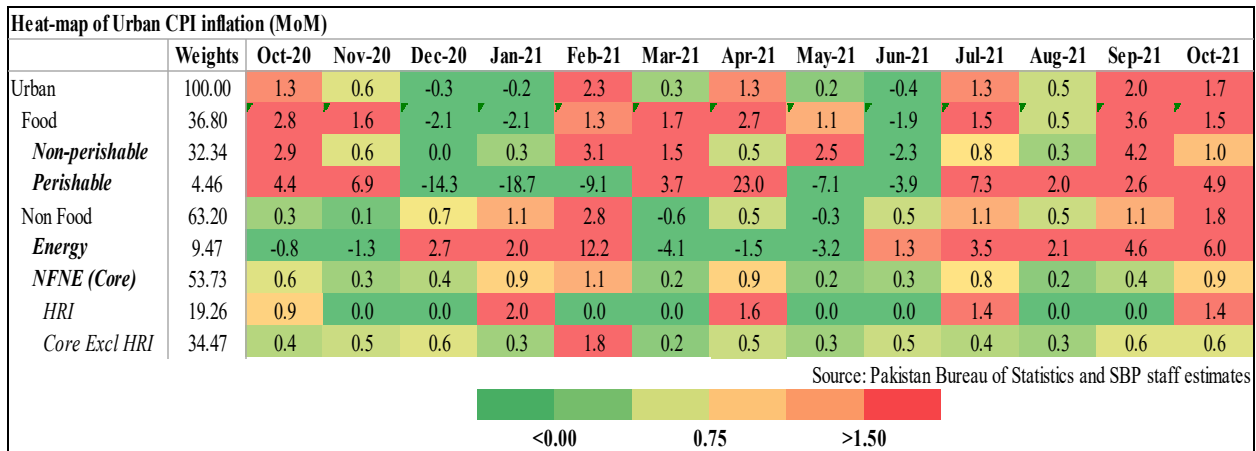
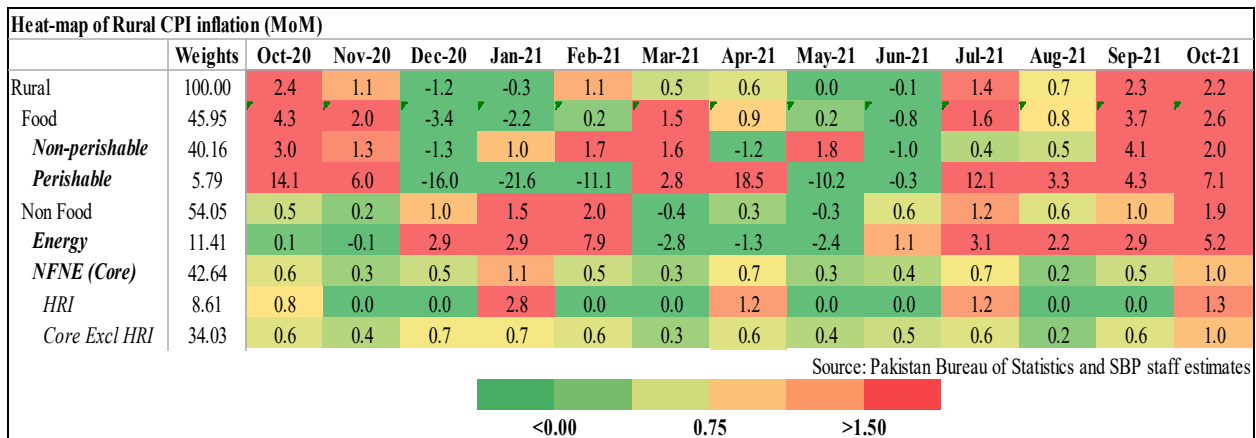
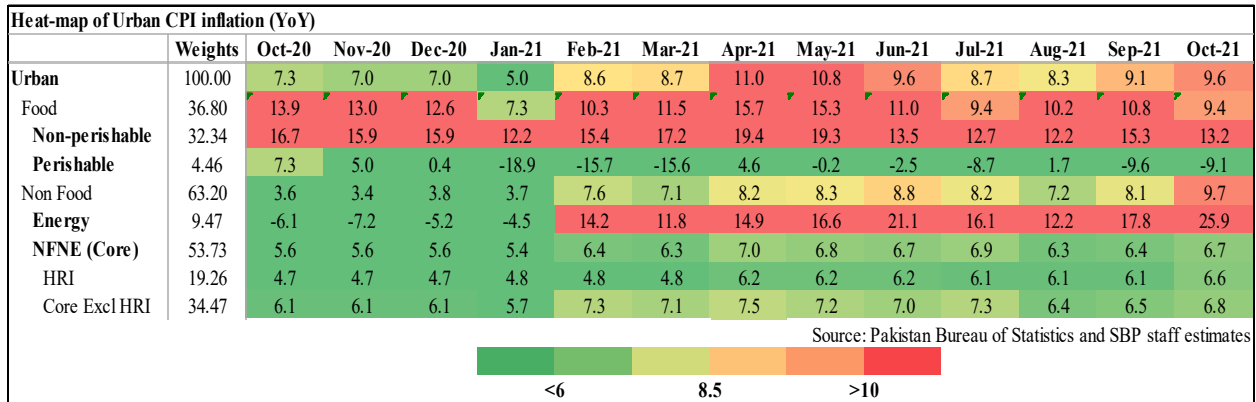
Source: Pakistan Bureau of Statistics and SBP staff estimates

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Heat-map of Rural CPI inflation (YoY)														
	Weights	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
Rural	100.00	11.3	10.5	9.5	6.6	8.8	9.5	11.3	10.9	9.7	8.0	8.4	8.8	8.7
Food	45.95	17.7	16.1	13.4	7.2	9.1	11.1	14.1	12.8	9.8	7.3	9.1	9.1	7.2
Non-perishable	40.16	19.5	18.9	16.8	13.1	13.9	16.9	17.2	16.9	12.2	10.3	9.9	12.3	11.2
Perishable	5.79	13.4	7.4	-1.6	-23.9	-19.3	-19.4	0.5	-8.2	-5.5	-9.7	5.4	-6.8	-12.5
Non Food	54.05	5.8	5.5	6.1	6.1	8.6	8.1	8.9	9.2	9.7	8.7	7.7	8.5	10.0
Energy	11.41	-0.8	-1.6	0.6	0.1	12.3	11.1	13.8	16.0	19.8	15.7	13.8	17.2	23.2
NFNE (Core)	42.64	7.6	7.4	7.7	7.8	7.7	7.3	7.7	7.6	7.3	6.9	6.2	6.2	6.7
HRI	8.61	5.2	5.2	5.2	5.8	5.8	5.8	6.6	6.6	6.6	6.1	6.1	6.1	6.6
Core Excl HRI	34.03	8.3	8.0	8.3	8.2	8.1	7.7	8.0	7.8	7.5	7.1	6.3	6.3	6.7

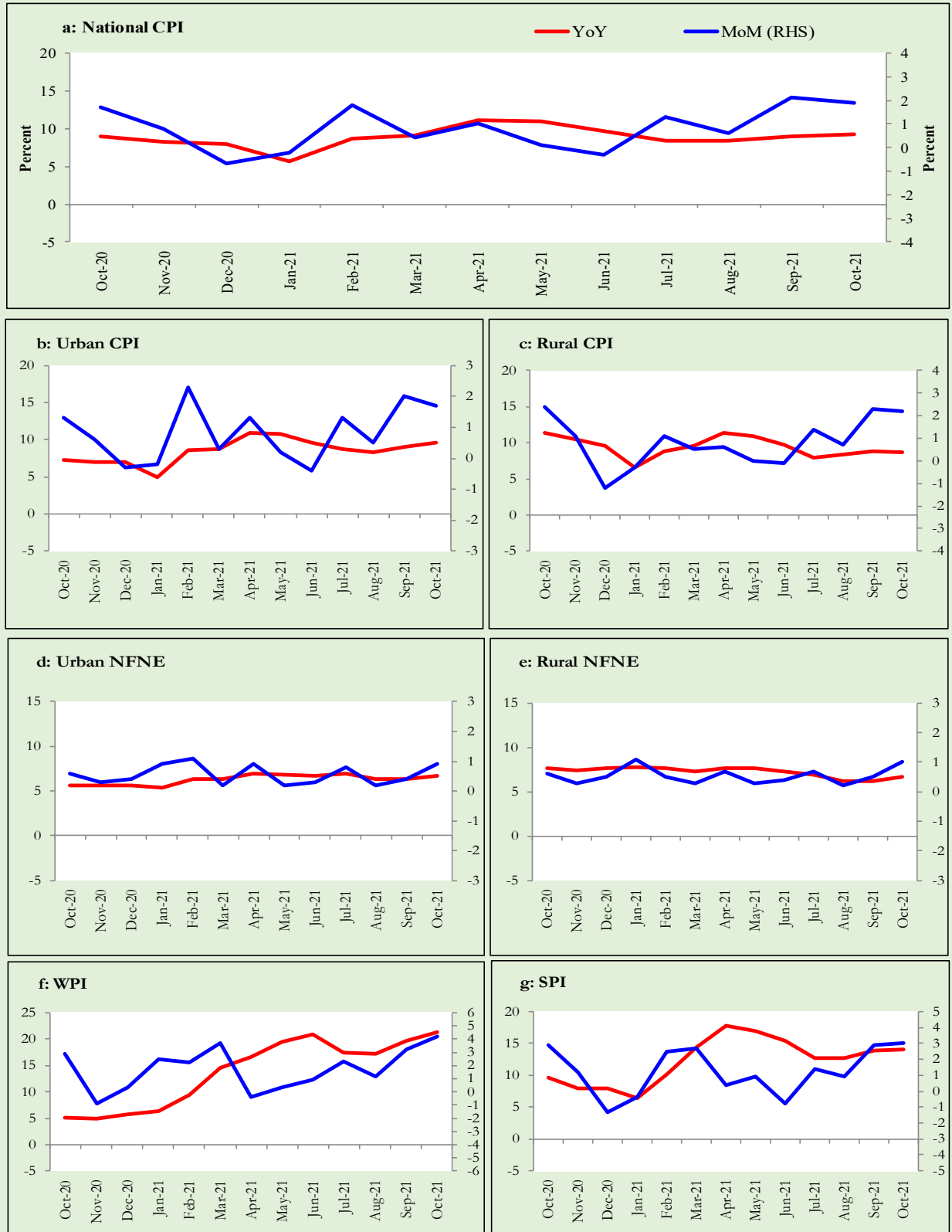
Source: Pakistan Bureau of Statistics and SBP staff estimates

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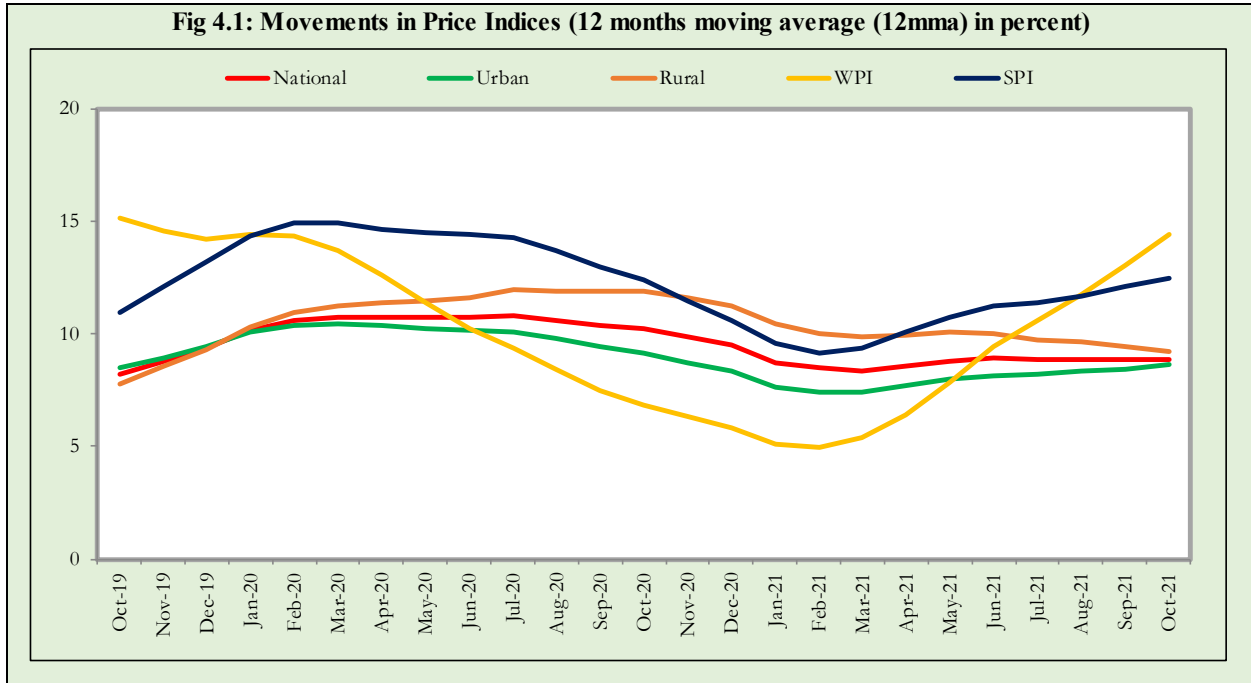


3. Trends in Inflation

Fig 3.1: Summary of Inflation Trends (in percent)



4. Movement in Price Indices (Moving Averages)



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

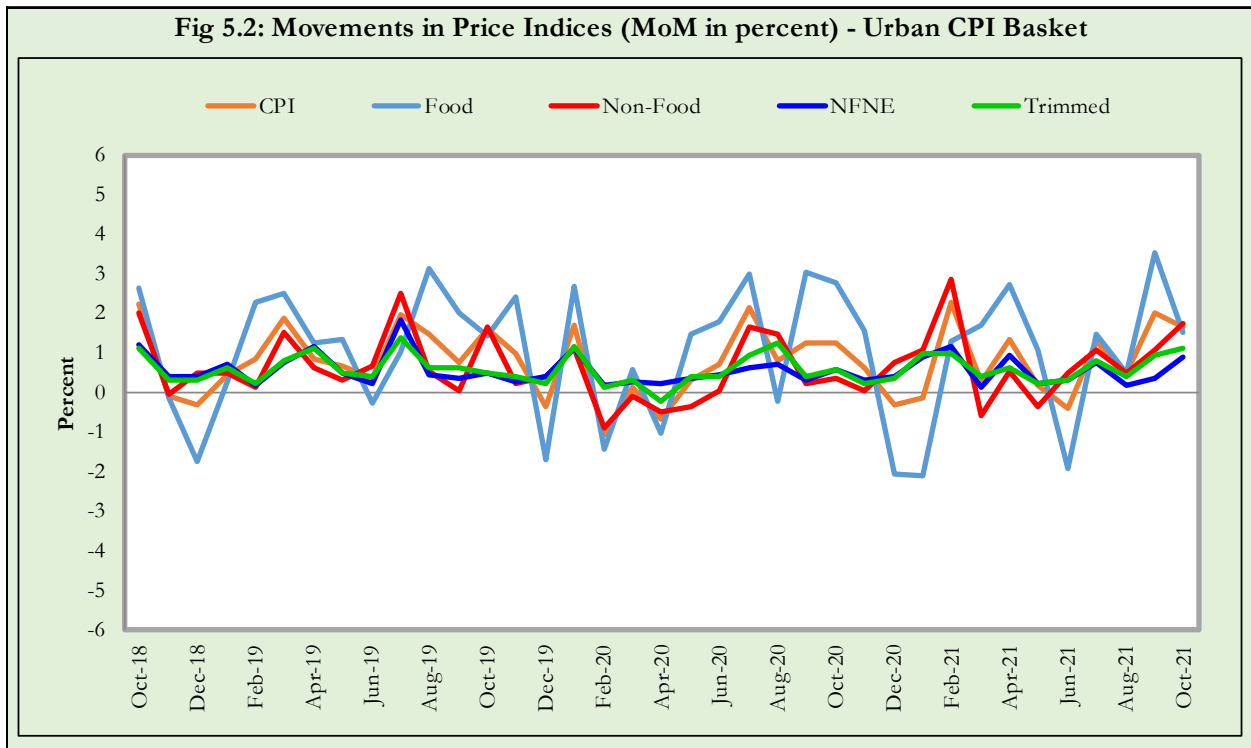
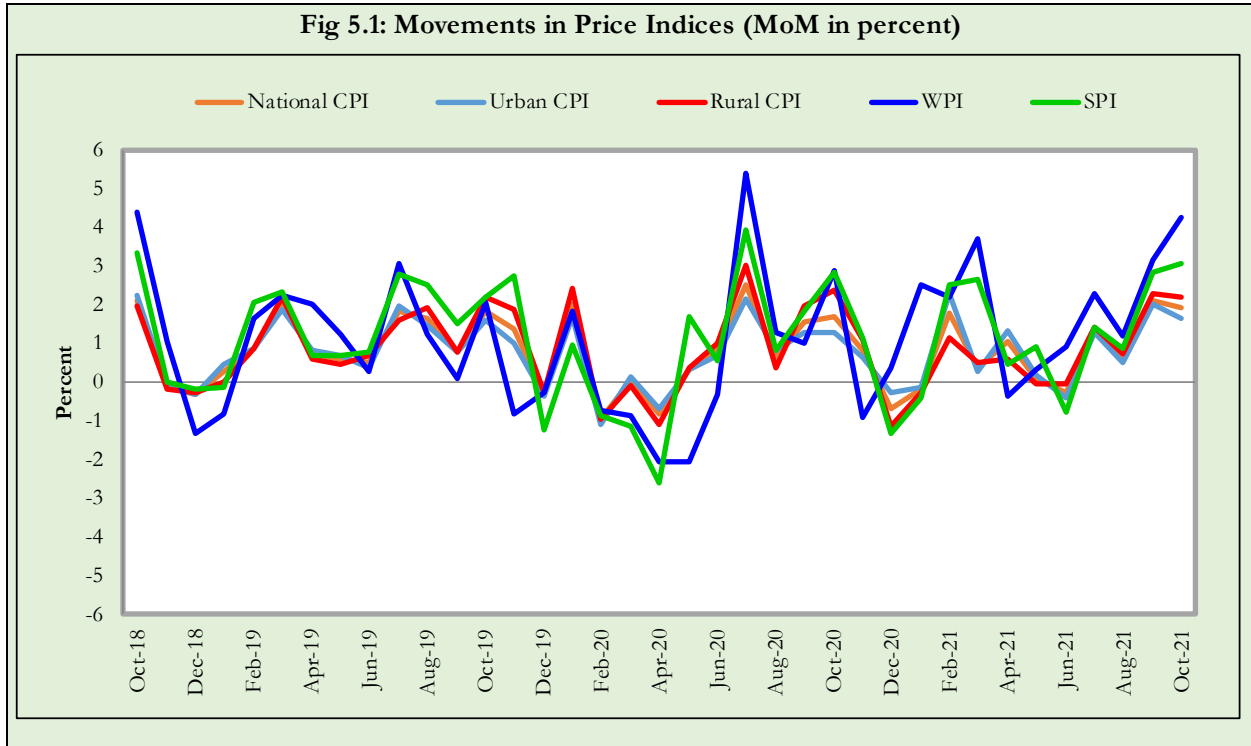
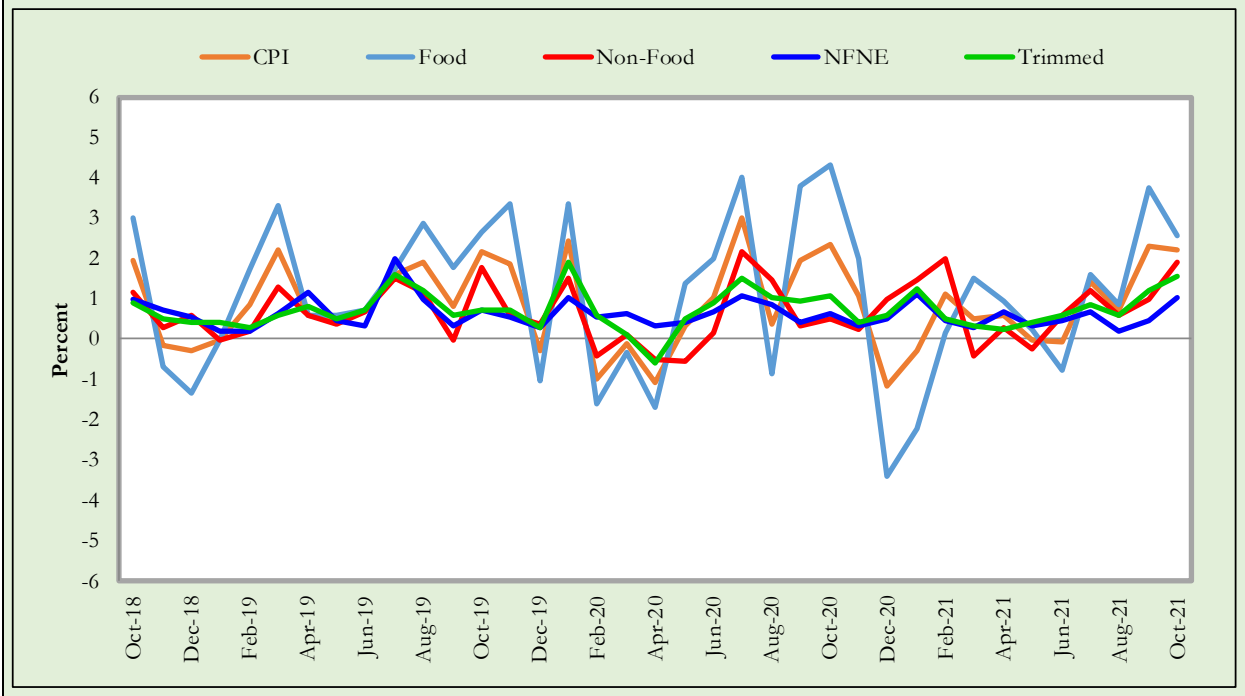
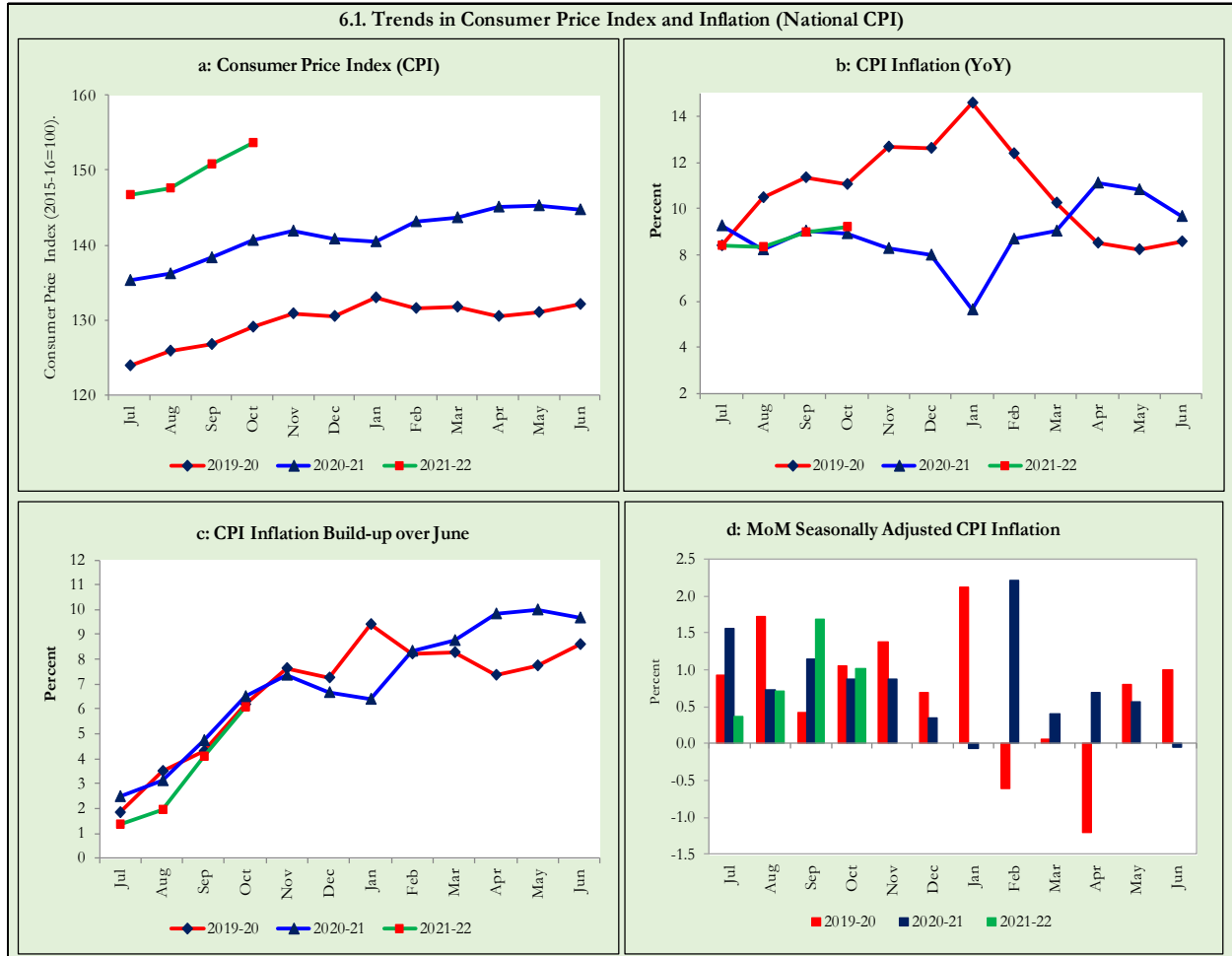


