

Inflation Monitor

May 2022
(Base Year: 2015-16)



State Bank of Pakistan
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- Provided by Pakistan Bureau of Statistics (PBS), for domestic inflation analysis
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1. Inflation in Brief

1. National CPI Inflation on year-on-year basis increased to 13.8 percent in May 2022 from 13.4 percent in previous month. It stood at 10.9 percent in the corresponding month of last year. However, on month-on-month basis (MoM), National CPI Inflation decreased to 0.4 percent in May 2022 from 1.6 percent in previous month. It was recorded 0.1 percent in the corresponding month of last year.
2. Urban CPI Inflation (year-on-year basis) increased from 12.2 percent in April 2022 to 12.4 percent in May 2022. It stood at 10.8 percent during the corresponding month of last year. Urban CPI Inflation (month-on-month basis) decreased from 1.6 percent in April 2022 to 0.3 percent in May 2022. It stood at 0.2 percent in the corresponding month of last year. Seasonally adjusted month-on-month CPI Inflation recorded at 0.8 percent in May 2022 compared to 1.0 percent in the previous month.
3. Rural CPI Inflation (year-on-year basis) increased to 15.9 percent in May 2022 from 15.1 percent in previous month. It was recorded 10.9 percent during the corresponding month of last year. Rural CPI Inflation (month-on-month basis) decreased to 0.6 percent in May 2022 from 1.6 percent in the previous month. Seasonally adjusted (month-on-month) CPI Inflation recorded at 1.2 percent in May 2022 compared to 1.6 percent in previous month.
4. Urban Core Inflation (trimmed) on year-on-year basis increased from 10.5 percent in April 2022 to 10.7 percent in May 2022. It stood at 10.0 percent during the corresponding month of last year. On month-on-month basis, Urban Core Inflation (trimmed) decreased to 0.8 percent in May 2022 from 0.9 percent in previous month. It stood at 0.2 percent during the corresponding month of last year.
5. Rural Core Inflation (trimmed) on year-on-year basis increased to 14.1 percent in May 2022 from 12.8 percent in April 2022. It was recorded 10.3 percent during the corresponding month of last year. On month-on-month basis, Rural Core Inflation (trimmed) stood at 1.4 percent in May 2022 as compared to 0.9 percent in previous month and 0.4 percent during corresponding month of last year.
6. Urban Core (Non-food, Non-energy (NFNE)) Inflation on year-on-year basis increased to 9.7 percent in May 2022 from 9.1 percent in previous month. It stood at 6.8 percent during corresponding month of last year. On month-on-month basis, Urban Core (NFNE) Inflation decreased to 0.7 percent in May 2022 from 1.1 percent in previous month. It stood at 0.2 percent during the corresponding month of last year.
7. Rural Core (Non-food, Non-energy (NFNE)) Inflation on year-on-year basis increased to 11.5 percent in May 2022 from 10.9 percent in previous month. It stood at 7.6 percent during the corresponding month of last year. On month-on-month basis, it decreased to 0.9 percent in May 2022 from 1.2 percent in previous month. It was recorded 0.3 percent during the corresponding month of last year.
8. WPI Inflation on year-on-year basis increased from 28.1 percent in April 2022 to 29.6 percent in May 2022. It stood at 19.4 percent during the corresponding month of last year. On month-on-month basis, it decreased to 1.4 percent in May 2022 from 3.2 percent in previous month. It was recorded 0.3 percent during the corresponding month of last year.


9. SPI Inflation on year-on-year basis decreased to 16.1 percent in May 2022 from 16.5 percent in previous month. During corresponding month of last year, SPI Inflation stood at 16.9 percent. On month-on-month basis, SPI Inflation decreased to 0.6 percent in May 2022 as compared to 1.1 percent in previous month. It was recorded 0.9 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 time span of last thirteen months is presented. The observed inflation is compared with the revised benchmark of inflation target of 13.3 percent for FY22. Green areas indicate low inflation pressures and increasing order of red (light to dark color spectrum i.e. green to orange to brown to red) represents higher and higher inflationary pressures.


Heat-map of National, Urban and Rural CPI inflation (YoY)														
		May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Headline	National	10.9	9.7	8.4	8.4	9.0	9.2	11.5	12.3	13.0	12.2	12.7	13.4	13.8
	Urban	10.8	9.6	8.7	8.3	9.1	9.6	12.0	12.7	13.0	11.5	11.9	12.2	12.4
	Rural	10.9	9.7	8.0	8.4	8.8	8.7	10.9	11.6	12.9	13.3	13.9	15.1	15.9
Food	Urban	15.3	11.0	9.4	10.2	10.8	9.4	11.9	11.7	13.3	14.3	14.5	15.6	15.5
	Rural	12.8	9.8	7.3	9.1	9.1	7.2	8.6	9.0	11.8	14.6	15.5	17.7	19.0
Core	Urban	6.8	6.7	6.9	6.3	6.4	6.7	7.6	8.3	8.2	7.8	8.9	9.1	9.7
	Rural	7.6	7.3	6.9	6.2	6.2	6.7	8.2	8.9	9.0	9.4	10.3	10.9	11.5

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key 


Heat-map of National, Urban and Rural CPI inflation (MoM)														
		May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Headline	National	0.1	-0.3	1.3	0.6	2.1	1.9	3.0	-0.02	0.4	1.2	0.8	1.6	0.4
	Urban	0.2	-0.4	1.3	0.5	2.0	1.7	2.9	0.3	0.1	0.9	0.7	1.6	0.3
	Rural	-0.03	-0.1	1.4	0.7	2.3	2.2	3.1	-0.5	0.9	1.5	1.0	1.6	0.6
Food	Urban	1.1	-1.9	1.5	0.5	3.6	1.5	3.9	-2.3	-0.8	2.2	1.8	3.7	1.0
	Rural	0.2	-0.8	1.6	0.8	3.7	2.6	3.3	-3.1	0.4	2.6	2.3	2.8	1.3
Core	Urban	0.2	0.3	0.8	0.2	0.4	0.9	1.1	1.1	0.8	0.8	1.2	1.1	0.7
	Rural	0.3	0.4	0.7	0.2	0.5	1.0	1.8	1.1	1.2	0.9	1.1	1.2	0.9

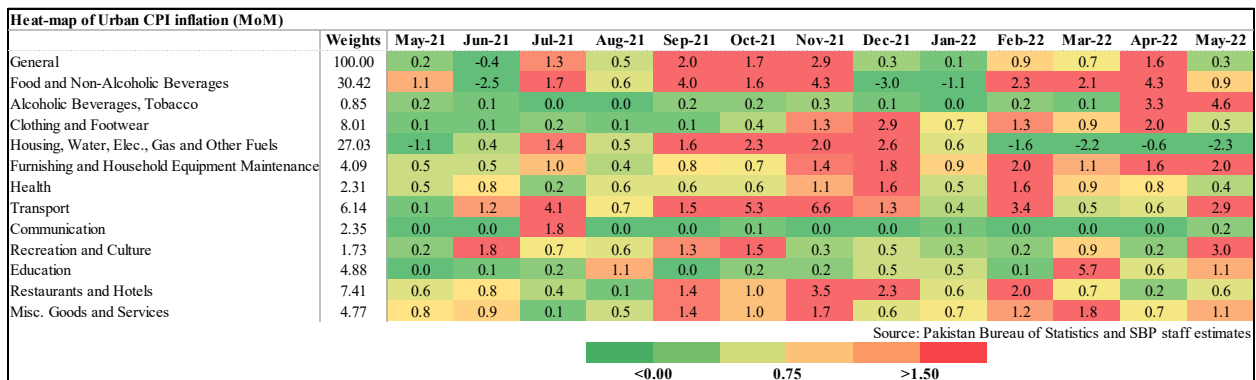
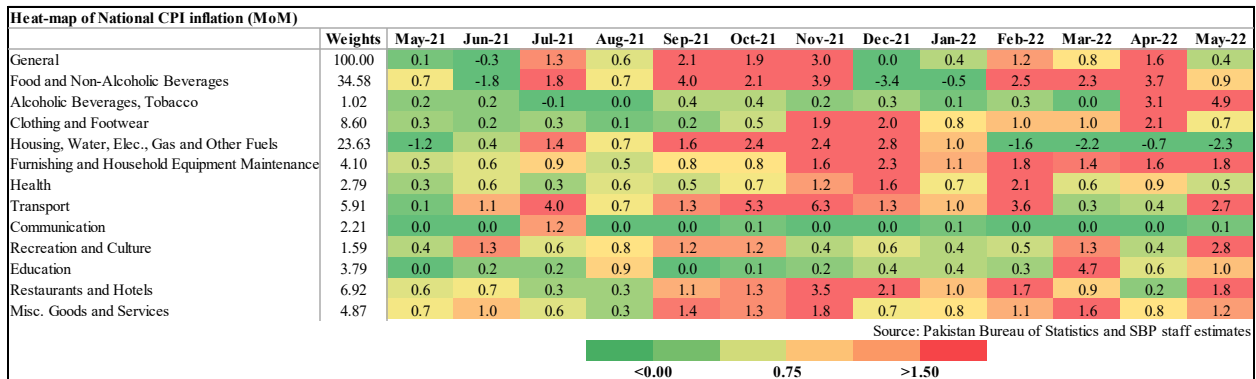
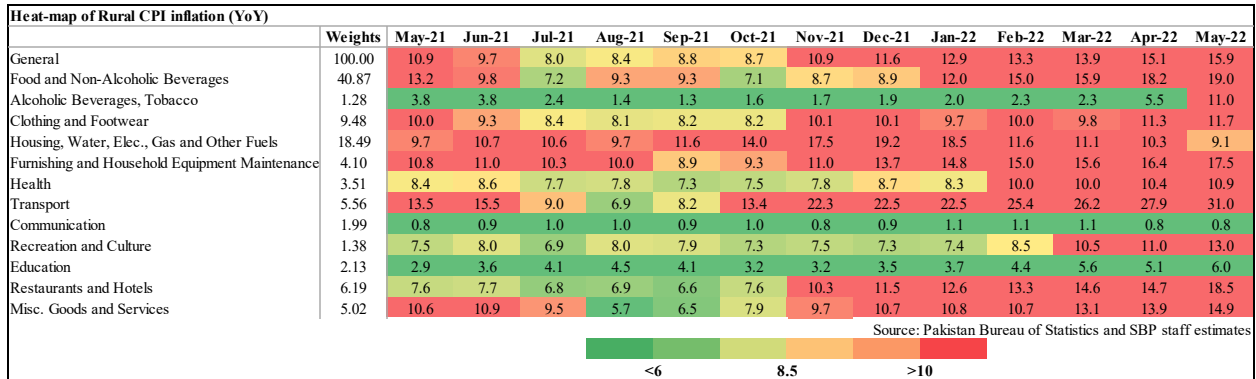
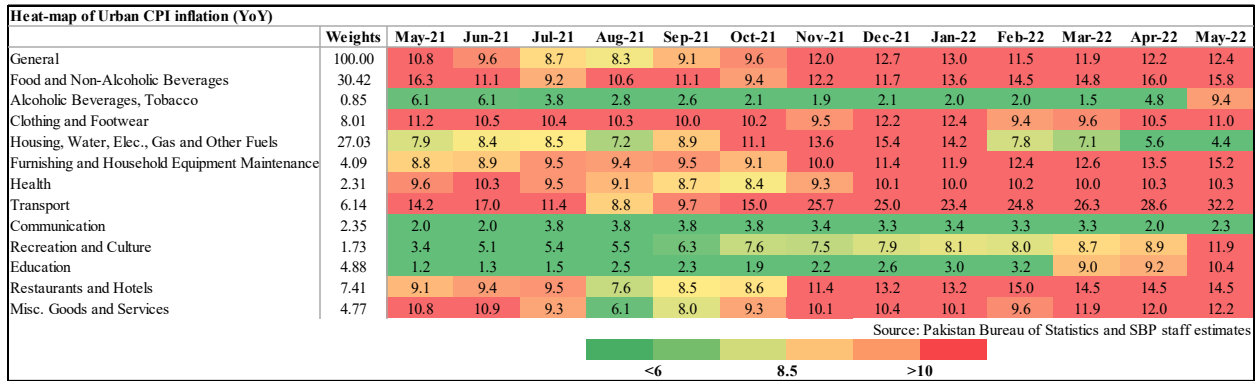
Source: Pakistan Bureau of Statistics and SBP staff estimates