Fig 5.3: Movements in Price Indices (MoM in percent) - Rural CPI Basket

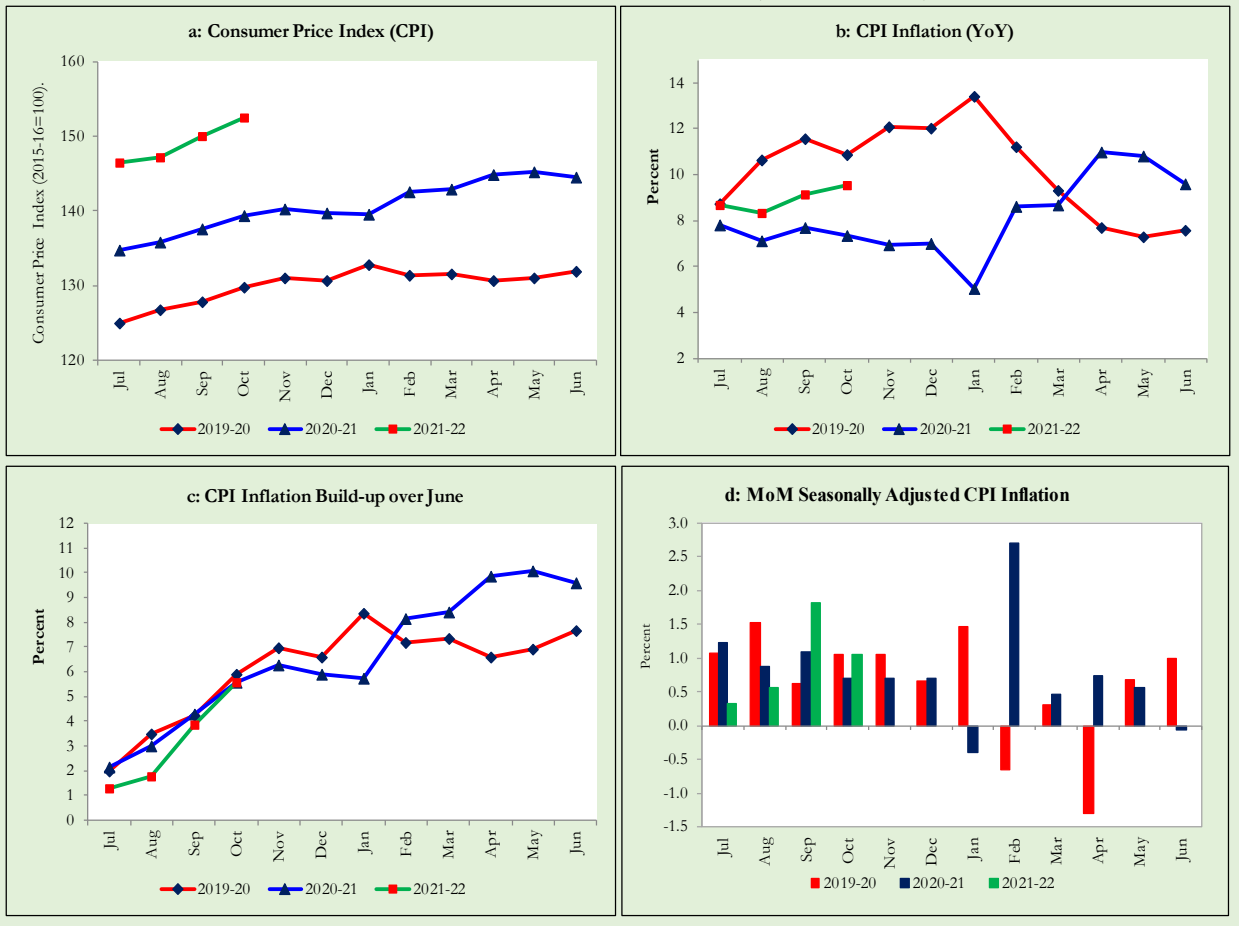


6. Trends in Consumer Price Indices and Inflation

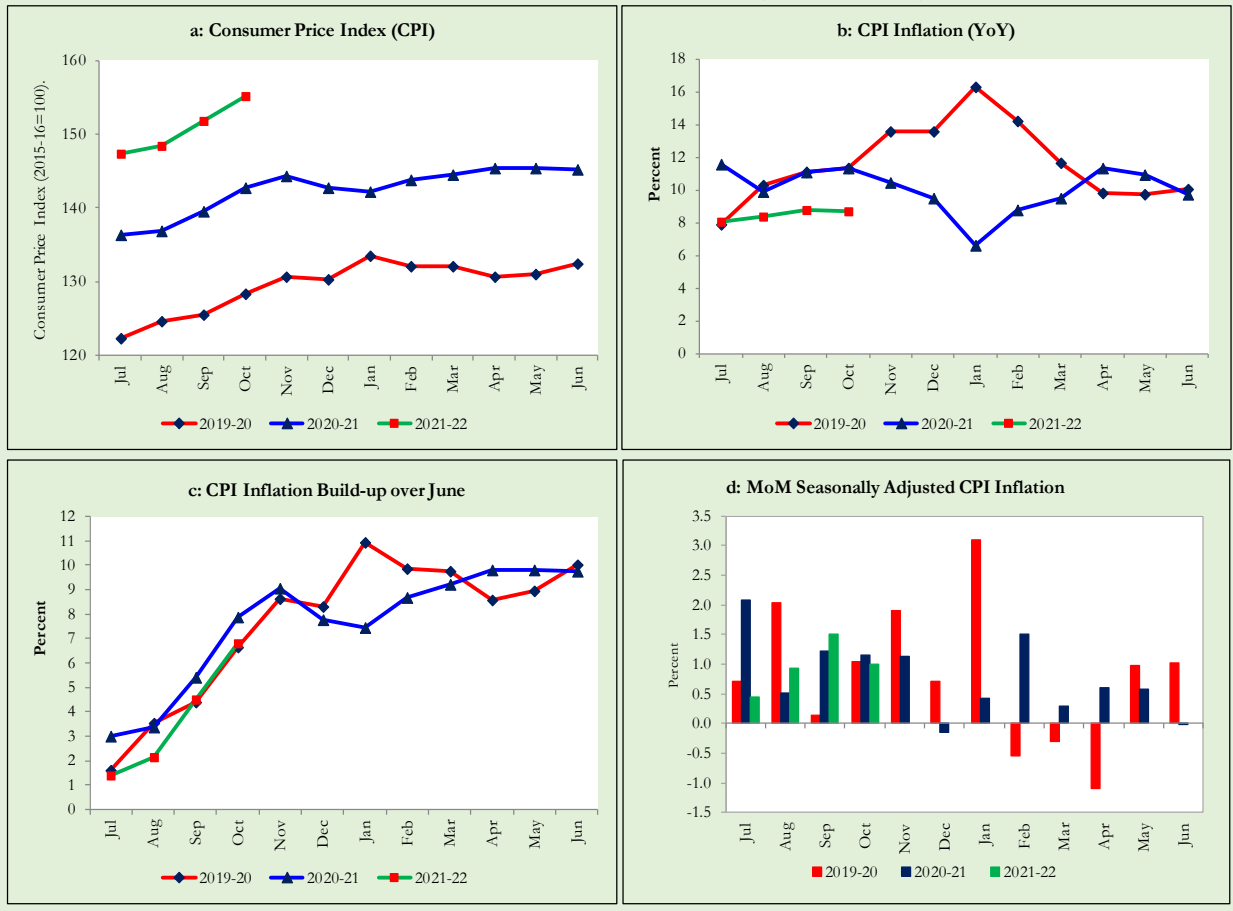
Monthly Consumer Price Indices, YoY growth rates and inflation build up over June along with seasonally adjusted (MoM) growth rates in CPI (National, Urban and Rural) is summarized in the following graphs (Figure 6.1 to 6.3).



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 37.8 percent during October 2021 from 44.7 percent in previous month. It was 68.7 percent during corresponding month of last year. The weighted contribution of non-food group increased to 62.2 percent in October 2021 from 55.3 percent in previous month. Weighted Contribution of non-food was 31.3 percent during corresponding month of last year. Table 7.1 provide the historical perspective of weighted contribution of food and non-food group and their respective sub-indices (Perishable food, Non-Perishable food, Energy, Core Inflation (NFNE), NFNE excluding HRI and HRI) in the overall inflation for urban basket.

Table 7.1 Weighted Contribution (in percent) to Urban CPI Inflation (YoY)

Period	Overall CPI	Food Group			Non-Food Group				
		Food	Perishable food	Non- Perishable food	Non-food	Energy	Core Inflation (NFNE)	NFNE excl HRI	HRI
		a=(b+e)	b=(c+d)	c	d	e=(f+g)	f	g=(h+i)	h
Oct-20	100.0	68.7	5.5	63.2	31.3	-8.9	40.2	28.1	12.0
Nov-20	100.0	68.7	4.3	64.3	31.3	-11.0	42.4	29.8	12.6
Dec-20	100.0	65.5	0.3	65.2	34.5	-8.1	42.6	30.0	12.6
Jan-21	100.0	53.2	-20.1	73.2	46.8	-9.6	56.5	38.7	17.8
Feb-21	100.0	43.6	-8.6	52.2	56.4	16.6	39.8	29.2	10.5
Mar-21	100.0	48.2	-8.7	56.9	51.7	13.3	38.4	28.1	10.3
Apr-21	100.1	52.4	2.1	50.4	47.6	13.0	34.6	23.7	10.9
May-21	100.0	52.0	-0.1	52.1	48.0	13.9	34.1	23.2	10.9
Jun-21	100.1	43.0	-1.2	44.2	57.1	19.4	37.8	25.5	12.3
Jul-21	100.0	40.8	-5.2	46.0	59.2	17.3	41.9	28.7	13.2
Sep-21	100.0	45.7	1.0	44.7	54.3	14.3	40.0	26.4	13.6
Oct-21	100.0	44.7	-5.6	50.4	55.3	18.7	36.7	24.4	12.3
Oct-21	100.0	37.8	-5.3	39.1	62.2	25.4	36.8	24.0	12.8

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 also decreased to 40.8 percent during October 2021 from 49.5 percent in previous month. It was 72.2 percent during corresponding month of last year. The weighted contribution of non-food group increased to 59.2 percent in October 2021 from 50.4 percent in previous month. Weighted contribution of non-food group was 27.8 percent during corresponding month of last year. Table 7.2 provide 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
Oct-20	100.0	72.2	8.8	63.4	27.8	-0.8	28.6	24.7	3.9
Nov-20	100.0	72.2	5.7	66.5	27.8	-1.8	29.5	25.4	4.1
Dec-20	100.0	65.5	-1.2	66.7	34.5	0.7	33.8	29.2	4.6
Jan-21	100.0	51.1	-26.7	78.0	48.9	0.3	48.7	41.3	7.4
Feb-21	100.0	47.9	-13.6	61.6	52.1	15.7	36.4	30.8	5.6
Mar-21	100.0	54.4	-13.1	67.5	45.5	13.0	32.5	27.3	5.2
Apr-21	100.0	57.7	0.3	57.4	42.3	13.2	29.1	24.1	5.0
May-21	100.0	54.9	-4.6	59.5	45.1	15.2	29.8	24.7	5.2
Jun-21	100.0	47.4	-3.3	50.7	52.6	20.4	32.2	26.5	5.7
Jul-21	100.0	43.4	-8.0	51.4	56.6	20.4	36.2	29.9	6.3
Sep-21	100.0	51.1	3.7	47.4	48.8	17.7	31.2	25.2	6.0
Oct-21	100.0	49.5	-5.2	54.8	50.4	20.8	29.6	24.0	5.6
Oct-21	100.0	40.8	-10.9	41.5	59.2	27.7	31.5	25.3	6.2

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 (CPI, Core and twelve groups) 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													
	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
General	57.0	50.8	41.9	53.4	59.8	56.2	43.3	42.1	47.2	52.2	51.7	57.6	60.1
Food & Non-Alcoholic Beverages	51.1	28.9	-1.1	44.4	47.8	54.4	24.4	28.9	30.0	38.9	40.0	55.6	41.1
Alcoholic Beverages & Tobacco	33.3	66.7	-33.3	33.3	66.7	33.3	33.3	66.7	33.3	0.0	0.0	33.3	33.3
Clothing & Footwear	75.0	75.0	72.5	65.0	85.0	70.0	67.5	55.0	47.5	47.5	45.0	50.0	55.0
Housing, Water, Elect, Gas & other Fuels	6.9	6.9	51.7	6.9	31.0	17.2	20.7	-6.9	27.6	58.6	41.4	58.6	72.4
Furnishing & Household Equip. Maintenance etc.	85.7	85.7	81.0	92.9	90.5	92.9	73.8	81.0	71.4	83.3	78.6	83.3	88.1
Health	64.5	67.7	54.8	71.0	90.3	87.1	77.4	61.3	64.5	54.8	74.2	54.8	51.6
Transport	40.6	31.3	40.6	43.8	50.0	28.1	18.8	25.0	31.3	37.5	46.9	40.6	50.0
Communication	40.0	40.0	20.0	40.0	20.0	20.0	40.0	0.0	20.0	60.0	20.0	20.0	20.0
Recreation & Culture	48.0	64.0	48.0	32.0	36.0	28.0	12.0	24.0	64.0	68.0	56.0	48.0	72.0
Education	43.8	12.5	0.0	18.8	6.3	0.0	31.3	0.0	25.0	25.0	25.0	25.0	56.3
Restaurant & Hotels	85.7	85.7	78.6	71.4	71.4	85.7	57.1	85.7	71.4	71.4	57.1	64.3	85.7
Miscellaneous	75.9	75.9	65.5	79.3	75.9	75.9	65.5	79.3	75.9	58.6	69.0	89.7	82.8
NFNE	63.8	62.6	55.3	59.1	63.8	63.0	57.0	51.1	54.9	57.4	56.2	59.1	66.0

	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
General	58.2	37.7	34.8	39.3	45.5	46.7	35.2	32.0	43.9	44.3	41.0	54.1	63.4
Food & Non-Alcoholic Beverages	54.4	10.1	1.3	29.1	24.1	54.4	15.2	13.9	20.3	29.1	27.8	41.8	49.4
Alcoholic Beverages & Tobacco	60.0	20.0	20.0	40.0	40.0	-20.0	40.0	60.0	60.0	-20.0	0.0	40.0	80.0
Clothing & Footwear	66.7	85.2	77.8	59.3	59.3	81.5	55.6	74.1	44.4	55.6	25.9	74.1	81.5
Housing, Water, Elect, Gas & other Fuels	26.1	17.4	39.1	30.4	56.5	-17.4	17.4	-13.0	39.1	73.9	60.9	65.2	91.3
Furnishing & Household Equip. Maintenance etc.	84.6	42.3	69.2	46.2	88.5	88.5	61.5	61.5	76.9	80.8	61.5	57.7	84.6
Health	42.9	64.3	42.9	57.1	78.6	57.1	64.3	42.9	78.6	14.3	64.3	42.9	57.1
Transport	43.8	18.8	37.5	31.3	50.0	31.3	18.8	37.5	68.8	62.5	43.8	62.5	68.8
Communication	20.0	40.0	0.0	0.0	0.0	20.0	20.0	0.0	20.0	40.0	20.0	0.0	20.0
Recreation & Culture	61.5	46.2	61.5	23.1	23.1	23.1	30.8	23.1	38.5	30.8	53.8	53.8	61.5
Education	100.0	0.0	0.0	20.0	20.0	0.0	80.0	0.0	60.0	80.0	60.0	0.0	20.0
Restaurant & Hotels	71.4	78.6	64.3	42.9	42.9	21.4	42.9	57.1	28.6	28.6	28.6	64.3	78.6
Miscellaneous	76.5	82.4	35.3	76.5	52.9	64.7	58.8	47.1	70.6	41.2	58.8	88.2	88.2
NFNE	64.7	55.9	47.1	47.8	54.4	53.7	55.9	46.3	59.6	53.7	47.8	57.4	71.3

9. Domestic Commodity Prices

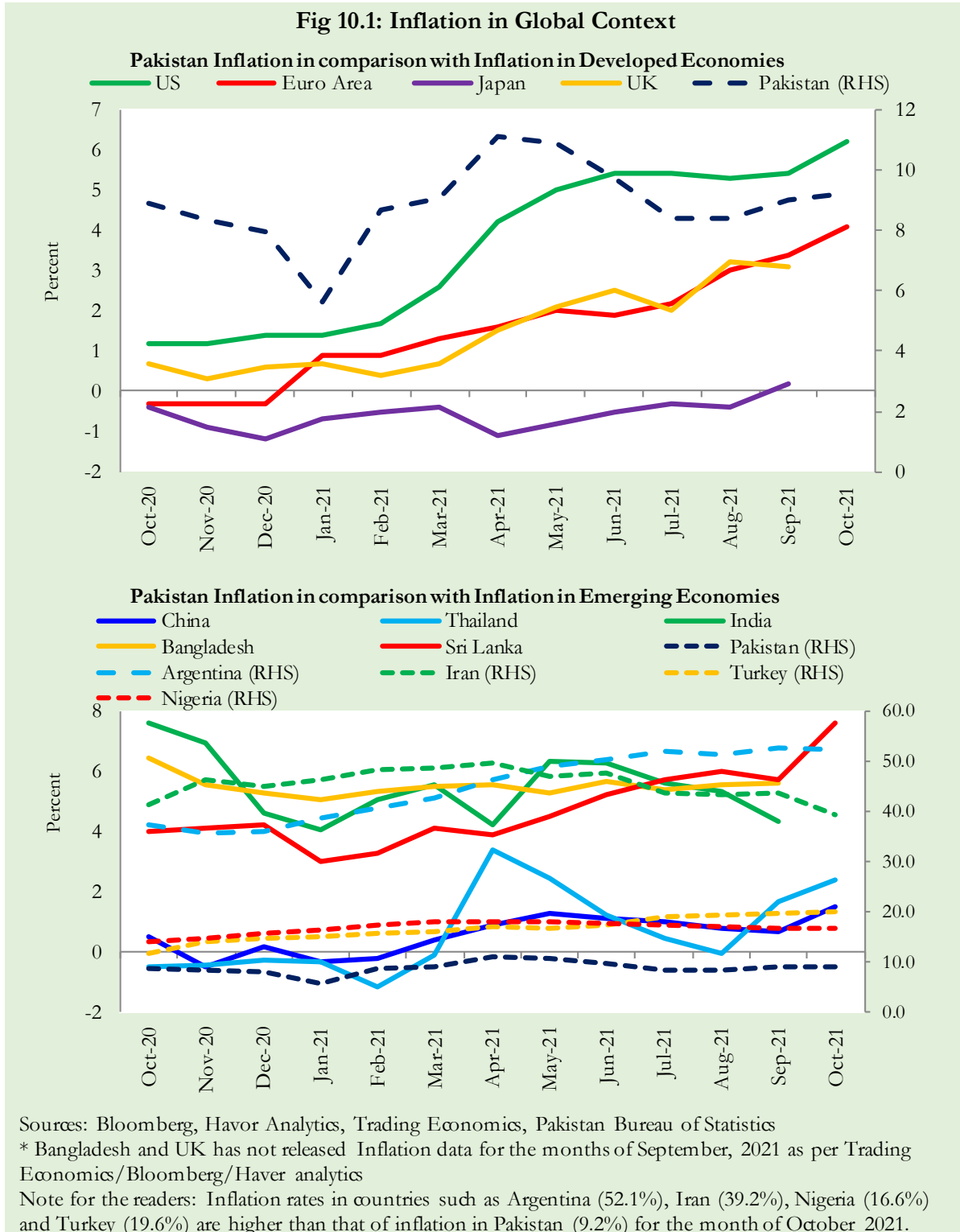
Inflation in domestic food commodities (YoY and MoM in percent) for selected essential food items covering both urban and rural CPI baskets is given in table 9.1.

S. No	Item	Unit	Urban CPI		Rural CPI	
			YoY	MoM	YoY	MoM
1	Wheat	10 Kg	4.7	7.2	2.9	5.2
2	Wheat Flour Bag	20 Kg	14.3	-2.5	16.9	1.5
3	Rice Basmati Broken (Superior/Average Quality) *	1 Kg	-0.5	0.2	7.7	0.9
4	Beef with Bone (Average Quality)	1 Kg	17.0	1.5	16.4	0.5
5	Mutton (Average Quality)	1 Kg	17.3	2.1	16.1	0.0
6	Chicken Farm Broiler (Live)	1 Kg	34.7	17.9	37.9	13.7
7	Milk Fresh (Un-Boiled)	1 Liter	10.0	0.4	8.6	1.8
8	Eggs Farm	Dozen	2.2	-5.9	5.0	-1.1
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	44.0	3.0	45.2	2.6
10	Pulse Masoor (Washed)	1 Kg	17.6	0.0	16.3	-1.3
11	Pulse Moong (Washed)	1 Kg	-29.1	-6.1	-27.0	-1.9
12	Pulse Mash (Washed)	1 Kg	3.2	-2.1	3.7	2.3
13	Pulse Gram	1 Kg	2.9	-2.3	5.4	-0.2
14	Potatoes	1 Kg	-20.0	10.3	-18.4	9.2
15	Onions	1 Kg	-28.4	-12.7	-28.8	-14.8
16	Tomatoes	1 Kg	-48.5	0.4	-54.6	-10.2
17	Sugar Refined	1 Kg	1.7	-7.7	5.8	-2.6
18	Garlic (Lehsun)	1 Kg	3.8	2.2	19.8	2.1
19	Ginger (Adrak)	500 Gm	-24.8	-13.2	-27.2	-14.0
20	Tea Lipton Yellow Label 190 Gm Packet	Each	7.9	4.9	4.9	3.5

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

10. Inflation in Global Context

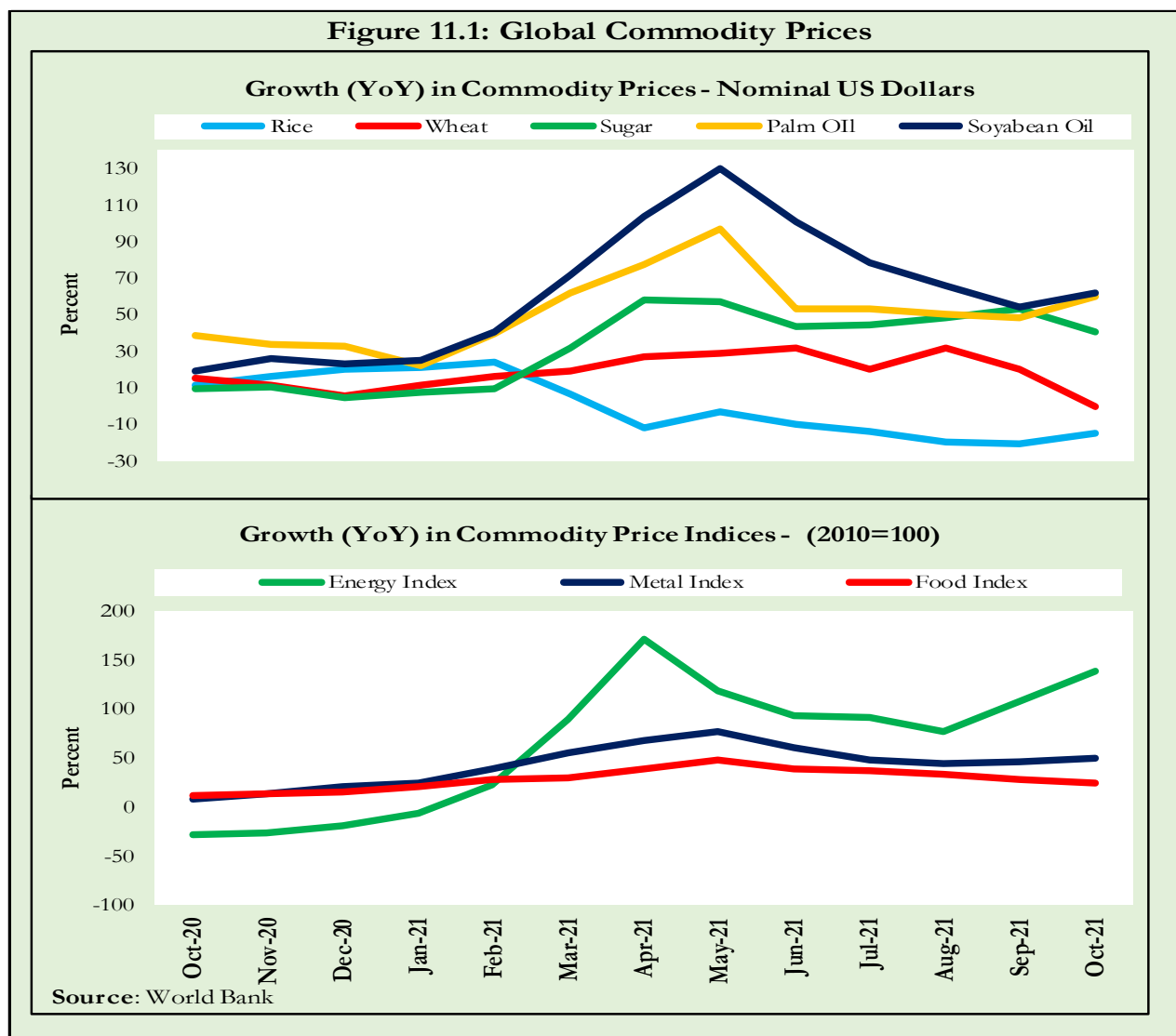
In global context, Pakistan’s inflation in comparison with inflation in selected developed and emerging economies is given in figure 10.1.



11. Global Commodity Prices

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	Oct-20		Sep-21		Oct-21	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	12.3	3.3	27.3	-1.2	24.9	1.4
Metals	7.7	1.3	45.7	2.7	50.7	4.7
Energy	-27.4	0.9	107.6	10.7	138.9	16.1
Agricultural	10.4	2.1	21.1	-0.3	20.8	1.8
Cotton	1.3	5.7	46.4	2.3	56.9	13.2



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 July 2008 to October 2021 has been used for seasonal adjustment analysis. The seasonal analysis is carried out without taking trading-day or Islamic calendar month's effects.

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. It is important to note that seasonal factors are estimate on historical data and that the future data may not necessarily show the same seasonal pattern.

Fig. 12.1 (a): Seasonal Factor of National CPI

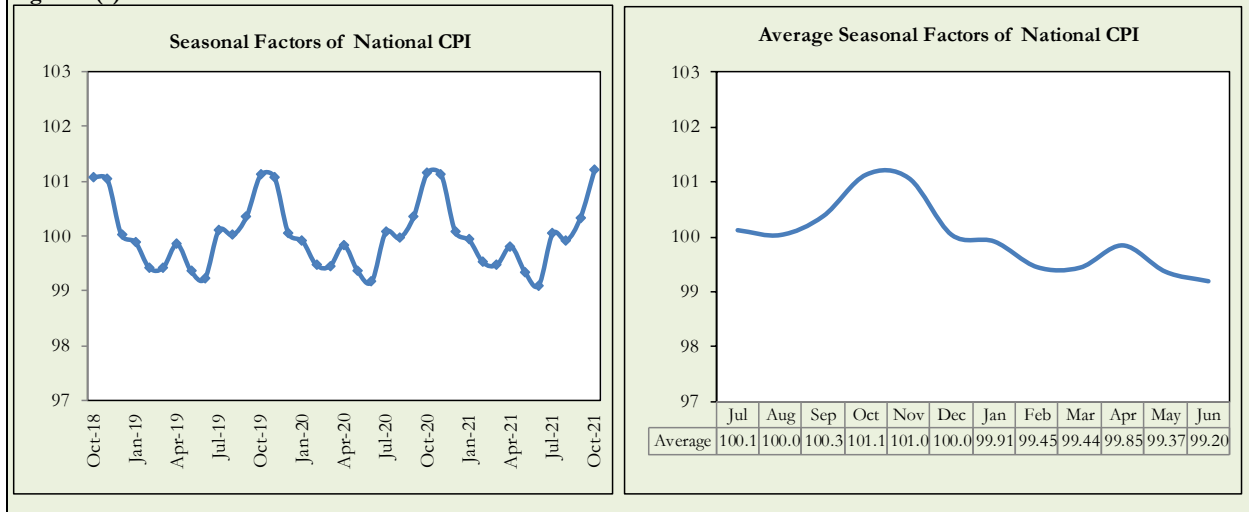


Fig. 12.1 (b): Seasonal Factor of Urban CPI

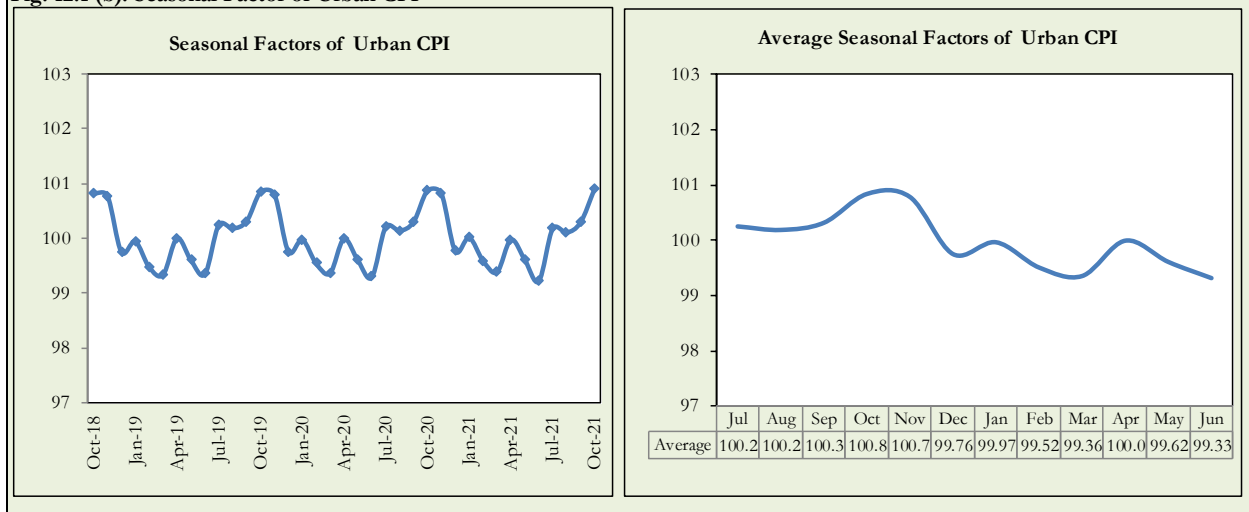
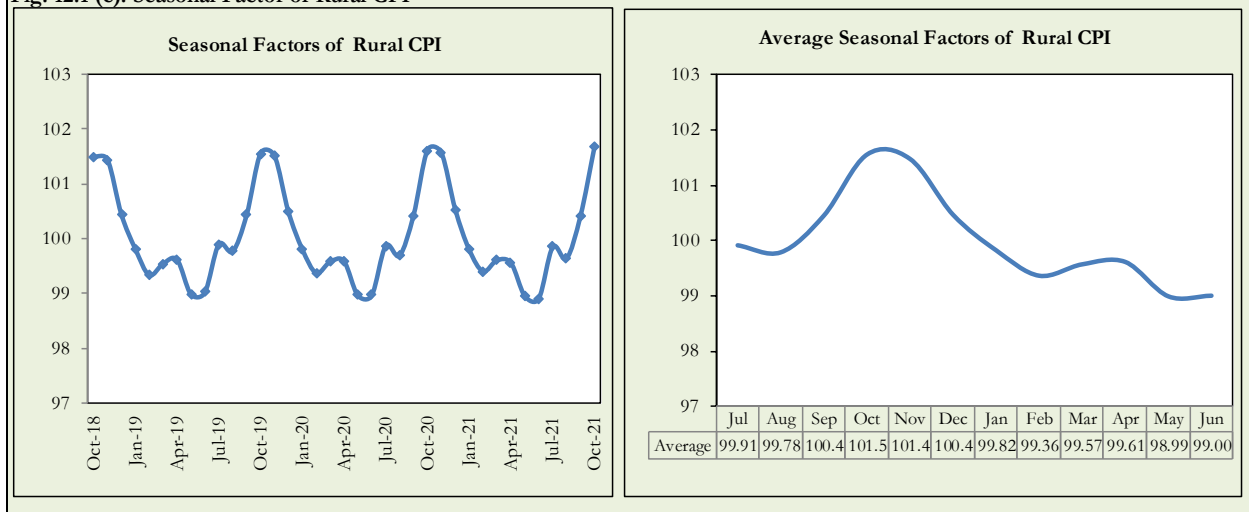