Key 

Heat-map of National CPI inflation (YoY)															
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	
General	100.00	10.9	9.7	8.4	8.4	9.0	9.2	11.5	12.3	13.0	12.2	12.7	13.4	13.8	
Food and Non-Alcoholic Beverages	34.58	14.8	10.5	8.2	10.0	10.2	8.3	10.5	10.3	12.8	14.7	15.3	17.0	17.3	
Alcoholic Beverages, Tobacco	1.02	5.0	5.0	3.1	2.1	2.0	1.9	1.8	2.0	2.0	2.1	1.8	5.1	10.1	
Clothing and Footwear	8.60	10.7	10.0	9.5	9.3	9.2	9.3	9.8	11.2	11.2	9.7	9.7	10.8	11.3	
Housing, Water, Elec., Gas and Other Fuels	23.63	8.4	9.1	9.2	8.0	9.8	12.0	14.8	16.6	15.5	9.0	8.3	7.1	5.8	
Furnishing and Household Equipment Maintenance	4.10	9.6	9.8	9.8	9.6	9.3	9.2	10.4	12.3	13.0	13.4	13.8	14.7	16.1	
Health	2.79	9.0	9.4	8.6	8.5	8.0	8.0	8.5	9.4	9.2	10.1	10.0	10.4	10.6	
Transport	5.91	14.0	16.4	10.5	8.1	9.1	14.4	24.4	24.1	23.1	25.0	26.3	28.3	31.8	
Communication	2.21	1.5	1.6	2.8	2.8	2.8	2.8	2.5	2.5	2.6	2.5	2.6	1.6	1.8	
Recreation and Culture	1.59	4.9	6.2	5.9	6.4	6.9	7.5	7.5	7.7	7.8	8.2	9.3	9.7	12.3	
Education	3.79	1.6	1.8	2.0	2.9	2.6	2.2	2.4	2.8	3.2	3.4	8.3	8.4	9.5	
Restaurants and Hotels	6.92	8.6	8.8	8.5	7.3	7.8	8.3	11.0	12.6	13.0	14.4	14.6	14.6	16.0	
Misc. Goods and Services	4.87	10.7	10.9	9.4	5.9	7.4	8.7	10.0	10.6	10.3	10.1	12.4	12.8	13.3	

Source: Pakistan Bureau of Statistics and SBP staff estimates

Key 



Heat-map of Rural CPI inflation (MoM)														
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
General	100.00	0.0	-0.1	1.4	0.7	2.3	2.2	3.1	-0.5	0.9	1.5	1.0	1.6	0.6
Food and Non-Alcoholic Beverages	40.87	0.2	-0.9	1.8	0.9	4.1	2.7	3.6	-3.7	0.2	2.8	2.5	3.1	0.8
Alcoholic Beverages, Tobacco	1.28	0.2	0.3	-0.1	0.0	0.6	0.5	0.1	0.5	0.3	0.3	0.0	2.8	5.3
Clothing and Footwear	9.48	0.5	0.3	0.4	0.1	0.4	0.6	2.6	0.9	0.8	0.6	1.1	2.3	0.9
Housing, Water, Elec., Gas and Other Fuels	18.49	-1.4	0.6	1.5	1.0	1.7	2.7	3.3	3.2	1.9	-1.4	-2.3	-0.8	-2.5
Furnishing and Household Equipment Maintenance	4.10	0.6	0.7	0.7	0.6	0.7	1.0	2.0	3.1	1.3	1.3	1.7	1.6	1.5
Health	3.51	0.1	0.3	0.3	0.5	0.4	0.7	1.3	1.7	0.9	2.5	0.2	0.9	0.6
Transport	5.56	0.1	0.9	3.9	0.8	1.0	5.2	5.8	1.3	2.0	3.9	0.0	0.2	2.5
Communication	1.99	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.1	0.0
Recreation and Culture	1.38	0.8	0.5	0.5	1.2	1.1	0.7	0.5	0.6	0.7	1.2	2.0	0.8	2.5
Education	2.13	0.0	0.7	0.5	0.4	0.0	0.1	0.0	0.3	0.2	0.8	1.1	1.0	0.8
Restaurants and Hotels	6.19	0.6	0.5	0.3	0.7	0.6	1.9	3.5	1.6	1.6	1.0	1.2	0.3	3.9
Misc. Goods and Services	5.02	0.5	1.1	1.2	0.1	1.3	1.9	2.0	0.9	1.0	0.8	1.4	1.0	1.3

Source: Pakistan Bureau of Statistics and SBP staff estimates

<0.00 0.75 >1.50

Heat-map of Rural CPI inflation (YoY)														
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Rural	100.00	10.9	9.7	8.0	8.4	8.8	8.7	10.9	11.6	12.9	13.3	13.9	15.1	15.9
Food	45.95	12.8	9.8	7.3	9.1	9.1	7.2	8.6	9.0	11.8	14.6	15.5	17.7	19.0
Non-perishable	40.16	16.9	12.2	10.3	9.9	12.3	11.2	11.7	12.8	12.8	12.4	13.7	15.8	17.0
Perishable	5.79	-8.2	-5.5	-9.7	5.4	-6.8	-12.5	-5.5	-12.0	6.6	35.8	32.8	34.4	33.7
Non Food	54.05	9.2	9.7	8.7	7.7	8.5	10.0	13.0	14.0	13.9	12.2	12.5	12.8	13.1
Energy	11.41	16.0	19.8	15.7	13.8	17.2	23.2	32.0	34.0	32.7	21.9	20.4	19.8	19.3
NFNE (Core)	42.64	7.6	7.3	6.9	6.2	6.2	6.7	8.2	8.9	9.0	9.4	10.3	10.9	11.5
HRI	8.61	6.6	6.6	6.1	6.1	6.1	6.6	6.6	6.6	5.9	5.9	5.9	5.7	5.7
Core Excl HRI	34.03	7.8	7.5	7.1	6.3	6.3	6.7	8.6	9.5	9.7	10.3	11.4	12.2	12.9

Source: Pakistan Bureau of Statistics and SBP staff estimates

<6 8.5 >10

Heat-map of Urban CPI inflation (YoY)														
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Urban	100.00	10.8	9.6	8.7	8.3	9.1	9.6	12.0	12.7	13.0	11.5	11.9	12.2	12.4
Food	36.80	15.3	11.0	9.4	10.2	10.8	9.4	11.9	11.7	13.3	14.3	14.5	15.6	15.5
Non-perishable	32.34	19.3	13.5	12.7	12.2	15.3	13.2	15.3	15.5	14.7	11.8	13.0	14.4	15.0
Perishable	4.46	-0.2	-2.5	-8.7	1.7	-9.6	-8.9	-1.9	-8.7	6.3	34.1	28.0	25.6	20.6
Non Food	63.20	8.3	8.8	8.2	7.2	8.1	9.7	12.0	13.4	12.8	9.9	10.4	10.2	10.4
Energy	9.47	16.6	21.1	16.1	12.2	17.8	25.9	37.2	41.3	38.1	20.2	18.0	15.7	14.1
NFNE (Core)	53.73	6.8	6.7	6.9	6.3	6.4	6.7	7.6	8.3	8.2	7.8	8.9	9.1	9.7
HRI	19.26	6.2	6.2	6.1	6.1	6.1	6.6	6.6	6.6	6.1	6.1	6.1	5.6	5.6
Core Excl HRI	34.47	7.2	7.0	7.3	6.4	6.5	6.8	8.1	9.2	9.3	8.7	10.5	11.0	11.9

Source: Pakistan Bureau of Statistics and SBP staff estimates

<6 8.5 >10

Heat-map of Rural CPI inflation (MoM)														
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Rural	100.00	0.0	-0.1	1.4	0.7	2.3	2.2	3.1	-0.5	0.9	1.5	1.0	1.6	0.6
Food	45.95	0.2	-0.8	1.6	0.8	3.7	2.6	3.3	-3.1	0.4	2.6	2.3	2.8	1.3
Non-perishable	40.16	1.8	-1.0	0.4	0.5	4.1	2.0	1.8	-0.4	1.0	1.4	2.8	0.6	2.8
Perishable	5.79	-10.2	-0.3	12.1	3.3	4.3	7.1	14.5	-21.8	-5.1	13.3	0.5	20.0	-10.7
Non Food	54.05	-0.3	0.6	1.2	0.6	1.0	1.9	3.0	1.9	1.4	0.4	-0.2	0.5	0.0
Energy	11.41	-2.4	1.1	3.1	2.2	2.9	5.2	7.0	4.4	1.9	-0.9	-4.0	-1.8	-2.8
NFNE (Core)	42.64	0.3	0.4	0.7	0.2	0.5	1.0	1.8	1.1	1.2	0.9	1.1	1.2	0.9
HRI	8.61	0.0	0.0	1.2	0.0	0.0	1.3	0.0	0.0	2.1	0.0	0.0	1.0	0.0
Core Excl HRI	34.03	0.4	0.5	0.6	0.2	0.6	1.0	2.2	1.4	1.0	1.1	1.3	1.3	1.0