Fig. 12.1 (c): Seasonal Factor of Rural CPI



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

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

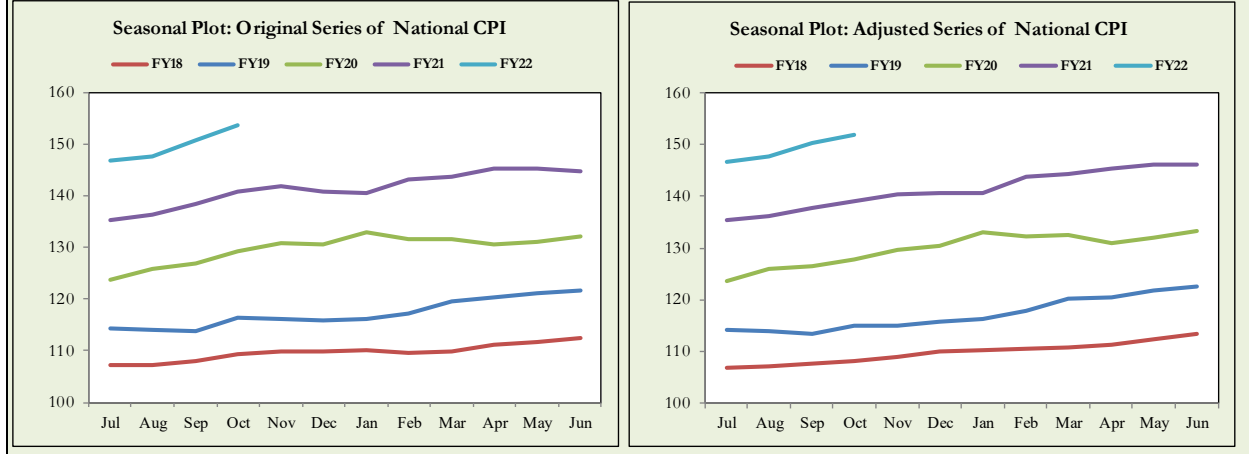


Fig. 12.2 (b): Seasonal Plot of Urban CPI

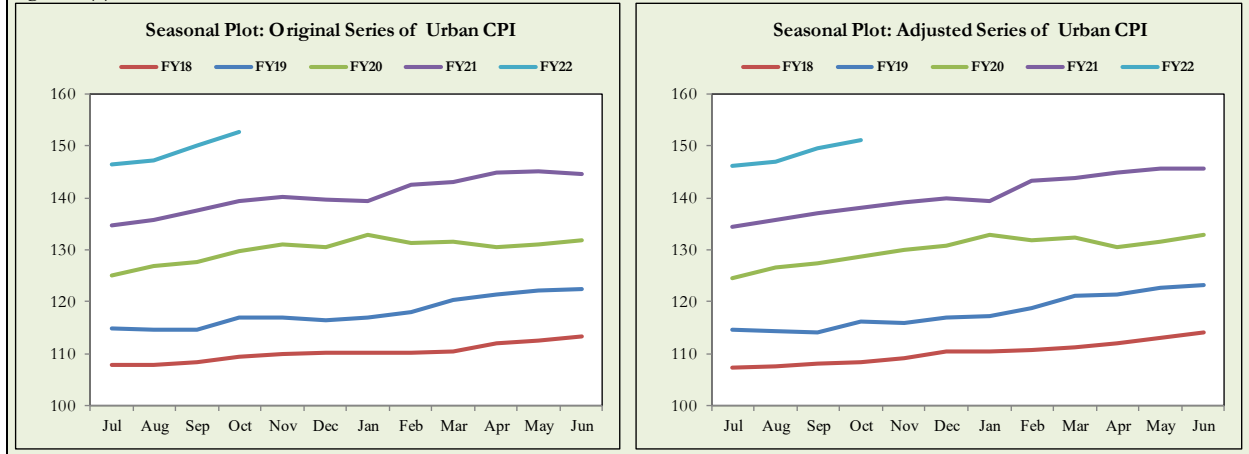
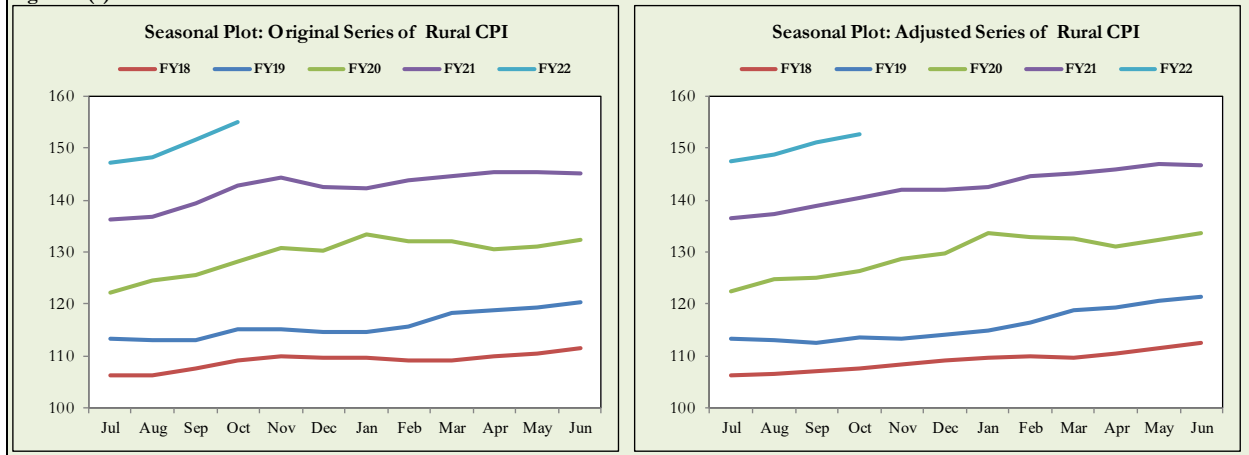


Fig. 12.2 (c): Seasonal Plot of Rural CPI



Seasonally adjusted Index of National CPI for October 2021 stood at 151.76 against 153.60 in original series showing a decrease of 1.84 on account of seasonal adjustment in October 2021.

Seasonally adjusted Index of Urban CPI for October 2021 stood at 151.21 against 152.6 in original series showing a decrease of 1.39 on account of seasonal adjustment in October 2021.

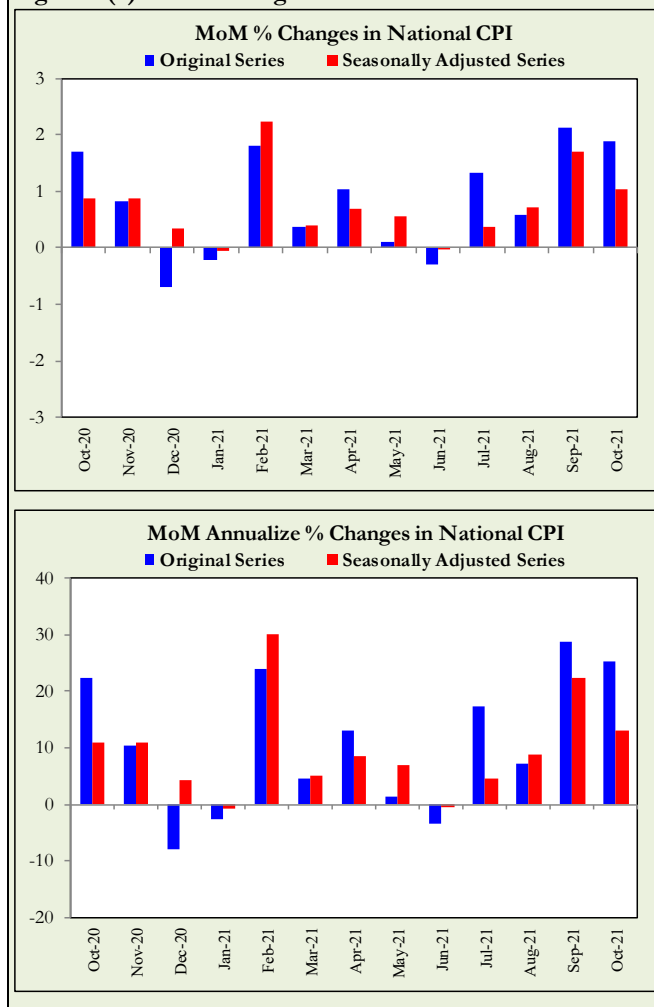
Seasonally adjusted Index of Rural CPI for October 2021 stood at 152.6 against 155.2 in original series showing a decreased of 2.6 on account of seasonal adjustment in October 2021.

Month-on-month change of seasonally adjusted National CPI series stood at 1.0% reflecting a decrease during October 2021 over previous month and an increase of 1.9% in original series.

Month-on-month change of seasonally adjusted Urban CPI series stood at 1.1% reflecting a decrease during October 2021 over previous month and an increase of 1.7% in original series.

Month-on-month change of seasonally adjusted Rural CPI series stood at 1.0% reflecting a decrease during October 2021 over previous month and an increase of 2.2% in original series.

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



It is pertinent to note that in case of MoM inflation, seasonally adjusted rates provide important information.

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

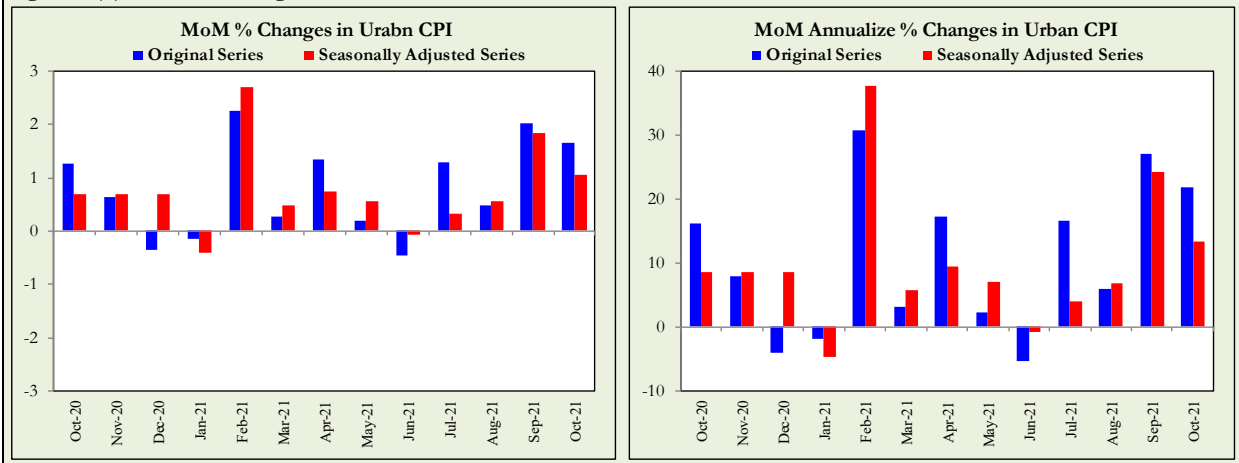
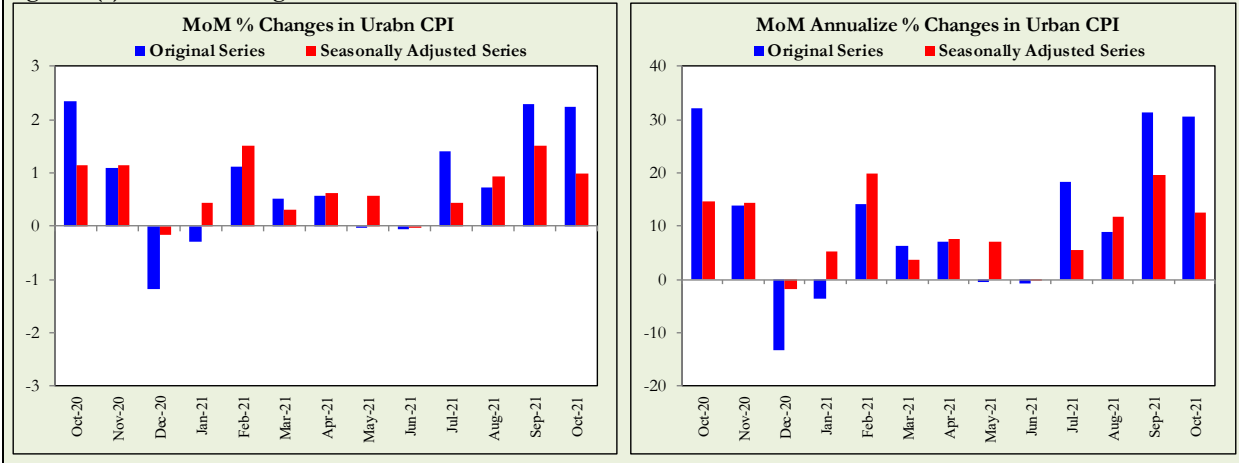


Fig. 12.3 (c): MoM % Changes in Rural CPI



List of Tables**Table A1: National CPI Inflation by Groups (YoY and MoM in percent)**

Groups	Weights	MoM change			YoY change		
		Oct-20	Sep-21	Oct-21	Oct-20	Sep-21	Oct-21
Food & Non-Alcoholic Beverages	34.6	3.9	4.0	2.1	16.6	10.2	8.3
Alcoholic Beverages & Tobacco	1.0	0.4	0.4	0.4	6.0	2.0	1.9
Clothing & Footwear	8.6	0.4	0.2	0.5	9.0	9.2	9.3
Housing, Water, Elec, Gas & other	23.6	0.4	1.6	2.4	2.7	9.8	12.0
Furnishing & Household Equip.	4.1	0.9	0.8	0.8	8.0	9.3	9.2
Health	2.8	0.7	0.5	0.7	7.8	8.0	8.0
Transport	5.9	0.4	1.3	5.3	-1.5	9.1	14.4
Communication	2.2	0.1	0.0	0.1	0.3	2.8	2.8
Recreation & Culture	1.6	0.7	1.2	1.2	3.9	6.9	7.5
Education	3.8	0.6	0.0	0.1	1.4	2.6	2.2
Restaurants & Hotels	6.9	0.9	1.1	1.3	8.9	7.8	8.3
Miscellaneous	4.9	0.1	1.4	1.3	11.6	7.4	8.7
Overall National CPI	100.0	1.7	2.1	1.9	8.9	9.0	9.2

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

Groups	Weights	MoM change			YoY change		
		Oct-20	Sep-21	Oct-21	Oct-20	Sep-21	Oct-21
I. Food Group	36.8	2.8	3.6	1.5	13.9	10.8	9.4
Food & Non-Alcoholic Beverages	30.4	3.2	4.0	1.6	14.9	11.1	9.4
Alcoholic Beverages & Tobacco	0.9	0.7	0.2	0.2	6.2	2.6	2.1
Restaurant & Hotels (Food)	5.5	1.0	1.8	1.2	9.4	10.4	10.7
II. Non-Food Group	63.2	0.3	1.1	1.8	3.6	8.1	9.7
Clothing & Footwear	8.0	0.3	0.1	0.4	8.0	10.0	10.2
Housing, Water, Elec, Gas & other	27.0	0.3	1.6	2.3	2.3	8.9	11.1
Furnishing & Household Equip.	4.1	1.0	0.8	0.7	6.6	9.5	9.1
Health	2.3	0.9	0.6	0.6	7.3	8.7	8.4
Transport	6.1	0.4	1.5	5.3	-1.7	9.6	15.0
Communication	2.4	0.0	0.0	0.1	0.3	3.8	3.8
Recreation & Culture	1.7	0.2	1.3	1.5	2.9	6.3	7.6
Education	4.9	0.5	0.0	0.2	1.2	2.3	1.9
Restaurants & Hotels (Non-food)	1.9	0.5	0.3	0.1	7.1	2.7	2.3
Miscellaneous	4.8	-0.2	1.4	1.0	9.7	8.0	9.3
Overall Urban CPI	100.0	1.3	2.0	1.7	7.3	9.1	9.6

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

Groups	Weights	MoM Change			YoY Change		
		Oct-20	Sep-21	Oct-21	Oct-20	Sep-21	Oct-21
I. Food Group	45.9	4.3	3.7	2.6	17.7	9.1	7.2
Food and Non-Alcoholic Beverages	40.9	4.7	4.1	2.7	18.4	9.3	7.1
Alcoholic Beverages, Tobacco	1.3	0.2	0.6	0.5	5.7	1.3	1.6
Restaurants and Hotels (Food Component)	3.8	1.4	1.0	2.0	14.0	9.4	10.2
II. Non-Food Group	54.1	0.5	1.1	2.0	5.1	8.7	10.4
Clothing and Footwear	9.5	0.6	0.4	0.6	10.1	8.2	8.2
Housing, Water, Elec., Gas and Other Fuels	18.5	0.5	1.7	2.7	3.7	11.6	14.0
Furnishing and Household Equip. Maintenance	4.1	0.7	0.7	1.0	10.1	8.9	9.3
Health	3.5	0.4	0.4	0.7	8.3	7.3	7.5
Transport	5.6	0.4	1.0	5.2	-1.1	8.2	13.4
Communication	2.0	0.1	0.0	0.2	0.4	0.9	1.0
Recreation and Culture	1.4	1.3	1.1	0.7	5.8	7.9	7.3
Education	2.1	0.9	0.0	0.1	2.1	4.1	3.2
Restaurants and Hotels (Non-Food Component)	2.4	0.0	0.0	1.6	0.8	1.3	2.9
Miscellaneous	5.0	0.5	1.3	1.9	14.3	6.5	7.9
Rural CPI	100.0	2.4	2.3	2.2	11.3	8.8	8.7

Table A4: Top Ten Contributors to Urban CPI Inflation (YoY) - October-2021

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Oct-20	Oct-21		
<u>A. Ranked by Weighted Contribution</u>					
1	Electricity Charges	4.56	-7.77	32.14	12.89
2	House Rent	19.26	4.67	6.62	12.77
3	Motor Fuel	2.91	-7.15	27.60	8.83
4	Milk Fresh	7.11	12.65	9.45	6.74
5	Readymade Food	5.52	9.41	10.71	6.04
6	Vegetable Ghee	1.03	15.76	43.03	4.97
7	Chicken	1.36	18.22	34.69	4.79
8	Cooking Oil	1.10	11.40	40.02	4.75
9	Wheat Flour	3.01	24.67	12.97	4.15
10	Meat	2.04	11.30	17.11	4.07
Total		47.90			70.00
<u>B. Ranked by Percentage Change</u>					
1	Liquefied Hydrocarbons	0.51	-12.31	71.03	3.52
2	Vegetable Ghee	1.03	15.76	43.03	4.97
3	Mustard Oil	0.01	16.93	41.92	0.05
4	Cooking Oil	1.10	11.40	40.02	4.75
5	Chicken	1.36	18.22	34.69	4.79
6	Electricity Charges	4.56	-7.77	32.14	12.89
7	Motor Fuel	2.91	-7.15	27.60	8.83
8	Pulse Masoor	0.16	19.88	17.62	0.23
9	Meat	2.04	11.30	17.11	4.07
10	Footwear	1.48	6.35	16.12	2.33
Total		15.16			46.43
<u>C. Ranked by Weights</u>					
1	House Rent	19.26	4.67	6.62	12.77
2	Milk Fresh	7.11	12.65	9.45	6.74
3	Readymade Food	5.52	9.41	10.71	6.04
4	Education	4.88	1.20	1.94	1.04
5	Electricity Charges	4.56	-7.77	32.14	12.89
6	Wheat Flour	3.01	24.67	12.97	4.15
7	Appliances/Articles/Products For Personal	2.98	6.52	12.53	3.71
8	Motor Fuel	2.91	-7.15	27.60	8.83
9	Cotton Cloth	2.22	8.75	9.81	2.25
10	Meat	2.04	11.30	17.11	4.07
Total		54.49			62.49

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in Urban CPI, which is 9.6 percent in October-2021.