Source: Pakistan Bureau of Statistics and SBP staff estimates

<0.00 0.75 >1.50

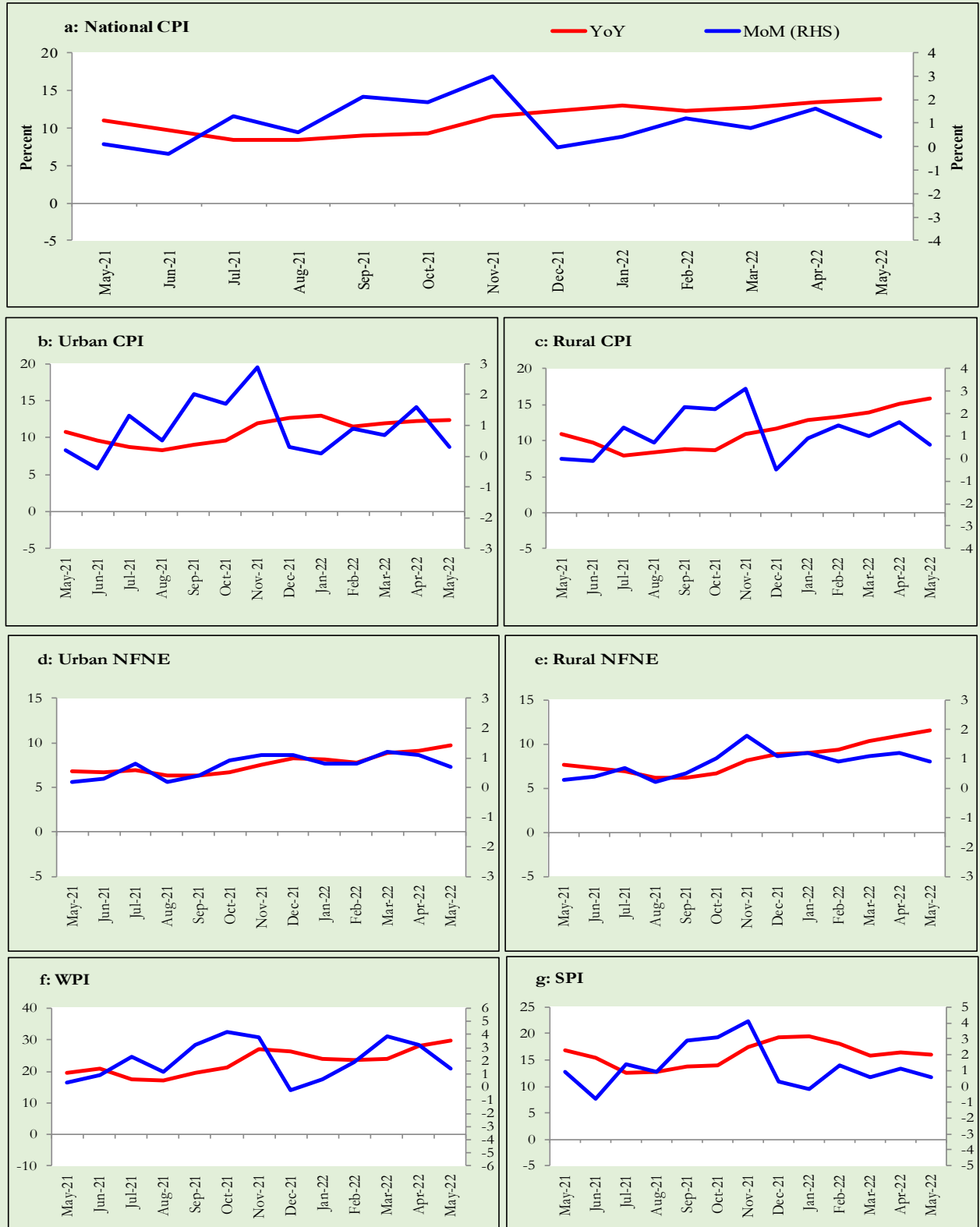
Heat-map of Urban CPI inflation (MoM)														
	Weights	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
Urban	100.00	0.2	-0.4	1.3	0.5	2.0	1.7	2.9	0.3	0.1	0.9	0.7	1.6	0.3
Food	36.80	1.1	-1.9	1.5	0.5	3.6	1.5	3.9	-2.3	-0.8	2.2	1.8	3.7	1.0
<i>Non-perishable</i>	32.34	2.5	-2.3	0.8	0.3	4.2	1.0	2.4	0.2	-0.4	0.5	2.6	1.7	3.1
<i>Perishable</i>	4.46	-7.1	-3.9	7.3	2.0	2.6	5.2	15.1	-20.2	-5.4	14.7	-1.1	20.8	-10.8
Non Food	63.20	-0.3	0.5	1.1	0.5	1.1	1.8	2.2	2.0	0.6	0.2	-0.1	0.3	-0.1
<i>Energy</i>	9.47	-3.2	1.3	3.5	2.1	4.6	6.0	7.6	5.8	-0.4	-2.3	-5.9	-3.4	-4.6
<i>NFNE (Core)</i>	53.73	0.2	0.3	0.8	0.2	0.4	0.9	1.1	1.1	0.8	0.8	1.2	1.1	0.7
<i>HRI</i>	19.26	0.0	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.5	0.0	0.0	1.1	0.0
<i>Core Excl HRI</i>	34.47	0.3	0.5	0.4	0.3	0.6	0.6	1.7	1.7	0.4	1.1	1.9	1.0	1.1

Source: Pakistan Bureau of Statistics and SBP staff estimates

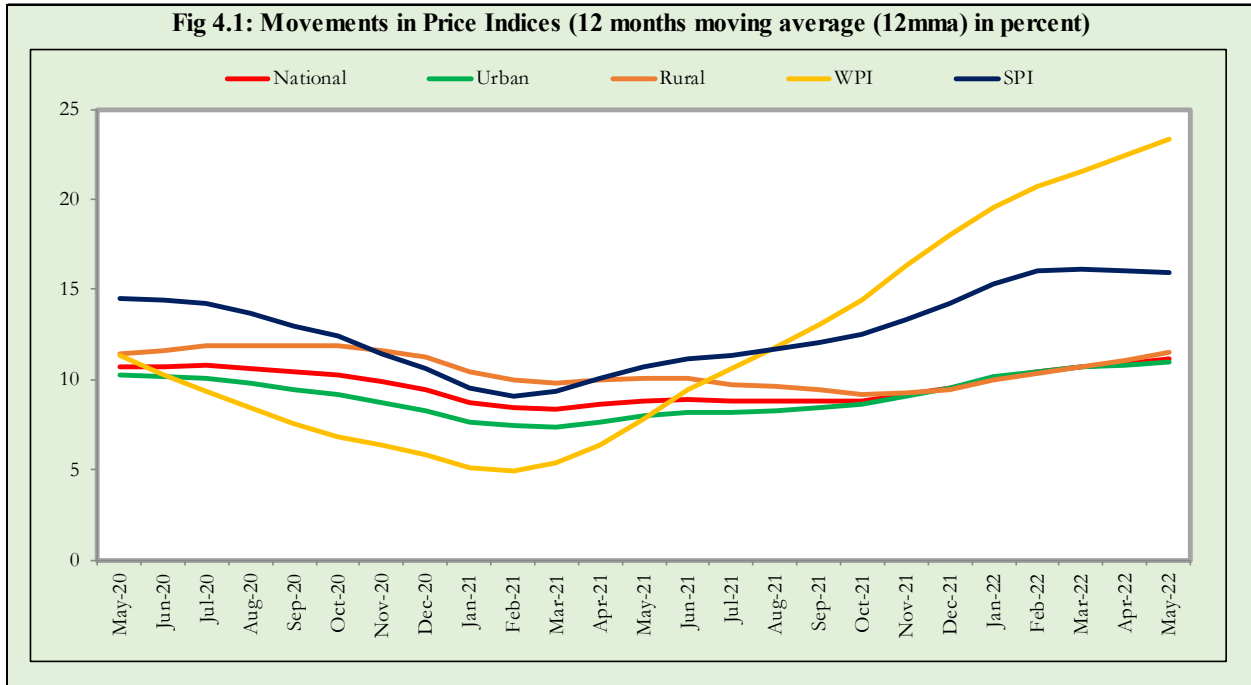
<0.00 0.75 >1.50

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)