Table A5: Top Ten Contributors to Urban CPI Inflation (MoM) in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	1.67	8.65	17.37
2	House Rent	19.26	0.00	1.42	15.39
3	Chicken	1.36	42.04	17.91	15.09
4	Electricity Charges	4.56	11.40	5.48	14.71
5	Fresh Vegetables	1.53	3.95	15.26	14.70
6	Liquefied Hydrocarbons	0.51	-7.22	13.20	5.27
7	Readymade Food	5.52	1.77	1.24	4.08
8	Potatoes	0.45	-2.62	10.05	3.64
9	Wheat	0.61	7.31	7.25	2.95
10	Meat	2.04	2.20	1.72	2.52
Total		38.75			95.72
B. Ranked by Percentage Change					
1	Chicken	1.36	42.04	17.91	15.09
2	Fresh Vegetables	1.53	3.95	15.26	14.70
3	Liquefied Hydrocarbons	0.51	-7.22	13.20	5.27
4	Potatoes	0.45	-2.62	10.05	3.64
5	Motor Fuel	2.91	1.67	8.65	17.37
6	Wheat	0.61	7.31	7.25	2.95
7	Stationery	0.35	0.24	5.78	1.09
8	Electricity Charges	4.56	11.40	5.48	14.71
9	Tea	0.84	2.78	4.93	2.41
10	Sweetmeat	0.35	0.34	4.92	1.10
Total		13.47			78.33
C. Ranked by Weights					
1	House Rent	19.26	0.00	1.42	15.39
2	Milk Fresh	7.11	0.10	0.41	1.68
3	Readymade Food	5.52	1.77	1.24	4.08
4	Education	4.88	0.03	0.15	0.45
5	Electricity Charges	4.56	11.40	5.48	14.71
6	Wheat Flour	3.01	9.69	-1.44	-2.83
7	Appliances/Articles/Products For	2.98	1.04	0.97	1.71
8	Motor Fuel	2.91	1.67	8.65	17.37
9	Cotton Cloth	2.22	0.01	0.04	0.05
10	Meat	2.04	2.20	1.72	2.52
Total		54.49			55.13

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Rural CPI, which is 1.7 percent in October 2021.

Table A6: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY) in October 2021

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Oct-20	Oct-21		
A. Ranked by Weighted Contribution					
1	Electricity Charges	4.56	-7.77	32.14	12.89
2	House Rent	19.26	4.67	6.62	12.77
3	Motor Fuel	2.91	-7.15	27.60	8.83
4	Milk Fresh	7.11	12.65	9.45	6.74
5	Readymade Food	5.52	9.41	10.71	6.04
6	Vegetable Ghee	1.03	15.76	43.03	4.97
7	Chicken	1.36	18.22	34.69	4.79
8	Cooking Oil	1.10	11.40	40.02	4.75
9	Wheat Flour	3.01	24.67	12.97	4.15
10	Meat	2.04	11.30	17.11	4.07
11	Appliances/Articles/Products For	2.98	6.52	12.53	3.71
12	Liquefied Hydrocarbons	0.51	-12.31	71.03	3.52
13	Footware	1.48	6.35	16.12	2.33
14	Cotton Cloth	2.22	8.75	9.81	2.25
15	Fresh Fruits	1.44	-3.85	15.84	1.81
Total		56.53			83.62
Bottom 15 Contributors					
1	Tomatoes	0.35	66.93	-48.52	-3.64
2	Onions	0.59	-8.35	-28.35	-2.17
3	Potatoes	0.45	53.14	-19.26	-1.78
4	Pulse Moong	0.17	40.94	-29.12	-0.56
5	Cigarettes	0.72	4.96	-0.11	-0.01
6	Newspapers	0.07	0.00	0.00	0.00
7	Gas Charges	1.08	0.00	0.00	0.00
8	Therapeutic Appliances And	0.01	7.36	1.94	0.00
9	Carpets	0.03	4.59	1.28	0.00
10	Electrical Appliances For Personal	0.05	1.59	1.46	0.01
11	Major Tools & Equipments	0.01	8.81	8.39	0.01
12	Dental Services	0.02	5.36	6.12	0.01
13	Dessert Preparation	0.04	10.01	5.33	0.02
14	Postal Services	0.02	0.23	10.87	0.02
15	Besan	0.08	10.00	3.76	0.03
Total		3.69			-8.06

Table A7: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM) in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	1.67	8.65	17.37
2	House Rent	19.26	0.00	1.42	15.39
3	Chicken	1.36	42.04	17.91	15.09
4	Electricity Charges	4.56	11.40	5.48	14.71
5	Fresh Vegetables	1.53	3.95	15.26	14.70
6	Liquefied Hydrocarbons	0.51	-7.22	13.20	5.27
7	Readymade Food	5.52	1.77	1.24	4.08
8	Potatoes	0.45	-2.62	10.05	3.64
9	Wheat	0.61	7.31	7.25	2.95
10	Meat	2.04	2.20	1.72	2.52
11	Tea	0.84	2.78	4.93	2.41
12	Vegetable Ghee	1.03	3.20	2.72	2.33
13	Readymade Garments	1.32	0.22	2.44	1.81
14	Appliances/Articles/Products For	2.98	1.04	0.97	1.71
15	Milk Fresh	7.11	0.10	0.41	1.68
Total		52.03			105.66
Bottom 15 Contributors					
1	Sugar	1.11	3.04	-7.72	-6.00
2	Condiments And Spices	1.33	0.10	-3.85	-4.46
3	Onions	0.59	32.49	-12.70	-4.26
4	Wheat Flour	3.01	9.69	-1.44	-2.83
5	Eggs	0.51	14.43	-5.94	-2.49
6	Pulse Moong	0.17	-4.02	-6.14	-0.48
7	Pulse Gram	0.17	4.33	-2.30	-0.19
8	Pulse Mash	0.12	3.81	-2.12	-0.11
9	Besan	0.08	2.37	-0.24	-0.01
10	Pulse Masoor	0.16	15.70	-0.01	0.00
11	Newspapers	0.07	0.00	0.00	0.00
12	Communication Services	1.88	0.00	0.00	0.00
13	Postal Services	0.02	0.00	0.00	0.00
14	Motor Vehicle Tax	0.05	0.00	0.00	0.00
15	Gas Charges	1.08	0.00	0.00	0.00
Total		10.35			-20.83

Table A8: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Chicken	1.36	42.04	17.91	15.09
2	Fresh vegetables	1.53	3.95	15.26	14.70
3	Readymade food	5.52	1.77	1.24	4.08
4	Potatoes	0.45	-2.62	10.05	3.64
5	Wheat	0.61	7.31	7.25	2.95
6	Meat	2.04	2.20	1.72	2.52
7	Tea	0.84	2.78	4.93	2.41
8	Vegetable ghee	1.03	3.20	2.72	2.33
9	Milk fresh	7.11	0.10	0.41	1.68
10	Cooking oil	1.10	3.64	1.77	1.55
11	Sweetmeat	0.35	0.34	4.92	1.10
12	Fresh fruits	1.44	0.59	1.10	0.77
13	Rice	1.18	0.06	0.88	0.61
14	Fish	0.39	0.37	2.22	0.39
15	Bakery and confectionary	0.48	0.85	1.09	0.31
Total		25.44			54.14
Bottom 15 Contributors					
1	Sugar	1.11	3.04	-7.72	-6.00
2	Condiments and Spices	1.33	0.10	-3.85	-4.46
3	Onions	0.59	32.49	-12.70	-4.26
4	Wheat flour	3.01	9.69	-1.44	-2.83
5	Eggs	0.51	14.43	-5.94	-2.49
6	Pulse moong	0.17	-4.02	-6.14	-0.48
7	Pulse gram	0.17	4.33	-2.30	-0.19
8	Pulse mash	0.12	3.81	-2.12	-0.11
9	Besan	0.08	2.37	-0.24	-0.01
10	Pulse masoor	0.16	15.70	-0.01	0.00
11	Cigarettes	0.72	0.00	0.00	0.00
12	Dessert preparation	0.04	0.05	0.01	0.00
13	Ice cream	0.10	0.07	0.15	0.01
14	Butter	0.09	0.31	0.54	0.04
15	Mustard oil	0.01	4.56	4.68	0.04
Total		8.22			-20.73

Table A9: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Motor fuel	2.91	1.67	8.65	17.37
2	House rent	19.26	0.00	1.42	15.39
3	Electricity charges	4.56	11.40	5.48	14.71
4	Liquefied Hydrocarbons	0.51	-7.22	13.20	5.27
5	Readymade garments	1.32	0.22	2.44	1.81
6	Appliances/Articles/Products for	2.98	1.04	0.97	1.71
7	Transport services	1.75	2.42	1.87	1.68
8	Personal Effects n.e.c.	0.94	2.54	1.43	1.09
9	stationery	0.35	0.24	5.78	1.09
10	Drugs and medicines	1.07	0.34	1.18	0.80
11	Washing soap/detergents/match	1.41	1.38	0.91	0.77
12	Motor vehicles	0.81	0.09	1.05	0.52
13	Construction wage rates	0.20	0.08	3.71	0.48
14	Education	4.88	0.03	0.15	0.45
15	Household equipments	1.00	0.76	0.70	0.42
Total		43.95			63.55
Bottom 15 Contributors					
1	Newspapers	0.07	0.00	0.00	0.00
2	Communication Services	1.88	0.00	0.00	0.00
3	Postal services	0.02	0.00	0.00	0.00
4	Motor vehicle tax	0.05	0.00	0.00	0.00
5	Gas charges	1.08	0.00	0.00	0.00
6	Tailoring	1.07	0.00	0.00	0.00
7	Water supply	0.53	0.00	0.00	0.00
8	Footware	1.48	0.02	0.00	0.00
9	Garbage collection	0.11	0.93	0.00	0.00
10	Therapeutic Appliances and	0.01	0.09	0.10	0.00
11	Carpets	0.03	0.20	0.04	0.00
12	Dental services	0.02	0.00	0.10	0.00
13	Major tools & equipments	0.01	0.00	0.45	0.00
14	Dopatta	0.17	0.06	0.03	0.00
15	Accommodation Services	0.13	3.87	0.05	0.00
Total		6.65			0.01

Table A10: Top Ten Contributors to Rural CPI Inflation (YoY) in October 2021

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Oct-20	Oct-21		
A. Ranked by Weighted Contribution					
1	Vegetable Ghee	2.38	17.30	43.37	13.34
2	Electricity Charges	3.44	-7.77	32.14	10.48
3	Milk Fresh	10.38	7.68	8.59	9.43
4	Motor Fuels	2.49	-7.22	26.30	7.69
5	House Rent	8.61	5.20	6.64	6.16
6	Chicken	1.46	15.63	37.93	6.16
7	Liquefied Hydrocarbons	1.00	-10.84	54.75	5.36
8	Wheat Flour	3.43	29.43	13.06	5.34
9	Readymade Food	3.80	14.00	10.18	4.61
10	Solid Fuel	4.48	12.31	8.77	4.19
Total		41.47			72.76
B. Ranked by Percentage Change					
1	Liquefied Hydrocarbons	1.00	-10.84	54.75	5.36
2	Cooking Oil	0.60	14.08	46.56	3.49
3	Mustard Oil	0.01	12.12	44.86	0.07
4	Vegetable Ghee	2.38	17.30	43.37	13.34
5	Chicken	1.46	15.63	37.93	6.16
6	Electricity Charges	3.44	-7.77	32.14	10.48
7	Motor Fuels	2.49	-7.22	26.30	7.69
8	Gram Whole	0.11	-0.67	18.23	0.19
9	Meat	1.71	10.99	16.33	3.50
10	Pulse Masoor	0.21	30.50	16.30	0.31
Total		13.41			50.59
C. Ranked by Weights					
1	Milk Fresh	10.38	7.68	8.59	9.43
2	House Rent	8.61	5.20	6.64	6.16
3	Solid Fuel	4.48	12.31	8.77	4.19
4	Readymade Food	3.80	14.00	10.18	4.61
5	Wheat	3.47	51.11	2.93	1.38
6	Electricity Charges	3.44	-7.77	32.14	10.48
7	Wheat Flour	3.43	29.43	13.06	5.34
8	Cotton Cloth	2.84	13.59	8.04	2.91
9	Motor Fuels	2.49	-7.22	26.30	7.69
10	Vegetable Ghee	2.38	17.30	43.37	13.34
Total		45.32			65.53

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in YoY change in Rural CPI, which is 8.7 percent in October 2021.

Table A11: Top Ten Contributors to Rural CPI Inflation (MoM) in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Fresh Vegetables	2.09	6.07	25.09	23.20
2	Motor Fuels	2.49	1.16	8.99	11.05
3	Chicken	1.46	47.95	13.72	9.79
4	Wheat	3.47	7.01	5.16	8.66
5	Electricity Charges	3.44	11.40	5.48	8.12
6	Milk Fresh	10.38	0.00	1.80	7.64
7	Liquefied Hydrocarbons	1.00	-4.56	11.79	5.79
8	House Rent	8.61	0.00	1.33	4.70
9	Potatoes	0.74	-5.65	9.08	4.39
10	Readymade Food	3.80	0.96	2.04	3.62
Total		37.48			86.96
B. Ranked by Percentage Change					
1	Fresh Vegetables	2.09	6.07	25.09	23.20
2	Chicken	1.46	47.95	13.72	9.79
3	Liquefied Hydrocarbons	1.00	-4.56	11.79	5.79
4	Potatoes	0.74	-5.65	9.08	4.39
5	Motor Fuels	2.49	1.16	8.99	11.05
6	Mustard Oil	0.01	2.17	8.11	0.06
7	Electricity Charges	3.44	11.40	5.48	8.12
8	Wheat	3.47	7.01	5.16	8.66
9	Honey	0.03	0.00	4.93	0.06
10	Cleaning And Laundering	0.02	0.12	4.34	0.03
Total		14.75			71.15
C. Ranked by Weights					
1	Milk Fresh	10.38	0.00	1.80	7.64
2	House Rent	8.61	0.00	1.33	4.70
3	Solid Fuel	4.48	0.02	0.77	1.44
4	Readymade Food	3.80	0.96	2.04	3.62
5	Wheat	3.47	7.01	5.16	8.66
6	Electricity Charges	3.44	11.40	5.48	8.12
7	Wheat Flour	3.43	9.40	0.94	1.57
8	Cotton Cloth	2.84	0.56	0.18	0.26
9	Motor Fuels	2.49	1.16	8.99	11.05
10	Vegetable Ghee	2.38	3.26	2.20	3.44
Total		45.32			50.50

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Rural CPI, which is 2.2 percent in October 2021.

Table A12: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY) in October 2021

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		Oct-20	Oct-21		
A. Ranked by Weighted Contribution					
1	Vegetable Ghee	2.38	17.30	43.37	13.34
2	Electricity Charges	3.44	-7.77	32.14	10.48
3	Milk Fresh	10.38	7.68	8.59	9.43
4	Motor Fuels	2.49	-7.22	26.30	7.69
5	House Rent	8.61	5.20	6.64	6.16
6	Chicken	1.46	15.63	37.93	6.16
7	Liquefied Hydrocarbons	1.00	-10.84	54.75	5.36
8	Wheat Flour	3.43	29.43	13.06	5.34
9	Readymade Food	3.80	14.00	10.18	4.61
10	Solid Fuel	4.48	12.31	8.77	4.19
11	Meat	1.71	10.99	16.33	3.50
12	Cooking Oil	0.60	14.08	46.56	3.49
13	Cotton Cloth	2.84	13.59	8.04	2.91
14	Personal Grooming Services	1.54	12.59	12.64	2.35
15	Appliances/Articles/Products	2.27	9.17	8.83	2.05
Total		50.43			87.06
Bottom 15 Contributors					
1	Tomatoes	0.51	104.01	-54.61	-6.41
2	Onions	0.90	-2.56	-28.79	-3.49
3	Condiments And Spices	1.49	53.69	-14.09	-3.27
4	Potatoes	0.74	61.02	-18.15	-3.23
5	Pulse Moong	0.25	38.99	-27.04	-0.86
6	Transport Services	1.80	6.12	-0.98	-0.18
7	Motor Vehicle Tax	0.02	0.00	-5.56	-0.01
8	Postal Services	0.01	0.00	0.00	0.00
9	Accommodation Services	0.14	0.03	0.00	0.00
10	Newspapers	0.02	2.40	0.00	0.00
11	Garbage Collection	0.01	7.64	8.74	0.01
12	Dessert Preparation	0.01	10.40	7.34	0.01
13	Dental Services	0.02	12.13	6.05	0.01
14	Cleaning And Laundering	0.02	19.58	6.41	0.01
15	Pan Prepared	0.04	16.63	2.47	0.01
Total		5.98			-17.40

Table A13: Top and Bottom Fifteen Contributors to Rural CPI (MoM) Inflation in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Fresh Vegetables	2.09	6.07	25.09	23.20
2	Motor Fuels	2.49	1.16	8.99	11.05
3	Chicken	1.46	47.95	13.72	9.79
4	Wheat	3.47	7.01	5.16	8.66
5	Electricity Charges	3.44	11.40	5.48	8.12
6	Milk Fresh	10.38	0.00	1.80	7.64
7	Liquefied Hydrocarbons	1.00	-4.56	11.79	5.79
8	House Rent	8.61	0.00	1.33	4.70
9	Potatoes	0.74	-5.65	9.08	4.39
10	Readymade Food	3.80	0.96	2.04	3.62
11	Vegetable Ghee	2.38	3.26	2.20	3.44
12	Personal Grooming Services	1.54	0.23	3.28	2.41
13	Tea	1.26	1.29	3.50	1.80
14	Wheat Flour	3.43	9.40	0.94	1.57
15	Solid Fuel	4.48	0.02	0.77	1.44
Total		50.57			97.62
Bottom 15 Contributors					
1	Onions	0.90	39.56	-14.76	-5.42
2	Condiments And Spices	1.49	-2.09	-3.70	-2.78
3	Sugar	2.03	2.83	-2.59	-2.69
4	Tomatoes	0.51	-8.56	-10.24	-2.20
5	Fresh Fruits	1.45	-1.26	-1.30	-0.65
6	Eggs	0.57	11.82	-1.07	-0.34
7	Pulse Moong	0.25	-2.80	-1.91	-0.16
8	Pulse Masoor	0.21	18.45	-1.34	-0.11
9	Pulse Gram	0.28	5.39	-0.21	-0.02
10	Motor Vehicle Tax	0.02	0.00	0.00	0.00
11	Accommodation Services	0.14	0.00	0.00	0.00
12	Newspapers	0.02	0.00	0.00	0.00
13	Postal Services	0.01	0.00	0.00	0.00
14	Woolen Readymade Garments	0.54	0.00	0.00	0.00
15	Garbage Collection	0.01	0.00	0.00	0.00
Total		8.43			-14.37

Table A14: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Fresh Vegetables	2.09	6.07	25.09	23.20
2	Chicken	1.46	47.95	13.72	9.79
3	Wheat	3.47	7.01	5.16	8.66
4	Milk fresh	10.38	0.00	1.80	7.64
5	Potatoes	0.74	-5.65	9.08	4.39
6	Readymade Food	3.80	0.96	2.04	3.62
7	Vegetable ghee	2.38	3.26	2.20	3.44
8	Tea	1.26	1.29	3.50	1.80
9	Wheat Flour	3.43	9.40	0.94	1.57
10	Cooking oil	0.60	3.93	2.60	1.01
11	Milk products	0.96	0.00	2.18	0.84
12	Rice	1.55	0.22	0.85	0.73
13	Beverages	0.55	0.88	1.89	0.42
14	Meat	1.71	1.75	0.35	0.32
15	Fish	0.26	0.34	3.14	0.30
Total		34.67			67.72
Bottom 15 Contributors					
1	Onions	0.90	39.56	-14.76	-5.42
2	Condiments and Spices	1.49	-2.09	-3.70	-2.78
3	Sugar	2.03	2.83	-2.59	-2.69
4	Tomatoes	0.51	-8.56	-10.24	-2.20
5	Fresh fruits	1.45	-1.26	-1.30	-0.65
6	Eggs	0.57	11.82	-1.07	-0.34
7	Pulse Moong	0.25	-2.80	-1.91	-0.16
8	Pulse Masoor	0.21	18.45	-1.34	-0.11
9	Pulse Gram	0.28	5.39	-0.21	-0.02
10	Ice Cream	0.06	0.00	0.00	0.00
11	Dessert Preparation	0.01	0.46	0.00	0.00
12	Milk powder	0.11	0.68	0.00	0.00
13	Besan	0.07	4.47	0.09	0.00
14	Pan Prepared	0.04	0.00	0.93	0.02
15	Beans	0.09	-0.10	0.72	0.03
Total		8.06			-14.32

Table A15: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation in October 2021

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Sep-21	Oct-21		
A. Ranked by Weighted Contribution					
1	Motor Fuels	2.49	1.16	8.99	11.05
2	Electricity Charges	3.44	11.40	5.48	8.12
3	Liquefied Hydrocarbons	1.00	-4.56	11.79	5.79
4	House Rent	8.61	0.00	1.33	4.70
5	Personal Grooming Services	1.54	0.23	3.28	2.41
6	Solid Fuel	4.48	0.02	0.77	1.44
7	Marriage Hall Charges	2.25	0.00	1.66	1.41
8	Personal Effects n.e.c.	1.21	2.44	1.82	1.23
9	Washing Soaps, Detergents and	1.70	0.86	1.22	0.87
10	Transport Services	1.80	1.50	1.11	0.74
11	Appliances/Articles/Products for	2.27	1.27	0.78	0.71
12	Motor Vehicles	0.73	0.07	2.23	0.65
13	Readymade Garments	1.13	0.24	1.24	0.60
14	Drugs and Medicines	1.58	0.15	0.79	0.57
15	Construction Input Items	0.63	0.74	2.16	0.55
Total		34.86			40.82
Bottom 15 Contributors					
1	Accommodation Services	0.14	0.00	0.00	0.00
2	Newspapers	0.02	0.00	0.00	0.00
3	Communication Services	1.65	0.00	0.00	0.00
4	Postal Services	0.01	0.00	0.00	0.00
5	Motor Vehicle Tax	0.02	0.00	0.00	0.00
6	Garbage Collection	0.01	0.00	0.00	0.00
7	Water Supply	0.06	0.00	0.00	0.00
8	Woolen Readymade Garments	0.54	0.00	0.00	0.00
9	Stationery	0.37	0.16	0.00	0.00
10	Major Tools and Equipments	0.03	0.00	0.09	0.00
11	Dental Services	0.02	0.00	1.28	0.01
12	Plastic Products	0.08	0.14	0.70	0.03
13	Medical Tests	0.40	0.00	0.17	0.03
14	Cleaning and Laundering	0.02	0.12	4.34	0.03
15	Dopatta	0.21	0.08	0.57	0.05
Total		3.57			0.15

Table A16: Distribution of Price Changes (YoY) - Selected Urban CPI Items: October 2021				
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-Beverages	Peas (Matar), Carrot (Gajar), Tomatoes, Pulse Moong (Washed), Onions, Ginger (Adrak), Potatoes, Chilies (Green), Spinach (Paalak), Cardamom Small (Average Quality), Lemon, Cucumber	Cumin Seed (Zeera) White National 50 Gm Packet, Salt Powdered (National/Shan) 800 Gm Packet, Mineral Water Nestle 1.5 Liter, Sugar Refined, Fruit Juice Small Packet 250 ml	Powdered Milk Nido 390 Gm Polybag, Bananas (Kela) Local, Wheat Flour (Fine/Superior Quality), Turmeric Powder National 50 Gm Packet, Custard Powder	Nimko (Loose, Average Quality), Vermicelli (Packet), Sweetmeat (Mixed Mithai), Beans Red/White (Lobia), Jam-E-Shireen Standard Size (800 ml), Wheat Flour (Average Quality), Butter Local
Alcoholic Beverages & Tobacco	Cigarettes Capstan 20'S Packet,	Cigarettes Gold Leaf 20'S Packet,		Pan Prepared (Sweet With Beetle Nuts),
Clothing & Footwear	Gents Sandal Bata, Ladies Sandal Bata, Cheetah 50 Size 3-5 Servis,	Chaddar (Wash-N-Wear) (2X2.5 Meter), Women Shalwar Kameez (Average Quality), Georgette (Average Quality), Dopatta Georgette (Average Quality), Washing Charges Shalwar Kameez, Shoe Repair Full Sole, Washing Charges Pant And Shirt Both, Full Pant Boy Length	Pant Cloth Wash & Wear (Average Quality), Vest "Baniyan" For Men Average Quality, Lawn Printed Gul Ahmed/Al Karam, Tailoring Charges Awami Suit (Male), Tailoring Charges Pant (Men), Gents Shoes Servis, Underwear Medium	Awami Suit Gents Wash & Wear (Average Quality), Socks Nylon Local (Average Quality), Ladies Sponge Chappal Bata, Long Cloth 57" Gul Ahmed/Al Karam, Brassier (Average Quality), Pullover Ladies Oxford/Bonanza, School Uniform Boys (Pant & Shirt) 24"/26", Shirting (Average)
Housing, Water, Elect. Gas & other Fuels	Gas Charges Upto 3.3719 Mmbtu, Gas Charges 3.3719 - 6.7438 Mmbtu, Gas Charges 6.7438 - 10.1157 Mmbtu, Gas Charges 10.1157 - 13.4876 Mmbtu, Gas Charges Above 13.4876 Mmbtu, Gas Charges Combined,	Cement Blocks (6"X8"X12"), Sand (Black Pit), Water Charges Per House, Bricks New 1st Class, Charges For Refuse/Waste Collection,	Synthetic Enamel Ici Balti 3.64 Litre, Firewood Whole, Painter Wage Rate, House Rent Combined, Mason Wage Rate, Electrician Charges, Unskilled Labor Wage Rate, Plumber Wage Rate,	Bajri, Cement (Local) 50 Kg Bag, Electricity Charges Above 700 Units, Electricity Charges 301-700 Units, Electricity Charges 101-300 Units, Electricity Charges Combined, Electricity Charges 51-100 Units, Iron Bars (M.S. Bar) 1/2 " 40 Grade, Electricity Charges Upto 50
Furnishing & Household Equip. Maintenance etc		Tube Light Philips 40 Watt, Energy Saver Philips 14 Watt, Plain Carpet, Household Servant Female Part Time, Phenyl Tyfon/Finis 2.75 Litre Bottle, Blanket Single (Sn), Cleanser Powder Vim 900 Gm Polybag, Dining Table Wit Glass Top And Six Chairs (Average)	Bed Sheet Double With Two Pillow Covers (Superior Quality), Chair Plastic (Chairman) (Average Quality), Refrigerator Dawlance/Pel 10 Cubic Feet Double Door, Bed Sheet Single (Superior Quality), Cot Iron (Charpai), Readymade Quilt	Lota Plastic Medium Size (Average Quality), Electric Iron Dry (National/West Point), Bucket (Balti) Plastic Medium Size, Tea Set Pakistani (China-Ware) Set Of 21 Pieces, Chair Sheesham Wood With Arm, Steel Almirah, Sofa Set Five Seater, Ceiling Fan 56" Pak/Younas/Millat, Match Box,
Health		Hydriyllin Syrup 120 ml Bottle, Glaxose-D 400 Gm Packet, Glucometer, Sugar Test (Random/Fasting) Charges Of Both, Flagyl Tablets 400 Mg, X-Ray (Chest) Charges, Physiotherapist Fee Per Visit	Urine Test (Dr) Charges, Ventolin Tablets 2 Mg, Amoxil Capsule 250 Mg, Entox Tablets, Doctor (Mbbs) Clinic Fee, Calpol Syrup 100 ml Bottle, Dental Extraction Fee	Dettol Medium Bottle, Inderal Tablets 10 Mg, Cost Of Surgery (C-Section), Panadol Tablets Plain, Lederplex Syrup Bottle, Johar Joshanda Instant (Sachet) Packet, Septran Tablets,
Transport	Air Fare Economy Class Per Kilometer (National Average), Car Suzuki 1000 Cc, Train Fare Economy Per Person, Train Fare Ac Sleeper Per Person, Train Fare Ac Lower Per Person, Train Fare Business Class Per Person, Bus Fare	Car Toyota 1300 Cc Xli, Mini Bus Fare Minimum Within City, Mini Bus Fare Maximum Within City, Bus Fare Minimum Within City, Car Service Charges, Car Honda Civic Turbo 1.5 Vtec, Motorcycle Service Charges, Taxi	Car Tax 800 Cc To 1500 Cc, Tire Motorcycle Cd 70 (Back Wheel), Bus Fare Maximum Within City, Suzuki Fare Minimum Within City,	Auto Rickshaw Fare, Tire Car Puncture Charges, Suzuki Fare Maximum Within City, Tire Car Mehran Tubeless (General), Mobil Oil (Havoline 20W-50), Motorcycle United/Unique 70 Cc, Motorcycle Honda Cd 70, Bicycle, Hi-Speed Diesel, Petrol
Communication	Mobile Call Charges,	Internet Charges (Dsl) 1 Mb (Unlimited),	Mobile Set With Rear Camera And Without Touch Screen,	Courier Charges Minimum Within Zone Outside City (Tcs), Telephone Call Charges,
Recreation & Culture	Newspaper Daily Dawn, Newspaper Daily Jang, Akhbar-E-Jehan Weekly, Mag The Weekly (Magazine),	Cable Charges, Mathematics Book Class Ix And X (Text Book Board), English Book Ba/B.Sc, Ballpoint Pen Local, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Urdu Book Ba/B.Sc, Lead Pencil Goldfish,	Recreational Park Charges (Minimum Playland Ticket), English Book Class Vi, Led Sony/Samsung 32" Colored, Laptop Dell/Hp/Acer Core I5, Display (14"-15"), Urdu Book Class Ix And X (Text Book	Exercise Book (With Lines) 80 To 100 Pages, Mathematics Book Class Xi (Text Book Board), Mathematics Book Class V (Text Book Board), Pen Ink Dollar 57 ml Bottle, English Book Class Xi Complete Set, Photostat Paper 70 Gm, English Book
Education	Government University Fee M.S.C / M.A., Government Medical College/University Tuition Fee For Mbbs (1st Year), Private Engineering University Tuition Fee For Be (1st	Coaching Fee For Class Ix/X Science Group, Coaching Fee For Class Xi/Xii Science Group, Private College Fee First Year, Vocational Training Basic Computer Short Course Fee (3 Months),	Private Medical College/University Tuition Fee For Mbbs (1st Year),	
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student,	Marriage Hall Service Charges With Food (Average Meal), Marriage Hall Charges With Furniture,	Pizza Chicken Medium Size (Average Quality), Chicken Biryani Full/Double, Cooked Daal At Average Hotel, Cooked Chicken At	Bread Tandoori Standard Size, Burger With Shami Kabab (Average Quality), Chicken Roast (Full) (Average Quality), Seekh Kabab (Beef) (Average Quality), Tea
Miscellaneous	Gold Tezabi 24 Caratt,	Hair Style Charges (At Average Beauty Parlor), Electric Hair Straightener (Philips), Purse Ladies Medium Size (Average Quality), Wall Clock Quartz	Hair Color (Kala Kola), Suitcase Ragzine (24"X16"X6") (Average Quality), Hair Cut Charges For Men, Toilet Soap Lux 75 Gm, Shaving	Shampoo Sun Silk/Pantene 90 ml Bottle, Lipstick Swiss Miss/Medora (Medium), Trunk Medium Size (Average Quality), Hair Removing Cream (Eu-Cream) 30ml

Table A17: Distribution of Price Changes (YoY) - Selected Rural CPI Items: October 2021

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	Mango Kalmi (Average Quality), Watermelon (Turbooz), Muskmelon (Kharbuza), Peas (Matar), Carrot (Gajar), Tomatoes, Arvi, Onions, Ginger (Adrak), Pulse Moong (Washed), Chilies Powder Loose,	Rice Basmati 385/386, Guava (Amrood) (Average Quality), Suji, Radish (Mooli), Salt Powder Loose, Wheat, Grapes (Angoor) (Average Quality), Lady Finger (Bhindi), Fruit Juice Small Packet 250 Ml, Pulse	Almonds (Badam) Kaghazi With Shell (Average Quality), Cold Drink (Pepsi/Coca-Cola) 1.5 Liter Bottle, Pulse Gram, Sugar Refined, Besan, Rusk (Papay) (Average Quality), Turai,	Wheat Flour (Average Quality), Samosa (Vegetable, Average Quality), Nimko (Loose, Average Quality), Bread Plain (Medium Size), Groundnuts (Moong Phali) With Shell, Desi Ghee, Biscuit Bakery (Loose,
Alcoholic Beverages & Tobacco		Cigarettes Capstan 20'S Packet, Cigarettes Gold Leaf 20'S Packet, Pan Prepared (Sweet With Beetle	Chewing Tobacco (Niswar),	
Clothing & Footwear		School Uniform Girls (Kameez & Shalwar) 24"/26", Footware Ladies Local (Average Quality), Footware Gents Local (Average Quality), Dopatta Georgette (Average Quality),	Chaddar (Wash-N-Wear) (2X2.5 Meter), School Uniform Boys (Pant & Shirt) 24"/26", Long Cloth, Washing Charges Shalwar Kameez, Footware Children Local (Average Quality), Socks	Pullover Ladies (Average Quality), Tailoring Charges Simple Suit (Female), Underwear Medium Size (Average Quality), Georgette (Average Quality), Full Pant Boy Length 24"/26", Linen, Ladies (Average
Housing, Water, Elect, Gas & other Fuels		Water Charges Per House,	Mason Wage Rate, Bricks New 1St Class, Sand (Black Pit), Painter Wage Rate, Carpenter Wage Rate, House Rent	Electricity Charges Above 1000 Units, Kerosene Oil, Electricity Charges 301-1000 Units, Electricity Charges Combined, Electricity Charges 101-300
Furnishing & Household Equip. Maintenance etc.		Cleanser Powder Vim 900 Gm Polybag, Towel Medium Size (2' X 3'), Energy Saver Philips 14 Watt, Water Cooler 9/10 Litre Plastic	Blanket Single (Sn), Lota Plastic Medium Size (Average Quality), Water Set (Omroc) 6 Glass, Tube Light Philips 40 Watt,	Dinner Set Plastic 72 Pieces Super Quality, Washing Machine With Spinner (Super Asia Or Similar Brand) (Sn), Ceiling Fan 56"
Health	Hydrillin Syrup 120 Ml Bottle,	Blood Test (Cp) Charges, Daonil Tablets 5 Mg,	Cost Of Surgery (C-Section), Dental Surgeon Fee Per Visit, Amoxil Capsule 250 Mg, Physiotherapist Fee Per Visit	Inderal Tablets 10 Mg, Doctor (Mbbs) Clinic Fee, Johar Joshanda Instant (Sachet) Packet,
Transport	Air Fare Economy Class Per Kilometer, Car Tax 800 Cc To 1500 Cc, Car Suzuki 800 Cc Without Ac, Train Fare Economy Per Person, Bus Fare Outside City (Non Ac),	Tire Cycle, Chingchi Rickshaw Charges, Minimum, Motorcycle Service Charges,	Tire Motorcycle Cd 70 (Back Wheel),	Mobil Oil (Havoline 20W-50), Tire Car Mehran Tubeless (General), Bicycle, Motorcycle Honda Cd 70, Hi-Speed Diesel, Petrol Super, Cng,
Communication	Postal Registration Charges, Mobile Call Charges,	Mobile Set With Rear Camera And Without Touch Screen, Internet Charges (Dsl) 1 Mb (Unlimited),		Telephone Call Charges,
Recreation & Culture	Newspaper Daily Jang,	Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Urdu Books Class Ix And X (Text Book Board), English Books Class Vi, Led Sony/Samsung 32" Colored, Cable Charges, English	Ballpoint Pen Local, Exercise Book (With Lines) 80 To 100 Pages, Lead Pencil Goldfish,	English Books Class Ix And X, Pets Feed, Urdu Books Class V (Text Book Board),
Education		Vocational Training Basic Computer Short Course Fee (3 Months) , Coaching Fee For Class Ix/X Science Group, Private School Fee		
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student,	Pizza Chicken Medium Size (Average Quality), Marriage Hall Service Charges With Food (Average	Burger With Shami Kabab (Average Quality), Cooked Daal At Average Hotel, Marriage Hall	Tea Prepared Ordinary, Cooked Chicken At Average Hotel, Cooked Beef At Average Hotel,
Miscellaneous		Gold Tezabi 24 Carett, Shaving Cream (Touchme Large/Admiral), Blade Treet Ordinary (10 No. Packet), Artificial Jewelry (Locket	Tooth Brush (Shield), Toilet Soap Lux 75 Gm, Hair Color (Kala Kola), Tooth Paste Colgate 75 Gm, Trunk Medium	Hair Removing Cream (Eu-Cream) 30Ml Tube, Disposable Razor Gillette Blue Ii, Shampoo Sun Silk/Pantene 90 Ml Bottle, Talcum Powder

Table A18: Distribution of Price Changes (YoY) - WPI Items: September 2021

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 & Fishery Products	Edible Roots / Potatoes, Stimulant & Spice Crops, Vegetables, Sorghum / Jowar,	Fish Live Fresh or Chilled, Raw Animal Materials / Wool, Wheat, Cotton Seeds,	Fuel Wood in Logs, Sugar Crops, Dry Fruits, Rice, Raw Milk from Bovine Animals, Fresh Fruits,	Pulses, Unmanufactured Tobacco, Maize, Poultry, Other Oil Seeds, Fiber Crops, Millet / Bajra,
Ores & Minerals, Electricity Gas & Water	Coal not Agglomerated,	Salt & Pure Sodium Chloride, Natural Gas Liquified,		Electrical Energy,
Food Products, Beverages and Tobacco, Textiles, Apparel and Leather Products	Tobacco Products, Nylon Yarn, Woolen Carpets,	Blankets, Footwears, Synthetic Carpets, Other Food Products, Other Leather N.E.C, Beverages, Dairy Products N.E.C, Fruit Juices, Leather Without Hair, Milk & Cream in Solid Form,	Readymade Garments, Bed Sheets, Ice Cream, Other Cereal Flour, Sugar Confectionary, Vegetables & Fruit Juice, Dried Fruits & Nuts,	Quilts, Other Fabrics, Towels, Hosiery Products, Cotton Fabrics, Woven Fabrics, Blended Yarn, Meat of Animals,
Other Transportable Goods except Metal Products, Machinery and Equipments	Printing Paper, Hard Board, Dyeing Material, Insecticides,	Other Glass Articles, Plastic Products, Matches, Timber, Ceramics & Sanitary Fixture, Pesticides,	Bricks, Blocks & Tiles, Glass sheets,	Mobil Oil, Cement, Motor Spirit, Chemicals, Diesel Oil, Fertilizers, Kerosene Oil, Furnace Oil,
Metal Product Machinery & Equipment	Engines & Motors, Vacuum Pumps, Cultivators, Concrete Mixture,	Motor Vehicles, Steel Products, Radio & Television, Tractors, Air Conditioners,	Fridge, WashM, SewM, Fans, Iron,	Lighting Equipments, Motorcycles, Bicycles, Lathe Machines, Chuff Cutter, Pipe Fittings, Steel Bar & Sheets,

Table A19: International Commodity Prices/Indices

Commodity/Indices	Jun-21	Oct-20	Sep-21	Oct-21
Energy				
Crude Oil (US\$ per barrel)*	71.8	39.9	72.8	82.1
Energy Index (2010 = 100)	93.1	51.5	105.8	122.9
Food				
Rice (\$/MT)	466.0	471.0	400.0	401.0
Wheat (\$/MT)##	263.5	245.2	263.6	..
Sugar (US cent/ pound)^	17.4	13.7	19.6	19.2
Palm Oil (\$/MT)	1,004.4	819.3	1,181.4	1,306.9
Soybean Oil (\$/MT)	1,518.2	914.8	1,398.8	1,483.3
Non-Food Non-Energy				
Cotton Outlook 'A' Index #^	94.5	74.8	103.7	117.4
Metal Price Index (2010 = 100)	119.0	86.3	124.1	130.0
Copper (\$/MT)	9,631.5	6,713.8	9,324.7	9,829.2
Aluminum (\$/MT)	2,446.7	1,806.1	2,834.6	2,934.4
Iron Ore (\$ cents/dry MT)	214.4	119.8	124.5	122.9
Tin (\$/MT)	32,502.6	18,176.6	34,887.3	37,722.9
Nickel (\$/MT)	17,979.6	15,239.4	19,376.9	19,362.4
Zinc (\$/MT)	2,951.9	2,440.7	3,036.0	3,359.9
Lead (\$/MT)	2,191.0	1,776.3	2,248.3	2,344.8
Uranium (\$/MT)@	32.3	29.7	42.6	45.2
DAP (\$/MT)	604.8	357.1	643.8	672.9
Urea (\$/MT)	393.3	245.0	418.8	612.5

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

^ The measurement unit for sugar and Cotton is US cent/ pound in IMF data source, whereas it is US dollar / kg in World bank dataset. The result of two datasets can be reconciled using conversion formula: 1US \$ / kilogram = \$/MT = US\$ per metric tonne.