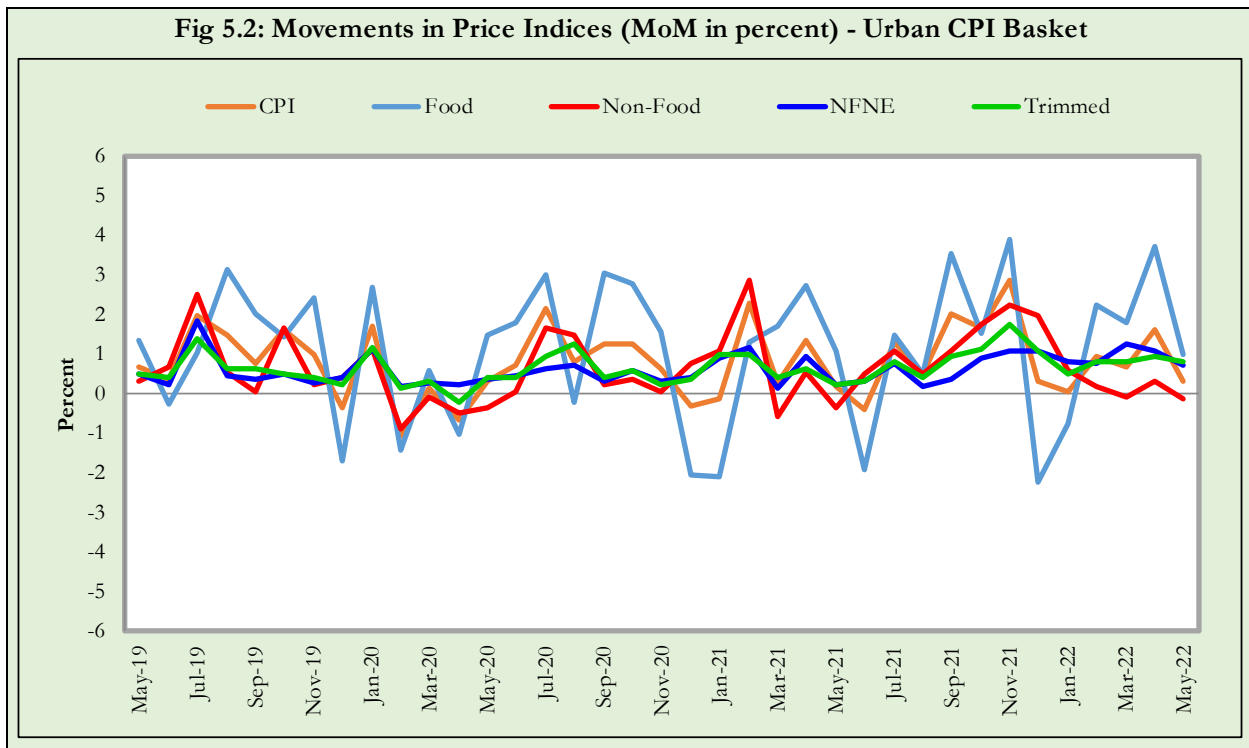
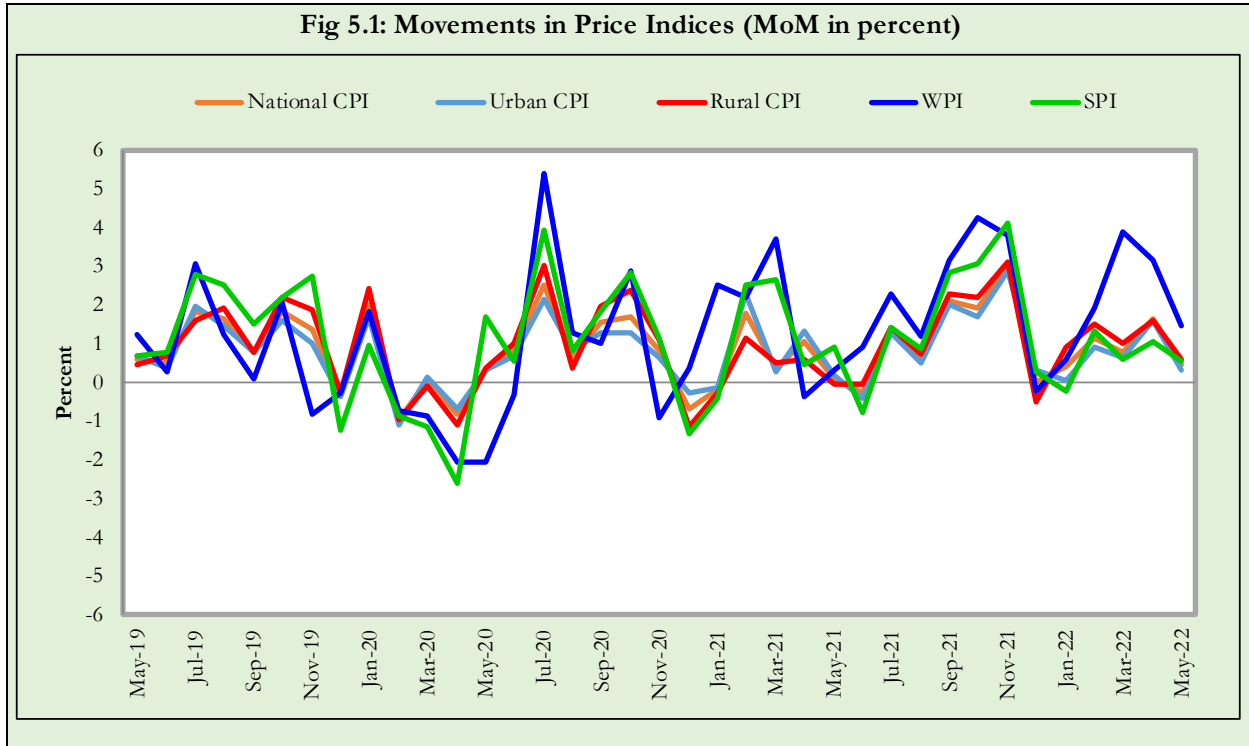
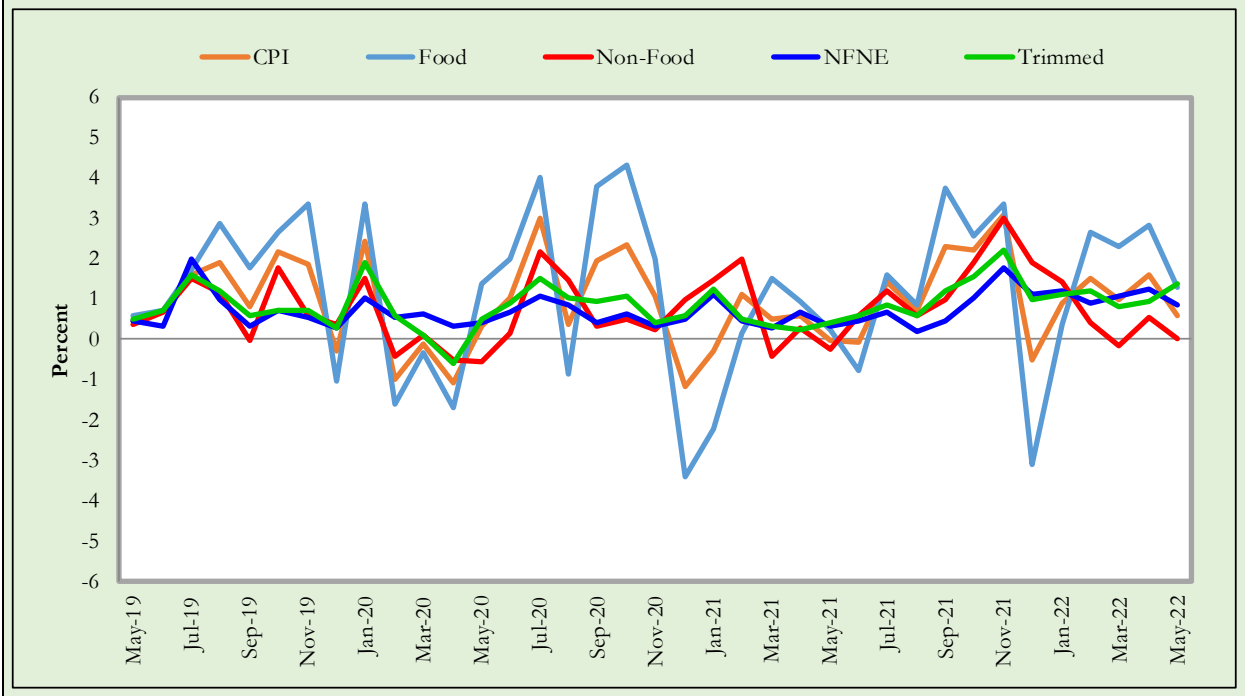
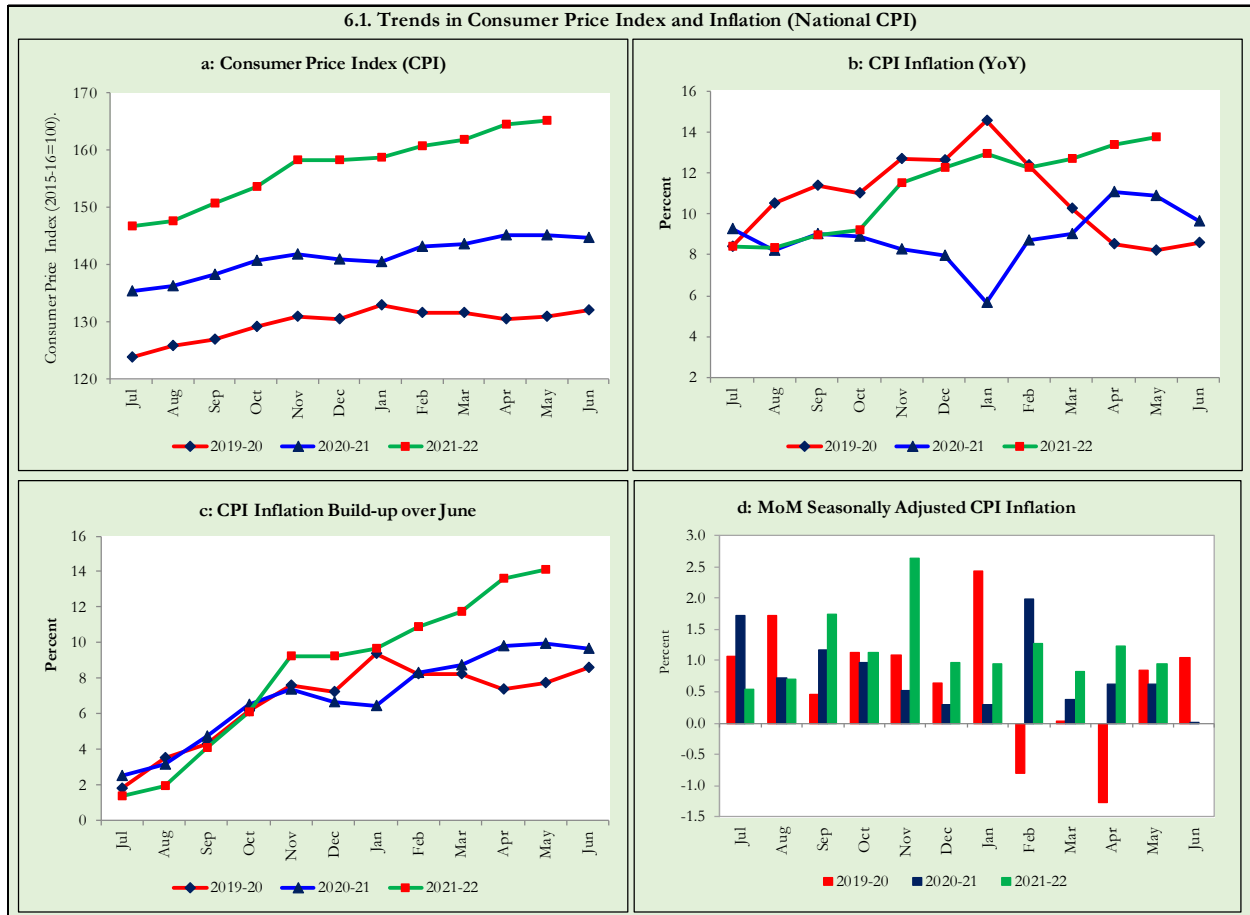


Fig 5.3: Movements in Price Indices (MoM in percent) - Rural CPI Basket

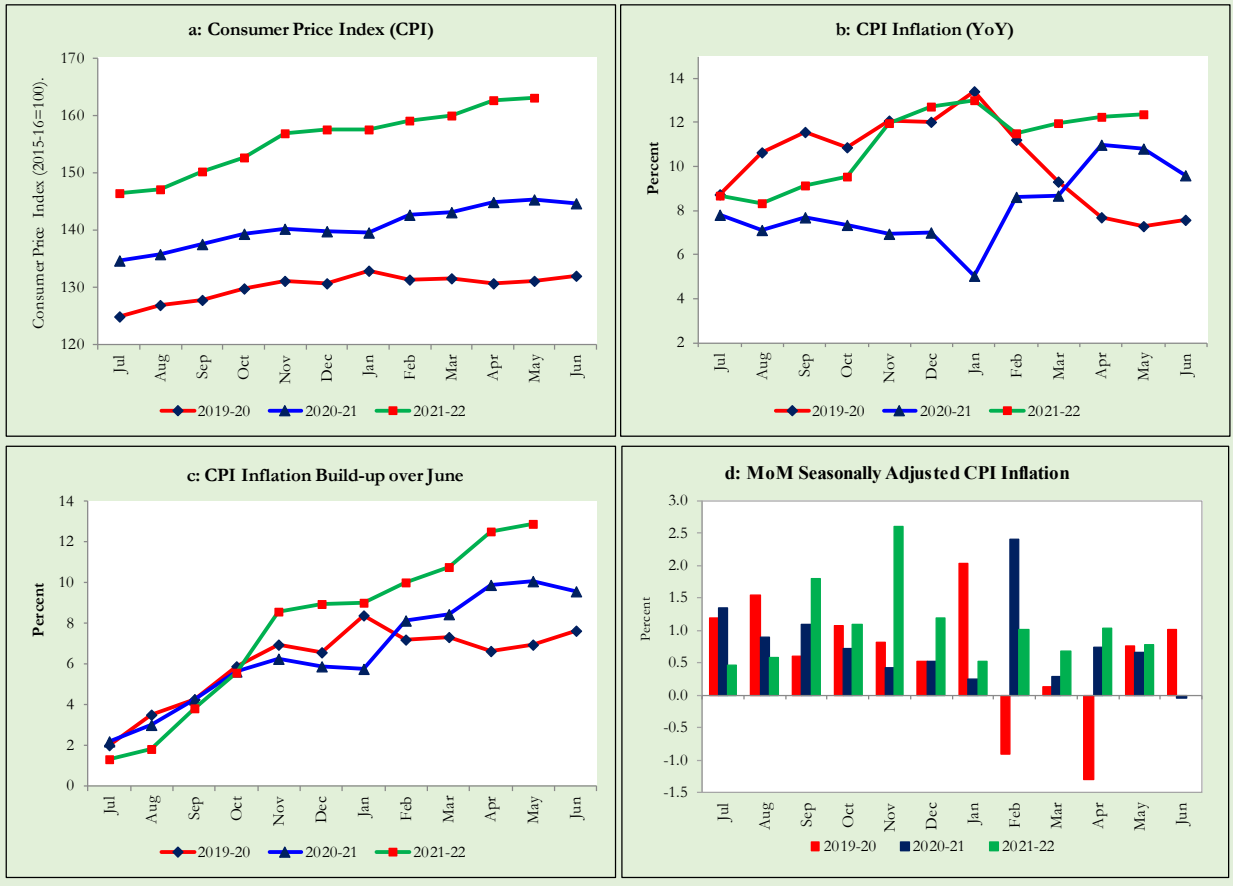


6. Trends in Consumer Price Indices and Inflation

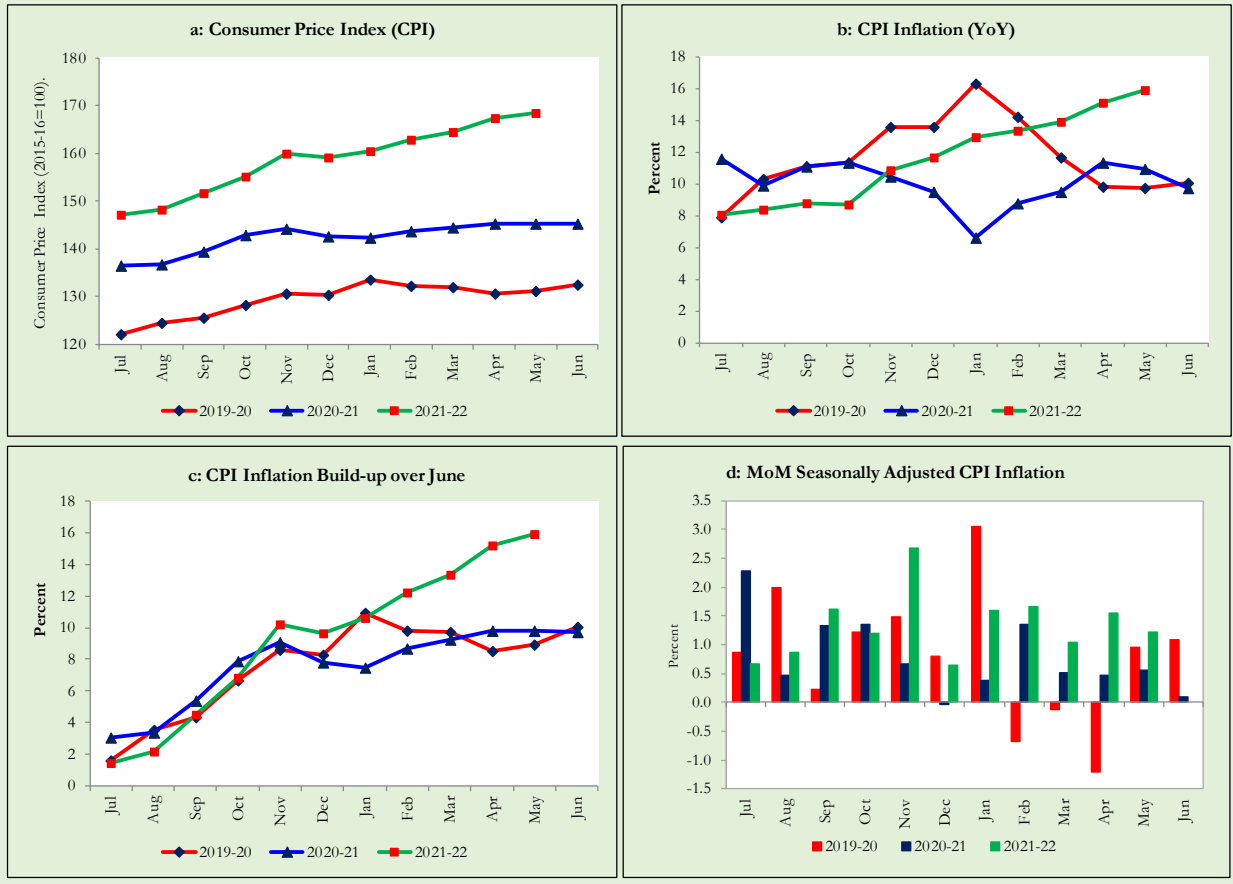
Monthly Consumer Price Indices, YoY growth rates and inflation build up over June along with seasonally adjusted (MoM) growth rates in CPI (National, Urban and Rural) is summarized in the following graphs (Figure 6.1 to 6.3).



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 48.2 percent during May 2022 from 48.5 percent in previous month. It was 52.0 percent during corresponding month of last year. The weighted contribution of non-food group increased to 51.7 percent in May 2022 from 51.5 percent in previous month. Weighted Contribution of non-food was 48.0 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.

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
May-21	100.0	52.0	-0.1	52.1	48.0	13.9	34.1	23.2	10.9
Jun-21	100.0	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
Aug-21	100.0	45.7	1.0	44.7	54.3	14.3	40.0	26.4	13.6
Sep-21	100.0	44.7	-5.6	50.4	55.3	18.7	36.7	24.4	12.3
Oct-21	100.0	37.9	-5.1	43.0	62.1	25.4	36.7	24.0	12.8
Nov-21	100.0	38.6	-0.9	39.5	61.4	28.6	32.8	22.7	10.1
Dec-21	100.0	35.0	-3.4	38.5	65.0	30.8	34.2	24.6	9.5
Jan-22	100.0	38.2	2.0	36.2	61.8	28.4	33.4	24.5	8.9
Feb-22	100.0	46.1	10.9	35.2	54.0	18.7	35.3	25.5	9.8
Mar-22	100.0	45.6	8.9	36.7	54.4	15.3	39.1	29.7	9.4
Apr-22	100.0	48.5	9.6	38.9	51.5	12.7	38.7	30.4	8.4
May-22	100.0	48.2	7.1	41.1	51.7	10.9	40.9	32.6	8.3

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

For rural basket, the weighted contribution of food group in the overall rural CPI inflation increased to 56.7 percent during May 2022 from 55.5 percent in previous month. It was 54.9 percent during corresponding month of last year. The weighted contribution of non-food group decreased to 43.3 percent in May 2022 from 44.5 percent in previous month. Weighted contribution of non-food group was 45.1 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	i
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
Aug-21	100.0	51.1	3.7	47.4	48.8	17.7	31.2	25.2	6.0
Sep-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	51.7	59.2	27.7	31.5	25.3	6.2
Nov-21	100.0	39.2	-4.0	43.2	60.8	30.1	30.8	25.9	4.9
Dec-21	100.0	37.2	-6.9	44.1	62.8	31.2	31.6	27.0	4.6
Jan-22	100.0	43.2	2.7	40.5	56.8	27.7	29.1	25.3	3.8
Feb-22	100.0	51.3	12.4	38.9	48.7	19.2	29.5	25.8	3.6
Mar-22	100.0	52.6	11.2	41.5	47.4	16.7	30.7	27.2	3.5
Apr-22	100.0	55.5	12.7	42.8	44.5	14.6	29.9	26.8	3.1
May-22	100.0	56.7	10.6	46.1	43.3	13.2	30.1	27.1	3.0

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													
Groups	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
General	42.1	47.2	52.2	51.7	57.6	60.1	70.2	63.2	57.6	60.1	60.1	57.3	61.2
Food & Non-Alcoholic Beverages	28.9	30.0	38.9	40.0	55.6	41.1	42.2	34.4	40.0	46.7	34.4	44.4	37.8
Alcoholic Beverages & Tobacco	66.7	33.3	0.0	0.0	33.3	33.3	33.3	33.3	66.7	33.3	33.3	66.7	100.0
Clothing & Footwear	55.0	47.5	47.5	45.0	50.0	55.0	80.0	85.0	77.5	77.5	70.0	67.5	72.5
Housing, Water, Elect, Gas & other Fuels	-6.9	27.6	58.6	41.4	58.6	72.4	72.4	69.0	13.8	3.4	10.3	17.2	20.7
Furnishing & Household Equip. Maintenance etc.	81.0	71.4	83.3	78.6	83.3	88.1	90.5	88.1	88.1	90.5	90.5	90.5	97.6
Health	61.3	64.5	54.8	74.2	54.8	51.6	64.5	90.3	71.0	87.1	77.4	74.2	61.3
Transport	25.0	31.3	37.5	46.9	40.6	50.0	93.8	53.1	62.5	62.5	59.4	40.6	53.1
Communication	0.0	20.0	60.0	20.0	20.0	20.0	0.0	20.0	40.0	20.0	20.0	20.0	20.0
Recreation & Culture	24.0	64.0	68.0	56.0	48.0	72.0	68.0	24.0	36.0	36.0	68.0	44.0	76.0
Education	0.0	25.0	25.0	25.0	25.0	56.3	81.3	68.8	31.3	37.5	75.0	43.8	50.0
Restaurant & Hotels	85.7	71.4	71.4	57.1	64.3	85.7	85.7	100.0	78.6	92.9	78.6	78.6	92.9
Miscellaneous	79.3	75.9	58.6	69.0	89.7	82.8	96.6	86.2	89.7	86.2	100.0	89.7	96.6
NFNE	51.1	54.9	57.4	56.2	59.1	66.0	80.9	75.3	67.2	69.4	76.6	67.2	72.8

Groups	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22
General	32.0	43.9	44.3	41.0	54.1	66.8	61.9	56.1	57.4	59.4	52.0	54.9	59.0
Food & Non-Alcoholic Beverages	13.9	20.3	29.1	27.8	41.8	49.4	29.1	21.5	44.3	45.6	41.8	32.9	40.5
Alcoholic Beverages & Tobacco	60.0	60.0	-20.0	0.0	40.0	80.0	40.0	80.0	60.0	100.0	0.0	80.0	100.0
Clothing & Footwear	74.1	44.4	55.6	25.9	74.1	81.5	96.3	96.3	70.4	92.6	74.1	92.6	88.9
Housing, Water, Elect, Gas & other Fuels	-13.0	39.1	73.9	60.9	65.2	91.3	87.0	73.9	17.4	4.3	0.0	26.1	26.1
Furnishing & Household Equip. Maintenance etc.	61.5	76.9	80.8	61.5	57.7	84.6	88.5	96.2	92.3	92.3	84.6	80.8	84.6
Health	42.9	78.6	14.3	64.3	42.9	57.1	71.4	78.6	64.3	78.6	42.9	71.4	42.9
Transport	37.5	68.8	62.5	43.8	62.5	68.8	81.3	43.8	62.5	62.5	37.5	50.0	68.8
Communication	0.0	20.0	40.0	20.0	0.0	20.0	0.0	20.0	20.0	20.0	20.0	20.0	20.0
Recreation & Culture	23.1	38.5	30.8	53.8	53.8	61.5	53.8	15.4	38.5	53.8	69.2	30.8	76.9
Education	0.0	60.0	80.0	60.0	0.0	20.0	0.0	20.0	60.0	80.0	80.0	100.0	80.0
Restaurant & Hotels	57.1	28.6	28.6	28.6	64.3	78.6	85.7	85.7	78.6	57.1	78.6	57.1	71.4
Miscellaneous	47.1	70.6	41.2	58.8	88.2	88.2	88.2	82.4	94.1	76.5	88.2	94.1	76.5
NFNE	46.3	59.6	53.7	47.8	57.4	71.3	75.0	72.1	67.6	71.3	66.9	74.3	69.9

9. Domestic Commodity Prices

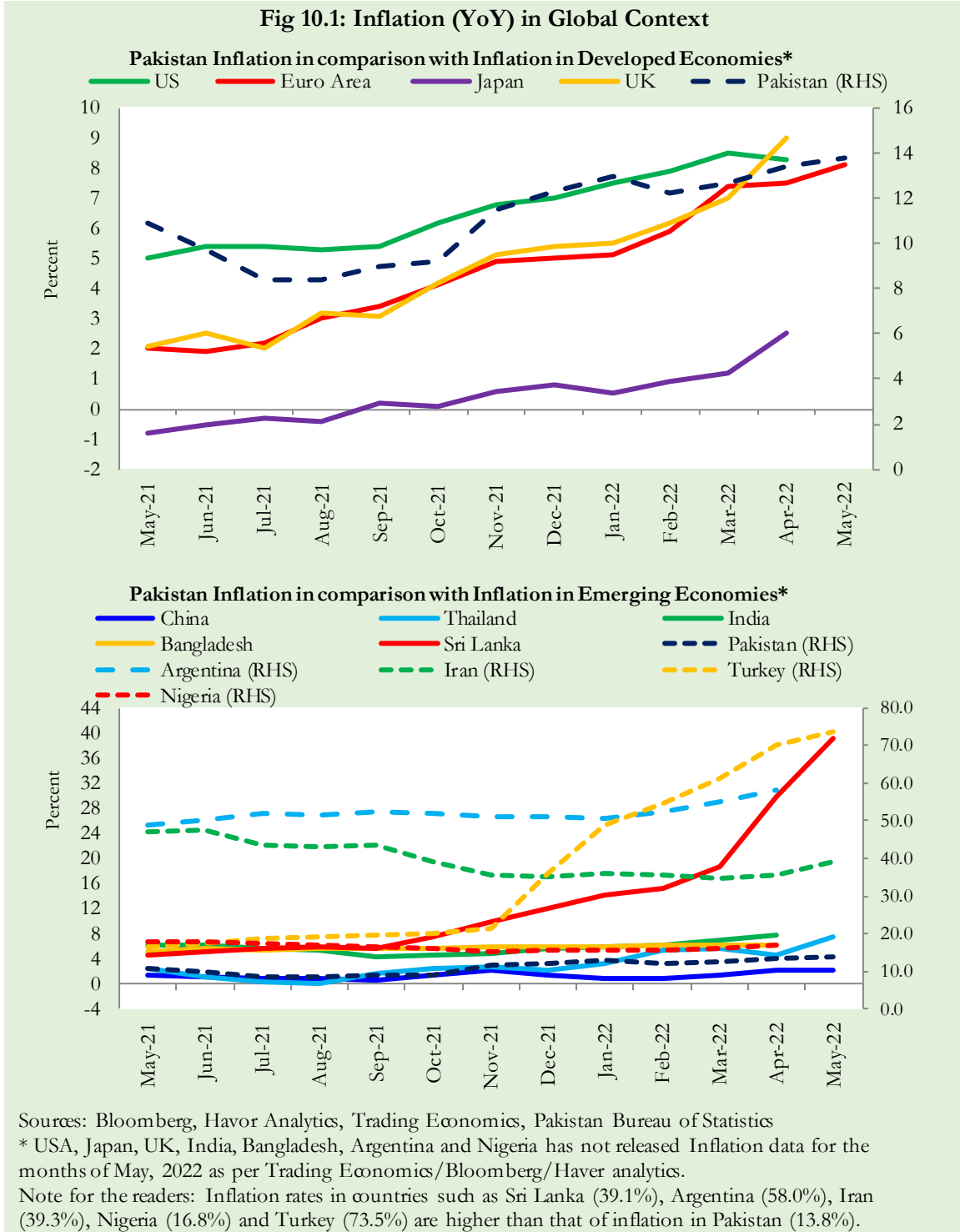
Inflation in domestic food commodities (YoY and MoM in percent) for selected essential food items covering both urban and rural CPI baskets is given in table 9.1.