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

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

Wheat, US HRW (Hard Red Winter) is not being reported by World Bank. Hence, it has been replaced with Wheat, US SRW (Soft Red Winter).

DAP: Diammonium Phosphate

Table A20: National CPI Data Series Original and Seasonally Adjusted

Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	107.15	114.29	123.86	135.38	146.76
Aug	107.31	113.93	125.89	136.23	147.61
Sep	108.05	113.90	126.86	138.32	150.74
Oct	109.22	116.32	129.16	140.67	153.60
Nov	109.95	116.18	130.90	141.83	
Dec	109.92	115.82	130.45	140.86	
Jan	110.01	116.12	133.04	140.56	
Feb	109.72	117.12	131.64	143.09	
Mar	109.96	119.46	131.69	143.61	
Apr	111.15	120.33	130.59	145.09	
May	111.65	121.05	131.01	145.24	
Jun	112.58	121.63	132.08	144.82	
Seasonally Adjusted Series					
Jul	106.93	114.10	123.72	135.27	146.68
Aug	107.14	113.83	125.86	136.27	147.72
Sep	107.59	113.46	126.39	137.83	150.22
Oct	108.10	115.07	127.72	139.04	151.76
Nov	108.86	114.98	129.49	140.25	
Dec	109.93	115.79	130.38	140.74	
Jan	110.12	116.23	133.14	140.65	
Feb	110.41	117.79	132.33	143.77	
Mar	110.62	120.15	132.41	144.36	
Apr	111.29	120.50	130.80	145.36	
May	112.34	121.82	131.85	146.19	
Jun	113.40	122.58	133.18	146.13	

Table A21: Urban CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	107.7	114.9	125.0	134.7	146.4
Aug	107.9	114.6	126.8	135.8	147.1
Sep	108.4	114.5	127.7	137.5	150.1
Oct	109.3	117.0	129.8	139.3	152.6
Nov	110.0	116.9	131.1	140.2	
Dec	110.1	116.6	130.6	139.7	
Jan	110.3	117.1	132.8	139.5	
Feb	110.1	118.1	131.3	142.6	
Mar	110.4	120.3	131.5	143.0	
Apr	111.9	121.3	130.6	144.9	
May	112.5	122.1	131.0	145.2	
Jun	113.3	122.5	131.9	144.5	
Seasonally Adjusted Series					
Jul	107.34	114.60	124.63	134.44	146.13
Aug	107.62	114.30	126.53	135.62	146.95
Sep	107.98	114.10	127.32	137.11	149.63
Oct	108.48	116.09	128.66	138.06	151.21
Nov	109.20	116.03	130.00	139.02	
Dec	110.37	116.85	130.87	139.98	
Jan	110.35	117.12	132.79	139.42	
Feb	110.76	118.69	131.91	143.18	
Mar	111.18	121.08	132.31	143.86	
Apr	111.92	121.28	130.60	144.93	
May	112.96	122.58	131.50	145.75	
Jun	114.01	123.31	132.82	145.66	

Table A22: Rural CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	106.3	113.3	122.2	136.4	147.3
Aug	106.4	113.0	124.6	136.8	148.3
Sep	107.5	113.0	125.6	139.5	151.7
Oct	109.1	115.2	128.3	142.8	155.2
Nov	109.8	115.0	130.7	144.3	
Dec	109.7	114.7	130.3	142.7	
Jan	109.6	114.7	133.4	142.2	
Feb	109.1	115.7	132.1	143.8	
Mar	109.3	118.2	132.0	144.6	
Apr	110.0	118.9	130.6	145.4	
May	110.3	119.5	131.0	145.3	
Jun	111.4	120.3	132.4	145.2	
Seasonally Adjusted Series					
Jul	106.32	113.36	122.34	136.53	147.50
Aug	106.43	113.12	124.84	137.25	148.87
Sep	107.01	112.49	125.01	138.92	151.10
Oct	107.52	113.54	126.31	140.52	152.60
Nov	108.35	113.39	128.72	142.11	
Dec	109.26	114.19	129.64	141.89	
Jan	109.78	114.89	133.67	142.51	
Feb	109.88	116.44	132.95	144.67	
Mar	109.78	118.74	132.55	145.11	
Apr	110.34	119.34	131.11	146.00	
May	111.42	120.66	132.39	146.85	
Jun	112.47	121.47	133.73	146.84	

Table A23: National CPI Monthly & Average Seasonal Factors						
Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	100.20	100.16	100.12	100.08	100.06	100.12
Aug	100.15	100.09	100.03	99.97	99.93	100.03
Sep	100.42	100.39	100.37	100.35	100.35	100.38
Oct	101.04	101.08	101.12	101.17	101.21	101.13
Nov	101.00	101.04	101.09	101.13		101.06
Dec	99.99	100.03	100.05	100.08		100.04
Jan	99.90	99.90	99.92	99.94		99.91
Feb	99.38	99.43	99.48	99.52		99.45
Mar	99.40	99.43	99.46	99.48		99.44
Apr	99.87	99.86	99.84	99.82		99.85
May	99.39	99.37	99.36	99.35		99.37
Jun	99.28	99.23	99.17	99.11		99.20

Table A24: Urban CPI Monthly & Average Seasonal Factors						
Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	100.34	100.30	100.26	100.22	100.19	100.26
Aug	100.29	100.24	100.19	100.15	100.11	100.20
Sep	100.37	100.34	100.32	100.30	100.30	100.33
Oct	100.80	100.82	100.85	100.87	100.90	100.85
Nov	100.76	100.78	100.81	100.82		100.79
Dec	99.73	99.76	99.77	99.78		99.76
Jan	99.93	99.95	99.98	100.02		99.97
Feb	99.43	99.49	99.55	99.60		99.52
Mar	99.32	99.35	99.38	99.40		99.36
Apr	100.02	100.01	100.00	99.99		100.00
May	99.62	99.61	99.61	99.62		99.62
Jun	99.41	99.36	99.30	99.23		99.33

Table A25: Rural CPI Monthly & Average Seasonal Factors						
Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	99.98	99.94	99.90	99.87	99.85	99.91
Aug	99.95	99.86	99.77	99.70	99.65	99.78
Sep	100.50	100.46	100.44	100.42	100.42	100.45
Oct	101.42	101.49	101.56	101.61	101.67	101.55
Nov	101.37	101.45	101.51	101.57		101.47
Dec	100.38	100.45	100.49	100.53		100.46
Jan	99.84	99.82	99.81	99.81		99.82
Feb	99.30	99.34	99.38	99.41		99.36
Mar	99.52	99.55	99.59	99.61		99.57
Apr	99.65	99.62	99.60	99.57		99.61
May	99.02	98.99	98.97	98.96		98.99
Jun	99.08	99.03	98.97	98.91		99.00

Table A26: National CPI (Month-on-Month) Original & Seasonally Adjusted

Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	0.57	1.51	1.83	2.50	1.34
Aug	0.15	-0.31	1.64	0.63	0.58
Sep	0.69	-0.03	0.77	1.53	2.12
Oct	1.09	2.12	1.81	1.70	1.90
Nov	0.66	-0.12	1.35	0.82	
Dec	-0.03	-0.31	-0.34	-0.68	
Jan	0.08	0.26	1.99	-0.21	
Feb	-0.26	0.86	-1.05	1.80	
Mar	0.22	2.00	0.04	0.36	
Apr	1.08	0.73	-0.84	1.03	
May	0.46	0.60	0.32	0.10	
Jun	0.83	0.48	0.82	-0.29	
Seasonally Adjusted Series					
Jul	-0.30	0.62	0.93	1.57	0.38
Aug	0.20	-0.24	1.73	0.74	0.71
Sep	0.42	-0.33	0.43	1.15	1.70
Oct	0.47	1.42	1.05	0.88	1.03
Nov	0.71	-0.08	1.38	0.87	
Dec	0.98	0.70	0.69	0.35	
Jan	0.17	0.38	2.12	-0.07	
Feb	0.26	1.34	-0.61	2.22	
Mar	0.20	2.00	0.06	0.40	
Apr	0.60	0.30	-1.21	0.69	
May	0.95	1.09	0.80	0.57	
Jun	0.94	0.62	1.01	-0.04	

Table A27: Urban CPI (Month-on-Month) Original & Seasonally Adjusted Series					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	0.59	1.41	1.98	2.15	1.29
Aug	0.20	-0.31	1.46	0.81	0.48
Sep	0.42	-0.08	0.75	1.26	2.01
Oct	0.89	2.23	1.59	1.27	1.66
Nov	0.63	-0.09	1.00	0.64	
Dec	0.05	-0.32	-0.37	-0.35	
Jan	0.18	0.43	1.68	-0.16	
Feb	-0.15	0.86	-1.09	2.27	
Mar	0.28	1.87	0.13	0.27	
Apr	1.37	0.83	-0.68	1.34	
May	0.53	0.68	0.30	0.19	
Jun	0.72	0.34	0.69	-0.45	
Seasonally Adjusted Series					
Jul	-0.29	0.51	1.07	1.22	0.33
Aug	0.26	-0.26	1.52	0.88	0.56
Sep	0.34	-0.18	0.62	1.10	1.83
Oct	0.46	1.74	1.06	0.69	1.05
Nov	0.67	-0.05	1.04	0.69	
Dec	1.07	0.70	0.67	0.69	
Jan	-0.02	0.24	1.47	-0.40	
Feb	0.36	1.34	-0.66	2.70	
Mar	0.39	2.01	0.30	0.47	
Apr	0.66	0.16	-1.30	0.75	
May	0.93	1.08	0.69	0.56	
Jun	0.94	0.59	1.00	-0.06	

Table A28: Rural CPI (Month-on-Month) Original & Seasonally Adjusted Series					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	0.54	1.67	1.60	3.02	1.40
Aug	0.07	-0.30	1.91	0.35	0.72
Sep	1.10	0.04	0.79	1.95	2.29
Oct	1.40	1.96	2.17	2.35	2.25
Nov	0.72	-0.17	1.86	1.09	
Dec	-0.14	-0.29	-0.30	-1.17	
Jan	-0.07	-0.02	2.43	-0.29	
Feb	-0.45	0.87	-0.98	1.12	
Mar	0.13	2.19	-0.10	0.51	
Apr	0.64	0.58	-1.08	0.57	
May	0.35	0.47	0.34	-0.03	
Jun	1.01	0.70	1.02	-0.06	
Seasonally Adjusted Series					
Jul	-0.31	0.79	0.71	2.09	0.45
Aug	0.10	-0.21	2.05	0.53	0.93
Sep	0.55	-0.56	0.13	1.22	1.50
Oct	0.48	0.93	1.05	1.15	0.99
Nov	0.77	-0.13	1.91	1.13	
Dec	0.85	0.70	0.71	-0.16	
Jan	0.47	0.61	3.11	0.43	
Feb	0.09	1.36	-0.54	1.52	
Mar	-0.09	1.97	-0.30	0.30	
Apr	0.51	0.50	-1.09	0.61	
May	0.98	1.11	0.98	0.58	
Jun	0.95	0.67	1.02	-0.01	

List of Figures

Figure A1: National CPI Non-food Inflation (YoY, 12MMA, MoM in percent)

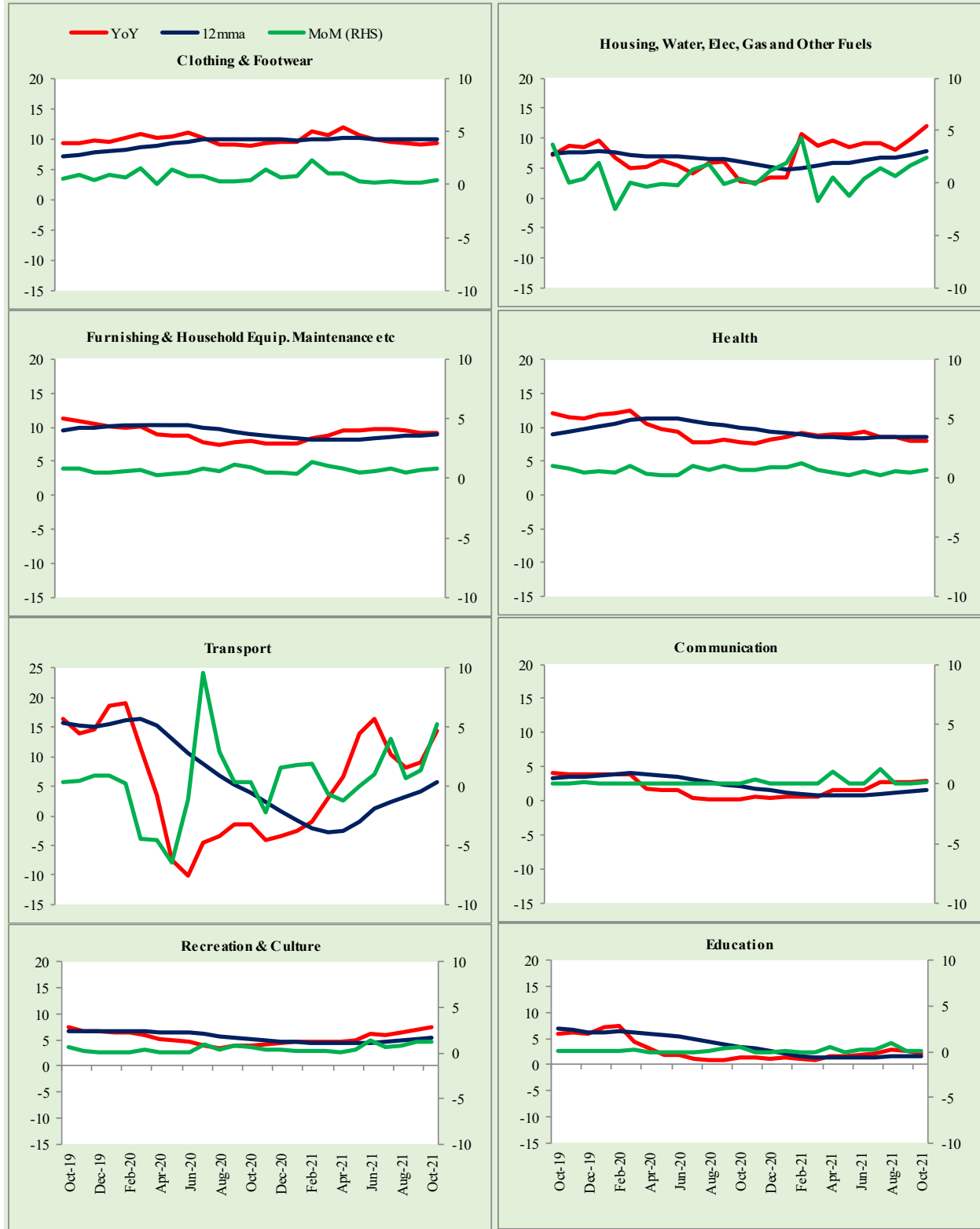


Figure A2: Urban CPI Non-food Inflation (YoY, 12MMA, MoM in percent)