S. No	Item	Unit	Urban CPI		Rural CPI	
			YoY	MoM	YoY	MoM
1	Wheat	10 Kg	29.9	-1.2	27.7	-5.2
2	Wheat Flour Bag	20 Kg	28.9	14.7	27.9	6.4
3	Rice Basmati Broken (Superior/Average Quality) *	1 Kg	0.5	-0.2	13.9	0.3
4	Beef with Bone (Average Quality)	1 Kg	13.6	4.9	16.1	6.0
5	Mutton (Average Quality)	1 Kg	15.0	4.4	16.9	5.7
6	Chicken Farm Broiler (Live)	1 Kg	59.6	16.9	60.8	22.6
7	Milk Fresh (Un-Boiled)	1 Liter	16.1	0.4	9.2	0.3
8	Eggs Farm	Dozen	55.0	-11.6	49.7	-11.7
9	Vegetable Ghee Dalda/Habib Or Other Superior Quality 1 Kg Pouch	Each	23.6	0.2	26.4	3.4
10	Pulse Masoor (Washed)	1 Kg	-7.1	-1.1	-4.8	-0.6
11	Pulse Moong (Washed)	1 Kg	-17.2	-1.3	-18.8	-0.7
12	Pulse Mash (Washed)	1 Kg	4.2	-1.4	5.7	0.4
13	Pulse Gram	1 Kg	-1.2	-1.3	-1.3	-0.5
14	Potatoes	1 Kg	-16.5	0.7	-12.9	10.3
15	Onions	1 Kg	-31.5	-13.1	-34.4	-9.1
16	Tomatoes	1 Kg	4.9	-46.6	9.7	-46.4
17	Sugar Refined	1 Kg	21.6	2.6	21.7	4.1
18	Garlic (Lehsun)	1 Kg	-28.1	0.2	-28.5	-4.3
19	Ginger (Adrak)	500 Gm	3.7	-5.3	2.8	-2.3
20	Tea Lipton Yellow Label 190 Gm Packet	Each	0.1	0.0	0.2	0.0

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

10. Inflation in Global Context

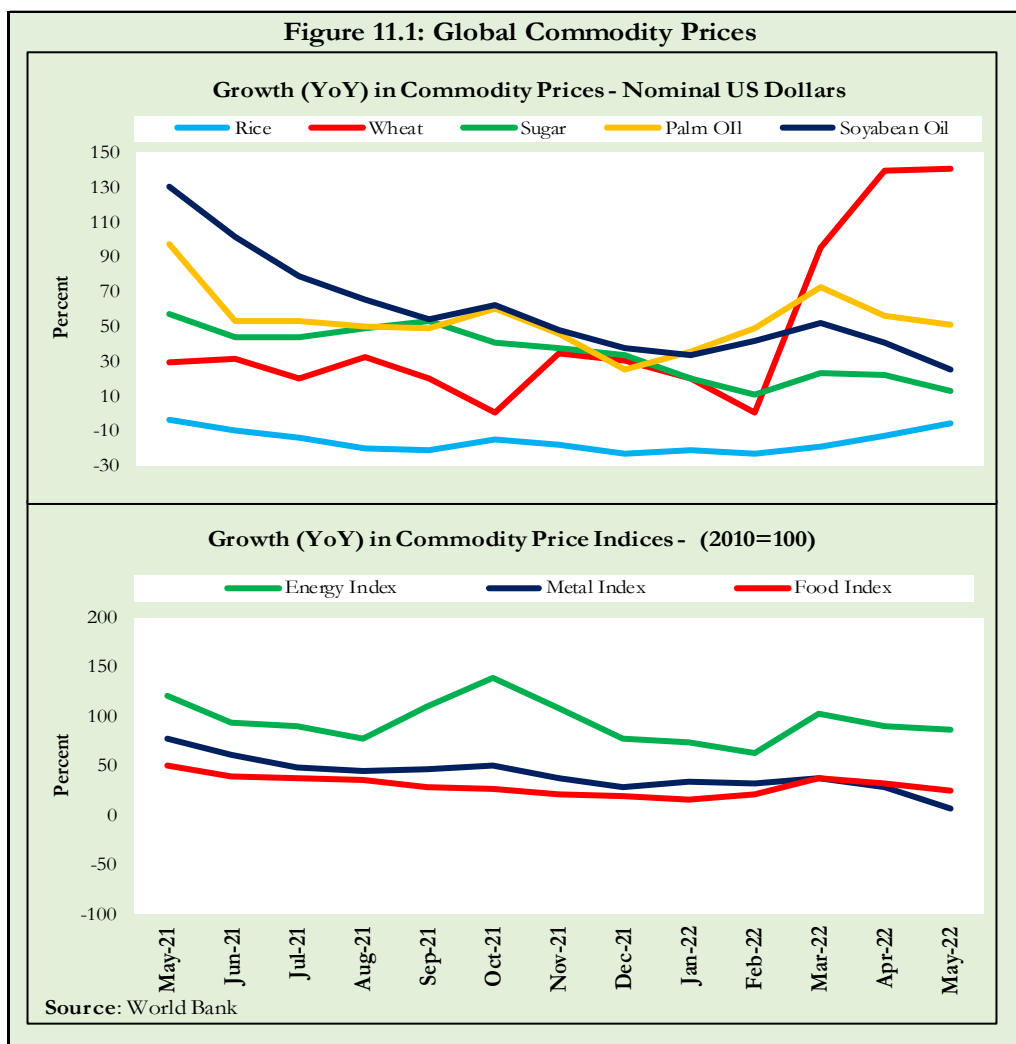
In global context, Pakistan’s inflation in comparison with inflation in selected developed and emerging economies is given in figure 10.1.



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	May-21		Apr-22		May-22	
	YoY	MoM	YoY	MoM	YoY	MoM
Food	49.4	6.5	32.6	1.0	24.6	0.1
Metals	77.0	7.5	28.7	-2.5	6.6	-11.0
Energy	119.9	6.8	89.6	-6.1	86.5	5.0
Agricultural	37.6	5.42	26.5	1.2	19.5	-0.4
Cotton	38.3	0.2	71.2	10.1	80.2	5.4



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 May 2022 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 April 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

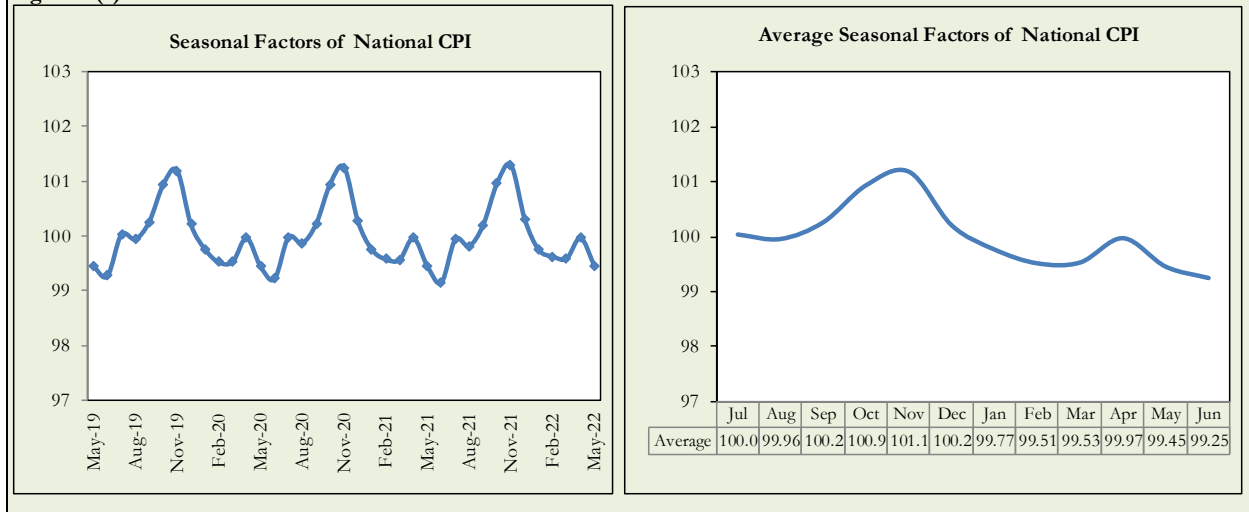


Fig. 12.1 (b): Seasonal Factor of Urban CPI

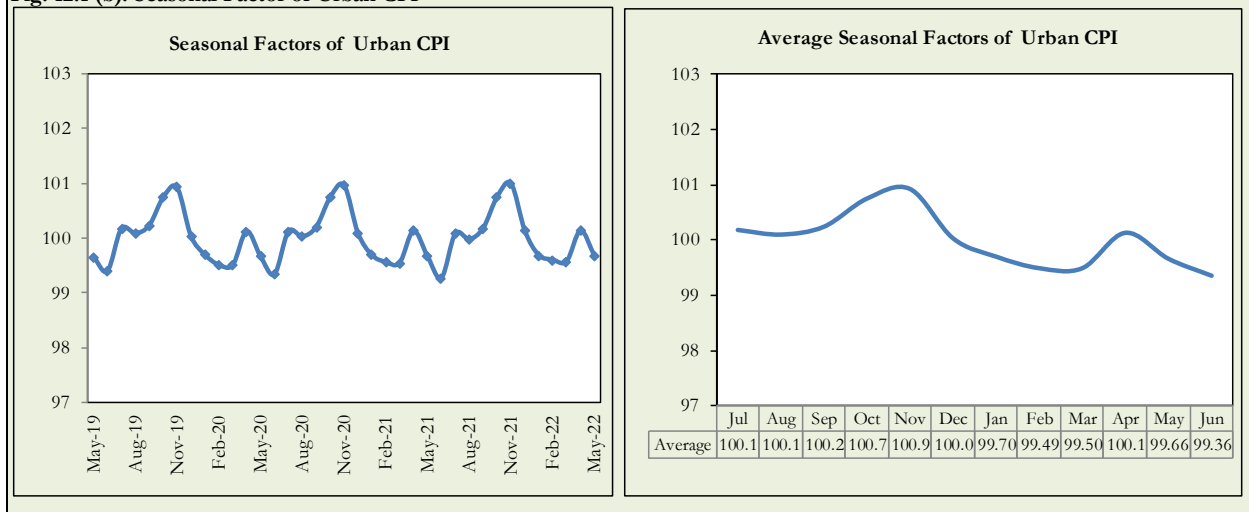
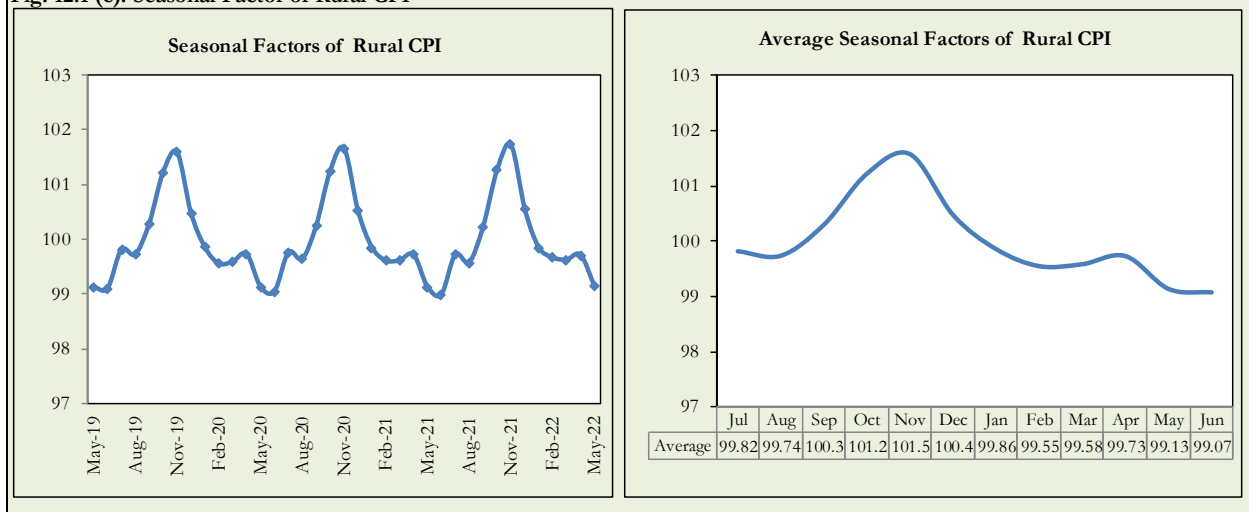