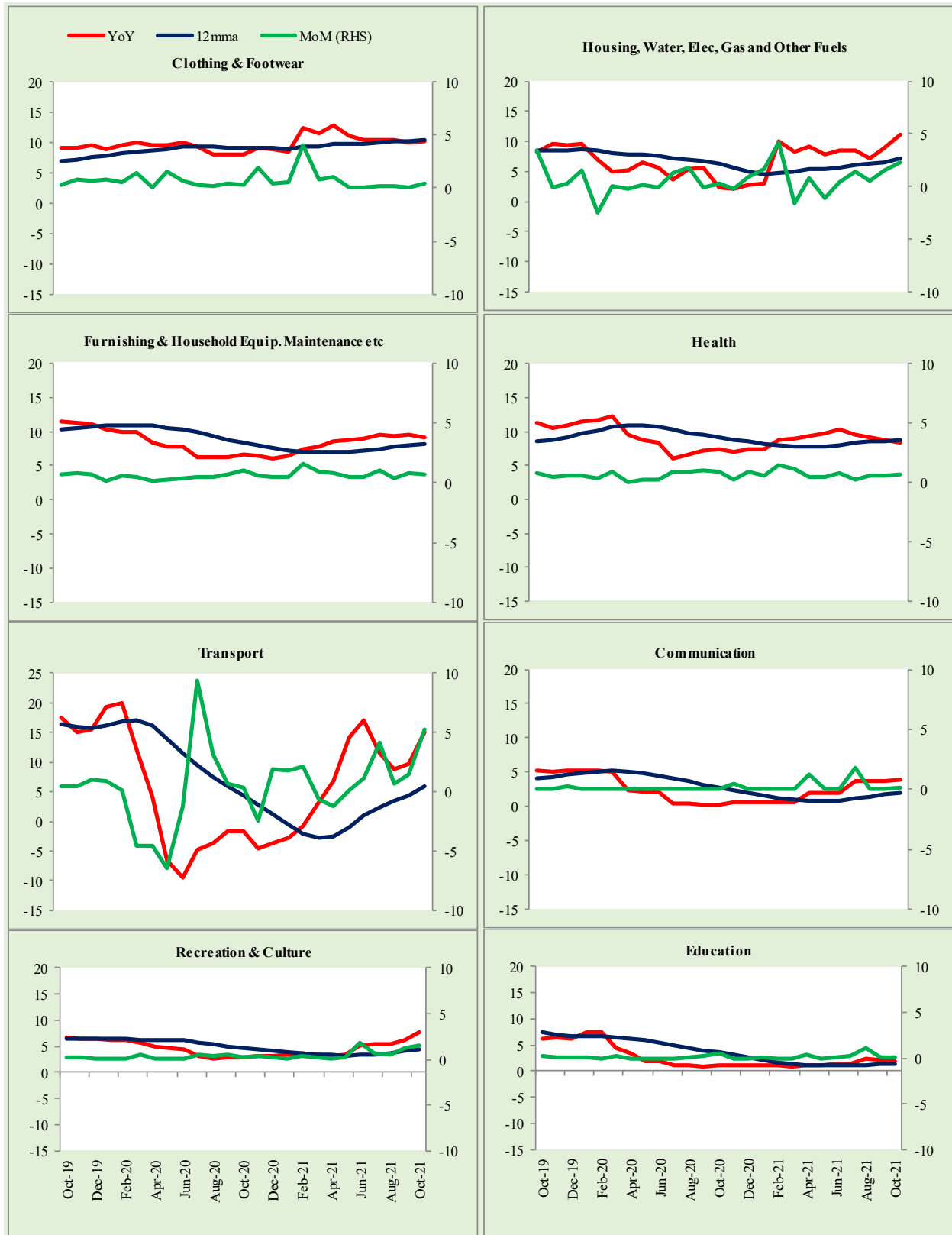
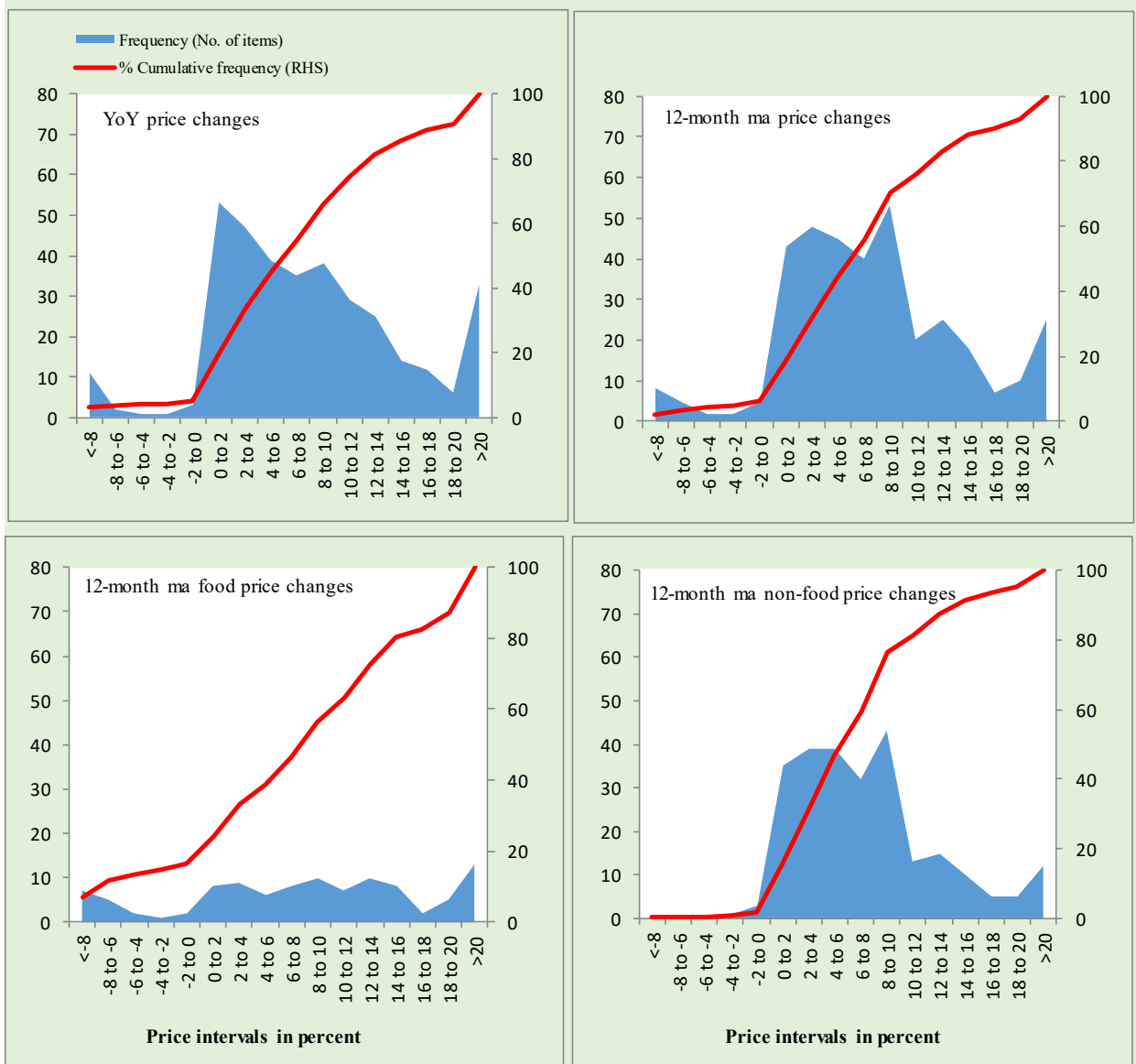


Figure A3: Rural CPI Non-food Inflation (YoY, 12MMA, MoM in percent)

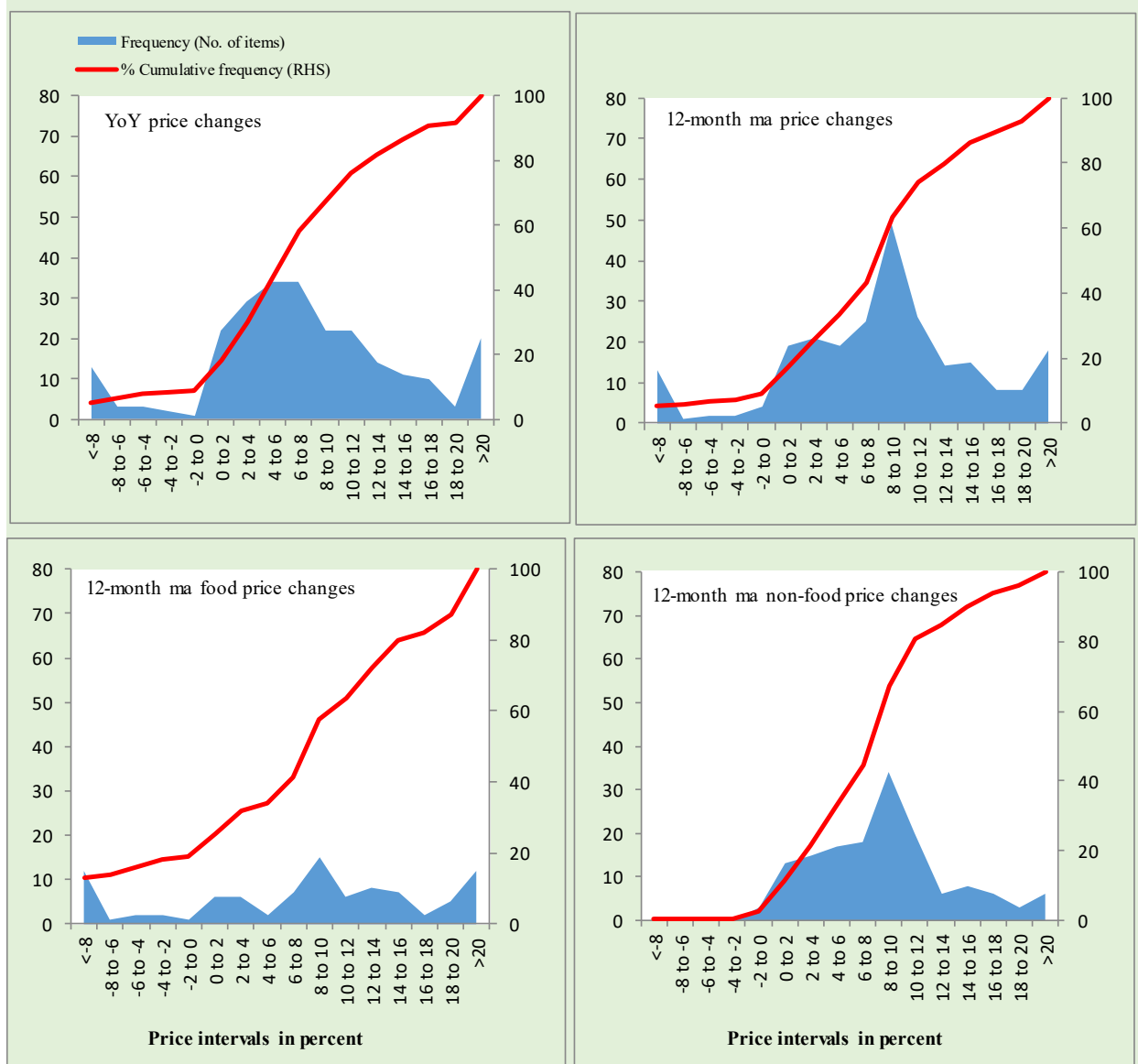


Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)



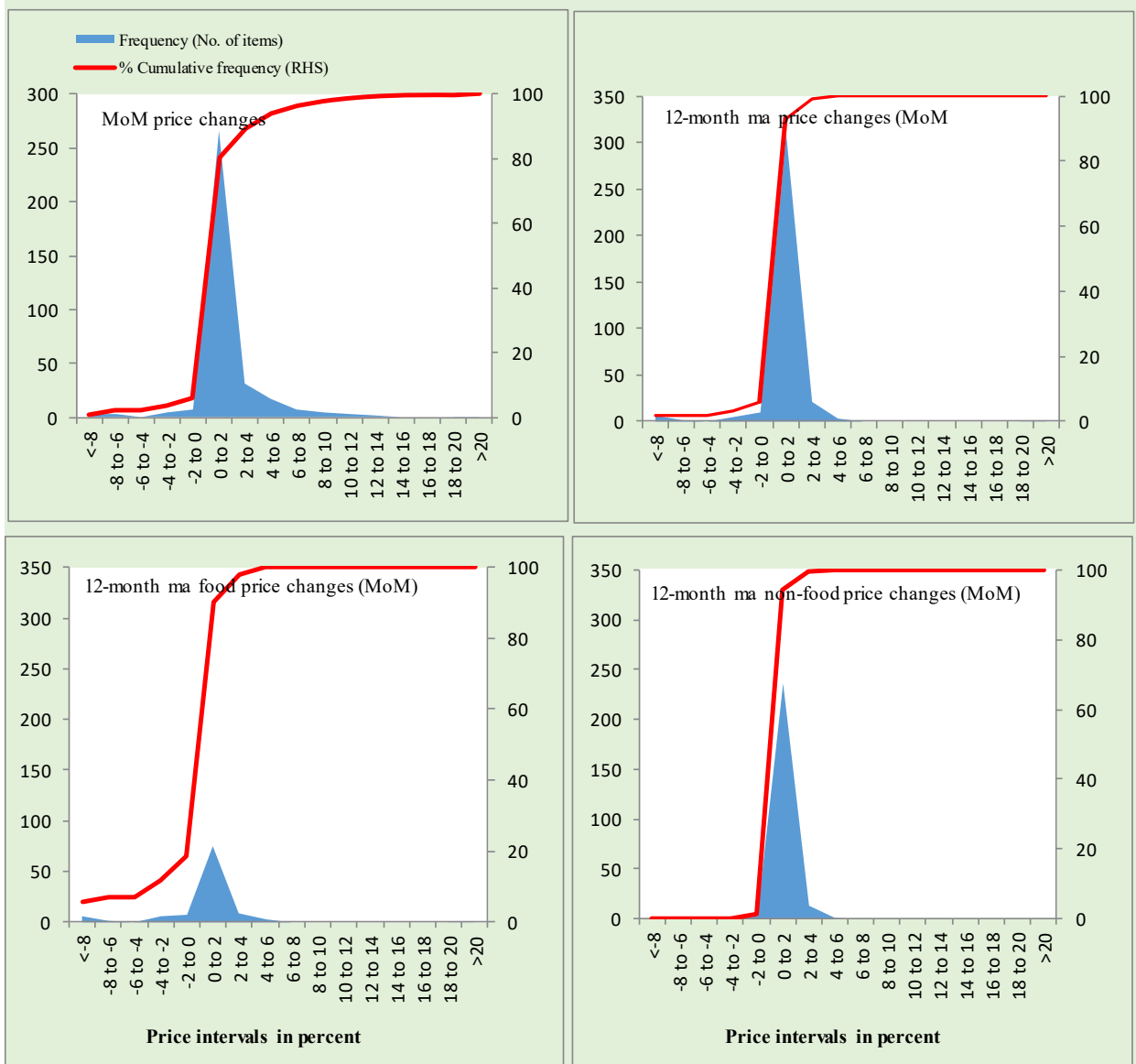
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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



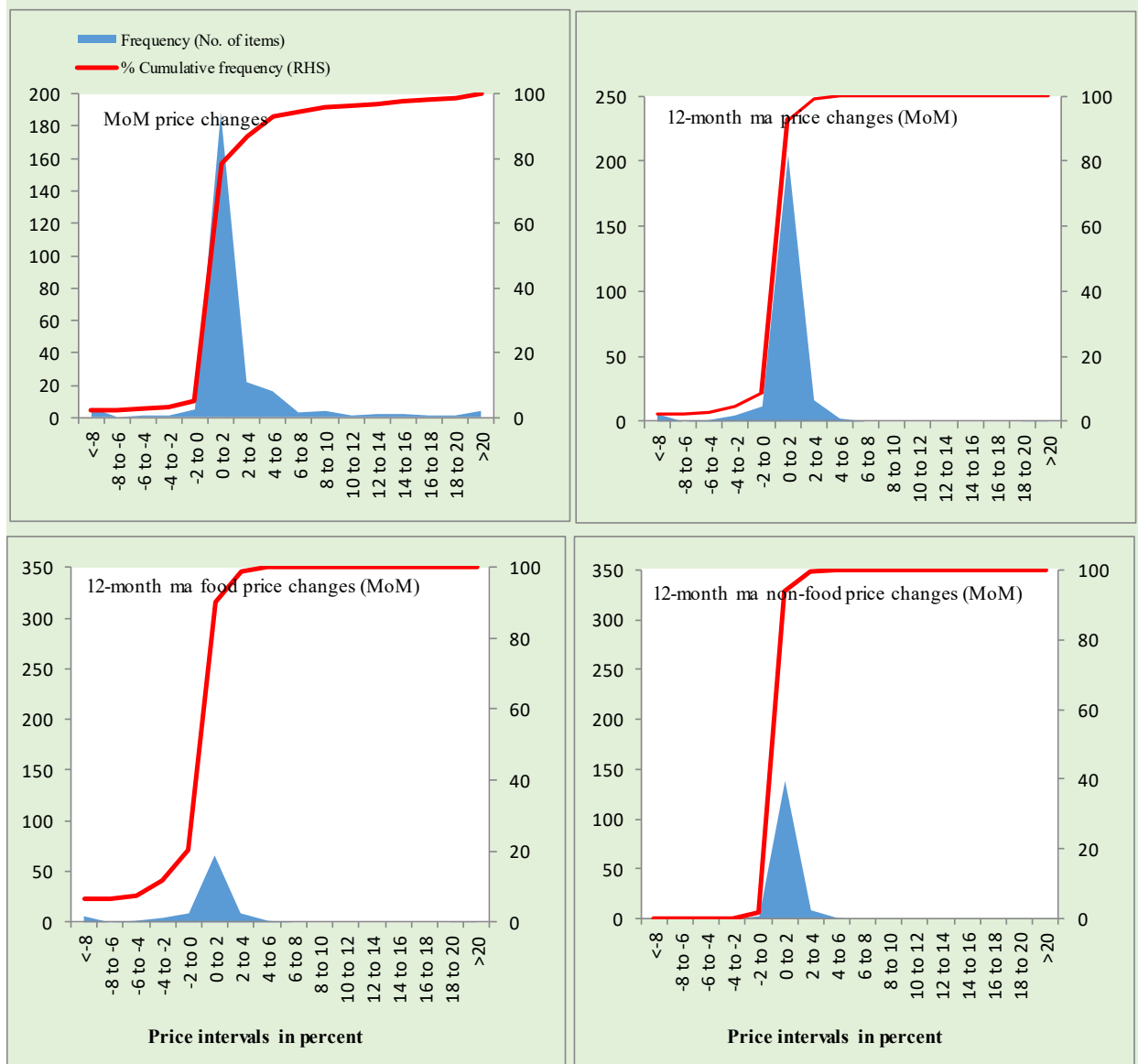
Total Items in CPI Basket (244), Food Items (94) and non-Food Items (150).

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



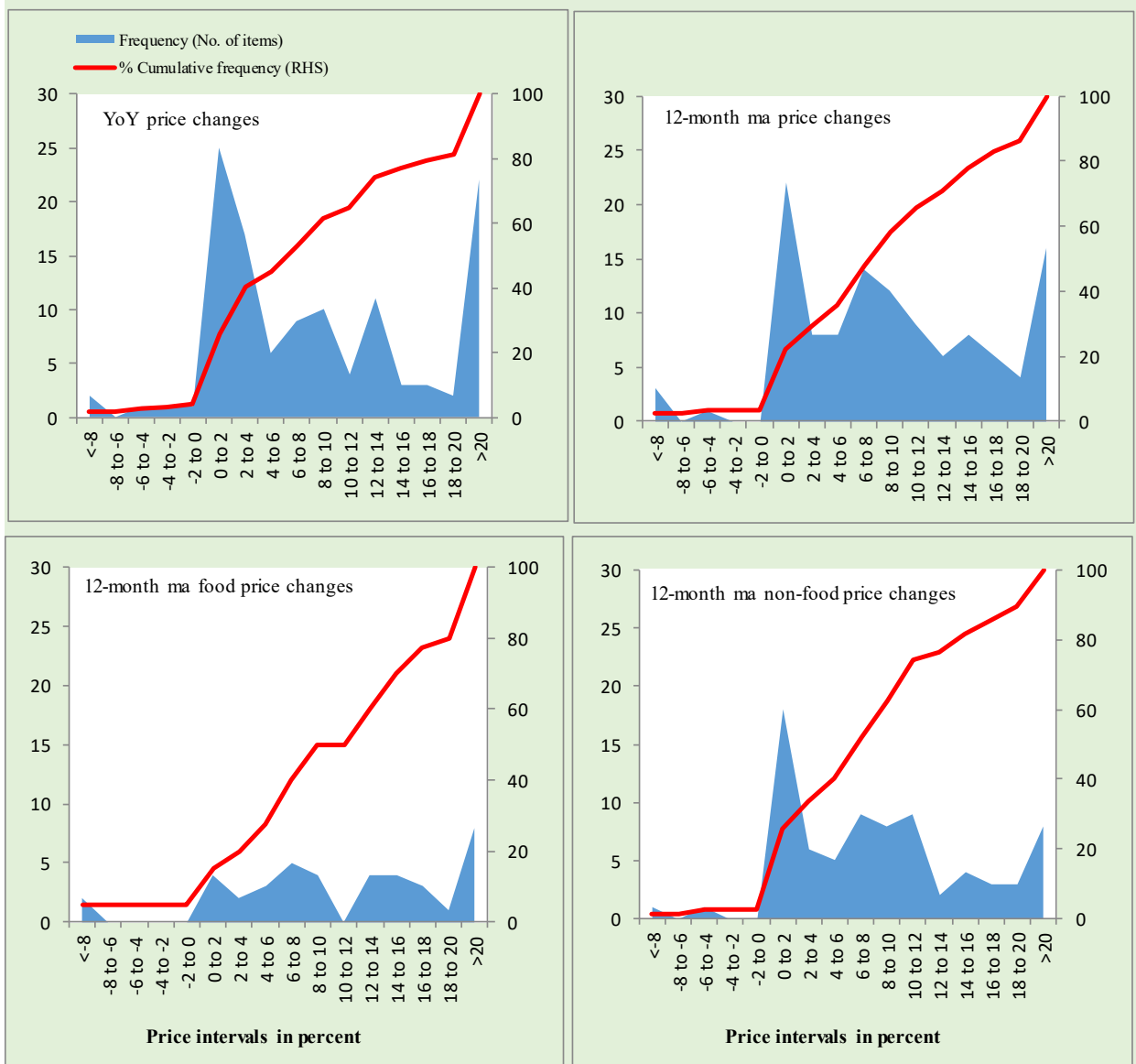
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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, Definitions and Methodologies

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 July to the given month of a fiscal year over the average index during the corresponding period of the last year. It is computed as follows:

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

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

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

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

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

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

8. Core Inflation is defined as the persistent component of measured inflation that excludes volatile and controlled prices. It reflects the normal supply and demand conditions in the economy. Core inflation is computed by the following two methods 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

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

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

Methodology for Estimating Inflation Diffusion Index for Pakistan

We constructed an index to measure the spread of inflation in the 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 constant¹.

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

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

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