Fig. 12.1 (c): Seasonal Factor of Rural CPI



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

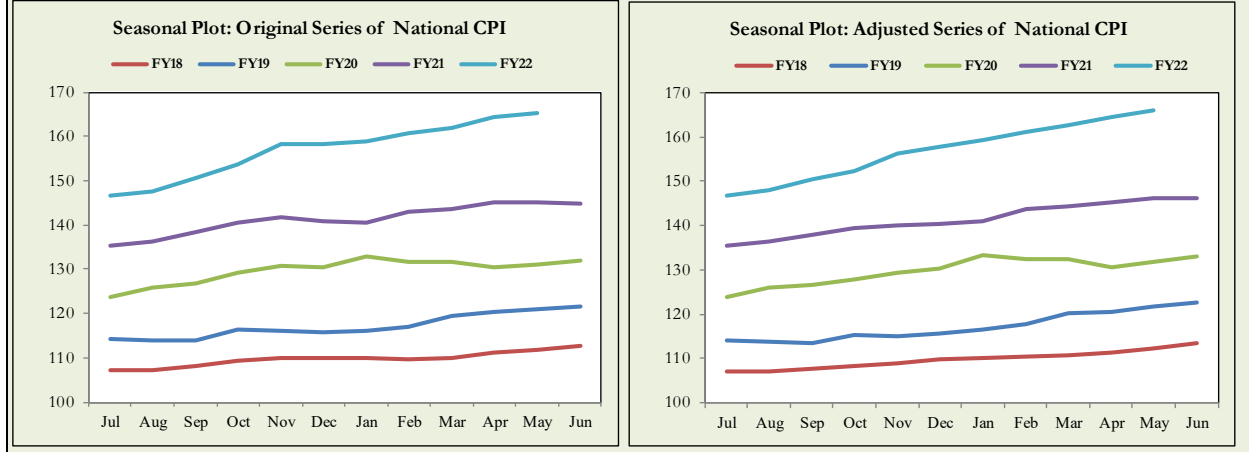


Fig. 12.2 (b): Seasonal Plot of Urban CPI

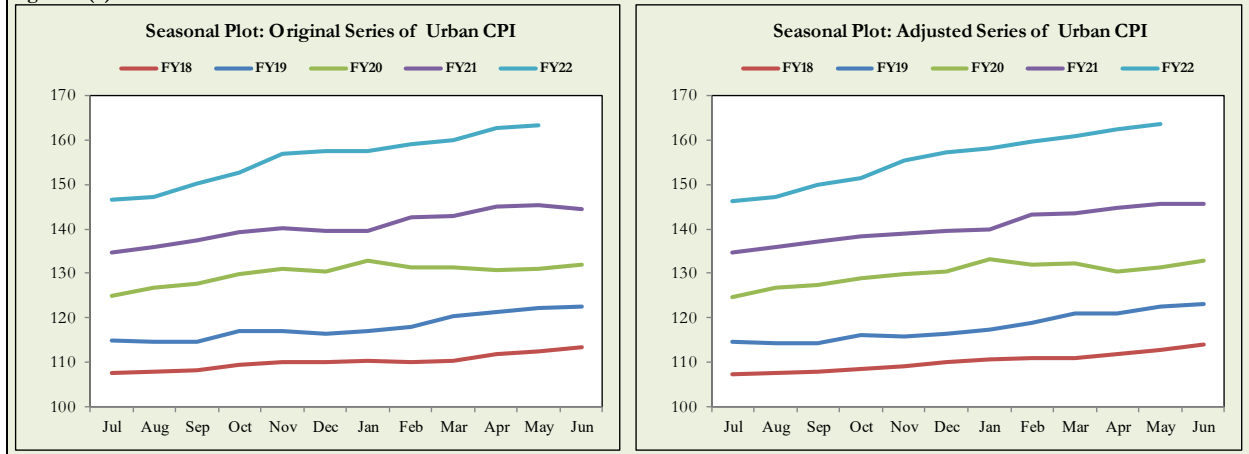
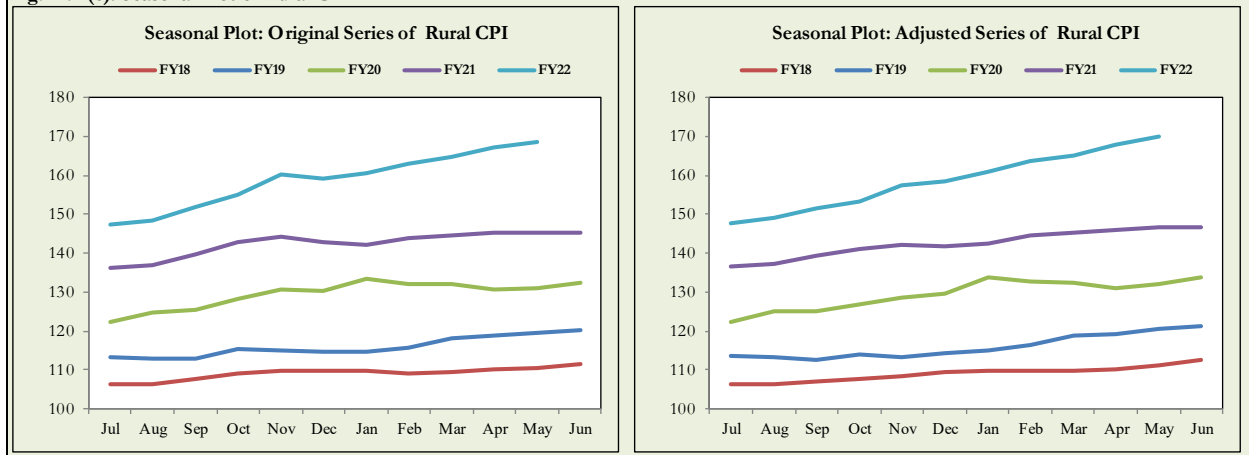


Fig. 12.2 (c): Seasonal Plot of Rural CPI



Seasonally adjusted Index of National CPI for May 2022 stood at 166.13 against 165.23 in original series showing an increase of 0.90 because of seasonal adjustment.

Seasonally adjusted Index of Urban CPI for May 2022 stood at 163.66 against 163.13 in original series showing an increase of 0.53 on account of seasonal adjustment.

Seasonally adjusted Index of Rural CPI for May 2022 stood at 169.85 against 168.39 in original series showing an increase of 1.46 on account of seasonal adjustment.

Month-on-month change of seasonally adjusted National CPI series stood at 0.96% reflecting a decrease during May 2022 over previous month and an decrease of 0.44% in original series.

Month-on-month change of seasonally adjusted Urban CPI series stood at 0.77% reflecting a decrease during May 2022 over previous month and an decrease of 0.31 % in original series.

Month-on-month change of seasonally adjusted Rural CPI series stood at 1.23% reflecting an decrease during May 2022 over previous month and an decrease of 0.65% in original series.

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

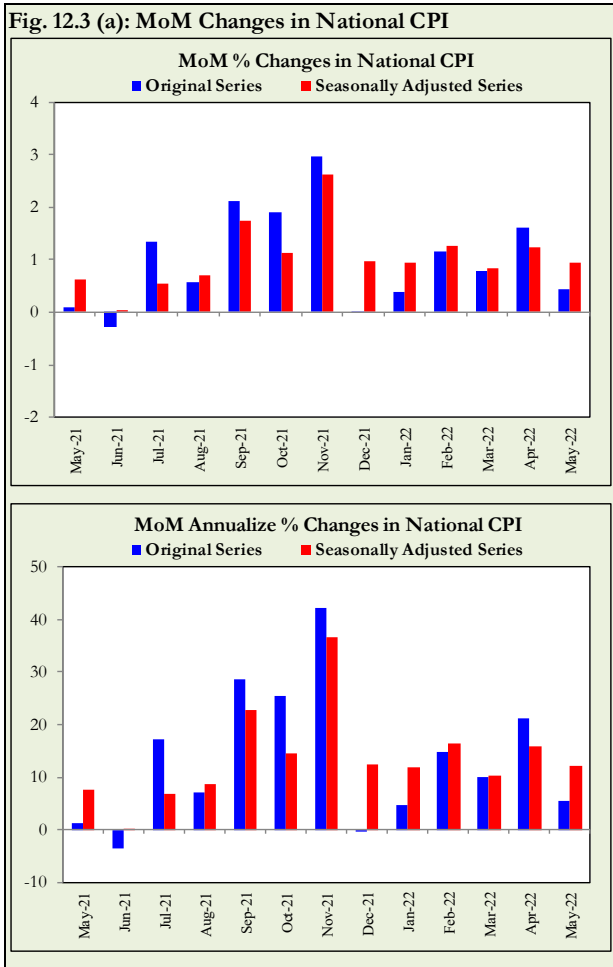


Fig. 12.3 (b): MoM % Changes in Urban CPI

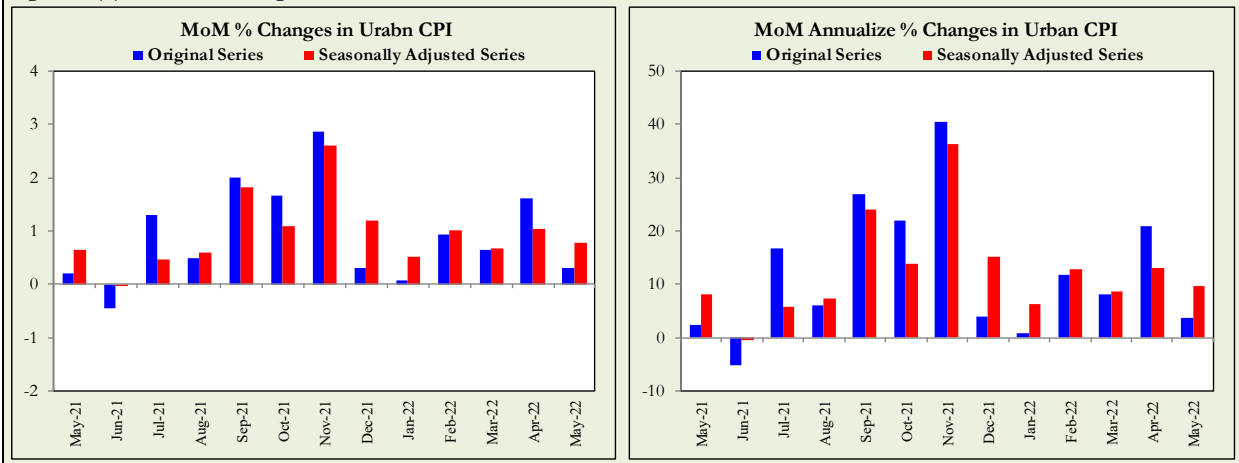
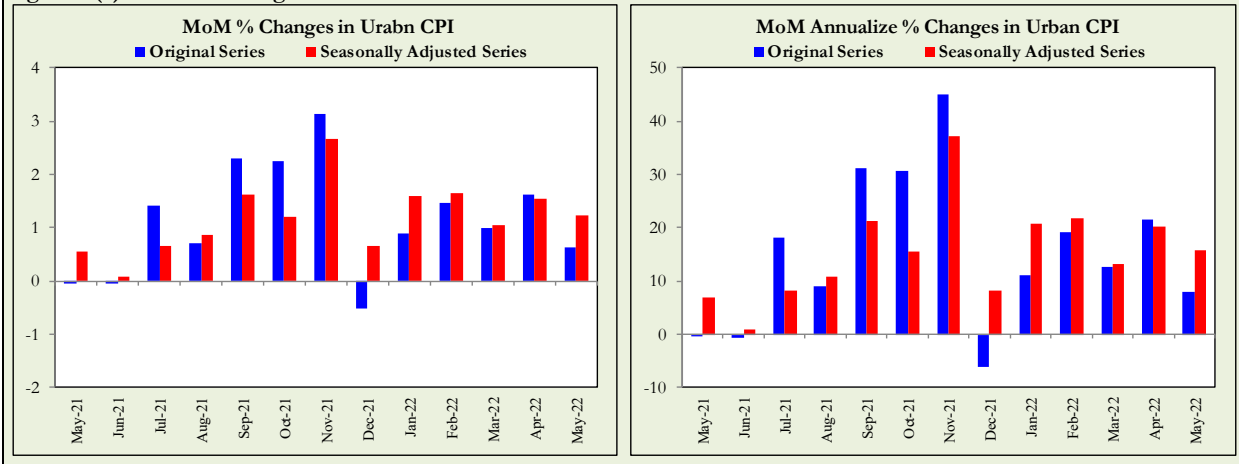


Fig. 12.3 (c): MoM % Changes in Rural CPI



List of Tables**Table A0: Inflation – Summary**

Period	CPI							WPI	SPI**	Core Inflation			
	General			Food		Non-Food				NFNE*		Trimmed	
	National	Urban	Rural	Urban	Rural	Urban	Rural			Urban	Rural	Urban	Rural
Year-on-Year													
May-21	10.9	10.8	10.9	15.3	12.8	8.3	9.2	19.4	16.9	6.8	7.6	10.0	10.3
Jun-21	9.7	9.6	9.7	11.0	9.8	8.8	9.7	20.9	15.4	6.7	7.3	9.4	9.8
Jul-21	8.4	8.7	8.0	9.4	7.3	8.2	8.7	17.3	12.6	6.9	6.9	9.0	8.4
Aug-21	8.4	8.3	8.4	10.2	9.1	7.2	7.7	17.1	12.7	6.3	6.2	7.8	7.8
Sep-21	9.0	9.1	8.8	10.8	9.1	8.1	8.5	19.6	13.8	6.4	6.2	8.7	8.2
Oct-21	9.2	9.6	8.7	9.4	7.2	9.7	10.0	21.2	14.0	6.7	6.7	8.7	8.2
Nov-21	11.5	12.0	10.9	11.9	8.6	12.0	13.0	27.0	17.4	7.6	8.2	9.8	9.5
Dec-21	12.3	12.7	11.6	11.7	9.0	13.4	14.0	26.2	19.3	8.3	8.9	10.8	10.3
Jan-22	13.00	13.0	12.9	13.3	11.8	12.8	13.9	24.0	19.5	8.2	9.0	10.6	10.9
Feb-22	12.2	11.5	13.3	14.3	14.6	9.9	12.2	23.6	18.1	7.8	9.4	9.8	11.3
Mar-22	12.7	11.9	13.9	14.5	15.5	10.4	12.5	23.8	15.8	8.9	10.3	10.5	11.7
Apr-22	13.4	12.2	15.1	15.6	17.7	10.2	12.8	28.1	16.5	9.1	10.9	10.5	12.8
May-22	13.8	12.4	15.9	15.5	19.0	10.4	13.1	29.6	16.1	9.7	11.5	10.7	14.1
Month-on-Month													
May-21	0.1	0.2	-0.03	1.1	0.2	-0.3	-0.3	0.3	0.9	0.2	0.3	0.2	0.4
Jun-21	-0.3	-0.4	-0.1	-1.9	-0.8	0.5	0.6	0.9	-0.8	0.3	0.4	0.3	0.6
Jul-21	1.3	1.3	1.4	1.5	1.6	1.1	1.2	2.3	1.4	0.8	0.7	0.8	0.8
Aug-21	0.6	0.5	0.7	0.5	0.8	0.5	0.6	1.2	0.9	0.2	0.2	0.4	0.6
Sep-21	2.1	2.0	2.3	3.6	3.7	1.1	1.0	3.2	2.9	0.4	0.5	0.9	1.2
Oct-21	1.9	1.7	2.2	1.5	2.6	1.8	1.9	4.2	3.1	0.9	1.0	1.1	1.6
Nov-21	3.0	2.9	3.1	3.9	3.3	2.2	3.0	3.8	4.1	1.1	1.8	1.7	2.2
Dec-21	-0.02	0.3	-0.5	-2.3	-3.1	2.0	1.9	-0.2	0.3	1.1	1.1	1.1	1.0
Jan-22	0.4	0.1	0.9	-0.8	0.4	0.6	1.4	0.6	-0.2	0.8	1.2	0.5	1.1
Feb-22	1.2	0.9	1.5	2.2	2.6	0.2	0.4	1.9	1.3	0.8	0.9	0.8	1.2
Mar-22	0.8	0.7	1.0	1.8	2.3	-0.1	-0.2	3.9	0.6	1.2	1.1	0.8	0.8
Apr-22	1.6	1.6	1.6	3.7	2.8	0.3	0.5	3.2	1.1	1.1	1.2	0.9	0.9
May-22	0.4	0.3	0.6	1.0	1.3	-0.1	0.0	1.4	0.6	0.7	0.9	0.8	1.4

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

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

Groups	Weights	MoM change			YoY change		
		May-21	Apr-22	May-22	May-21	Apr-22	May-22
Food & Non-Alcoholic	34.6	0.7	3.7	0.9	14.8	17.0	17.3
Alcoholic Beverages & Tobacco	1.0	0.2	3.1	4.9	5.0	5.1	10.1
Clothing & Footwear	8.6	0.3	2.1	0.7	10.7	10.8	11.3
Housing, Water, Elec, Gas & other Fuels	23.6	-1.2	-0.7	-2.3	8.4	7.1	5.8
Furnishing & Household Equip. Maintenance etc	4.1	0.5	1.6	1.8	9.6	14.7	16.1
Health	2.8	0.3	0.9	0.5	9.0	10.4	10.6
Transport	5.9	0.1	0.4	2.7	14.0	28.3	31.8
Communication	2.2	0.0	0.0	0.1	1.5	1.6	1.8
Recreation & Culture	1.6	0.4	0.4	2.8	4.9	9.7	12.3
Education	3.8	0.0	0.6	1.0	1.6	8.4	9.5
Restaurants & Hotels	6.9	0.6	0.2	1.8	8.6	14.6	16.0
Miscellaneous	4.9	0.7	0.8	1.2	10.7	12.8	13.3
Overall National CPI	100.0	0.1	1.6	0.4	10.9	13.4	13.8

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

Groups	Weights	MoM change			YoY change		
		May-21	Apr-22	May-22	May-21	Apr-22	May-22
I. Food Group	36.8	1.1	3.7	1.0	15.3	15.6	15.5
Food & Non-Alcoholic Beverages	30.4	1.1	4.3	0.9	16.3	16.0	15.8
Alcoholic Beverages & Tobacco	0.9	0.2	3.3	4.6	6.1	4.8	9.4
Restaurant & Hotels (Food)	5.5	0.8	0.3	0.8	11.2	15.0	15.1
II. Non-Food Group	63.2	-0.3	0.3	-0.1	8.3	10.2	10.4
Clothing & Footwear	8.0	0.1	2.0	0.5	11.2	10.5	11.0
Housing, Water, Elec, Gas & other Fuels	27.0	-1.1	-0.6	-2.3	7.9	5.6	4.4
Furnishing & Household Equip. Maintenance etc	4.1	0.5	1.6	2.0	8.8	13.5	15.2
Health	2.3	0.5	0.8	0.4	9.6	10.3	10.3
Transport	6.1	0.1	0.6	2.9	14.2	28.6	32.2
Communication	2.4	0.0	0.0	0.2	2.0	2.0	2.3
Recreation & Culture	1.7	0.2	0.2	3.0	3.4	8.9	11.9
Education	4.9	0.0	0.6	1.1	1.2	9.2	10.4
Restaurants & Hotels (Non-food Component)	1.9	0.0	0.0	0.0	3.3	13.0	13.0
Miscellaneous	4.8	0.8	0.7	1.1	10.8	12.0	12.2
Overall Urban CPI	100.0	0.2	1.6	0.3	10.8	12.2	12.4

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

Groups	Weights	MoM Change			YoY Change		
		May-21	Apr-22	May-22	May-21	Apr-22	May-22
I. Food Group	45.9	0.2	2.8	1.3	12.8	17.7	19.0
Food and Non-Alcoholic Beverages	40.9	0.2	3.1	0.8	13.2	18.2	19.0
Alcoholic Beverages, Tobacco	1.3	0.2	2.8	5.3	3.8	5.5	11.0
Restaurants and Hotels (Food Component)	3.8	0.8	0.4	5.9	11.6	15.4	21.2
II. Non-Food Group	54.1	-0.3	0.5	0.0	9.2	12.8	13.1
Clothing and Footwear	9.5	0.5	2.3	0.9	10.0	11.3	11.7
Housing, Water, Elec., Gas and Other Fuels	18.5	-1.4	-0.8	-2.5	9.7	10.3	9.1
Furnishing and Household Equip.	4.1	0.6	1.6	1.5	10.8	16.4	17.5
Maintenance	3.5	0.1	0.9	0.6	8.4	10.4	10.9
Health	5.6	0.1	0.2	2.5	13.5	27.9	31.0
Transport	2.0	0.0	0.1	0.0	0.8	0.8	0.8
Communication	1.4	0.8	0.8	2.5	7.5	11.0	13.0
Recreation and Culture	2.1	0.0	1.0	0.8	2.9	5.1	6.0
Education	2.4	0.0	0.0	0.0	0.6	13.3	13.3
Restaurants and Hotels (Non-Food Component)	5.0	0.5	1.0	1.3	10.6	13.9	14.9
Miscellaneous							
Rural CPI	100.0	-0.03	1.6	0.6	10.9	15.1	15.9

Table A4: Top Ten Contributors to Urban CPI Inflation (YoY) – May 2022

Items/Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-21	May-22		
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	25.43	44.35	10.82
2	House Rent	19.26	6.21	5.58	8.28
3	Milk Fresh	7.11	15.41	12.62	7.03
4	Readymade Food	5.52	11.18	15.05	6.65
5	Cooking Oil	1.10	20.62	60.05	6.44
6	Vegetable Ghee	1.03	22.10	58.70	6.17
7	Wheat Flour	3.01	28.54	19.17	4.81
8	Meat	2.04	14.15	24.79	4.73
9	Education	4.88	1.19	10.39	4.15
10	Liquefied Hydrocarbons	0.51	-1.97	103.09	3.66
Total		47.37			62.74
B. Ranked by Percentage Change					
1	Tomatoes	0.35	4.96	162.22	2.06
2	Onions	0.59	-31.52	153.44	3.51
3	Liquefied Hydrocarbons	0.51	-1.97	103.09	3.66
4	Cooking Oil	1.10	20.62	60.05	6.44
5	Vegetable Ghee	1.03	22.10	58.70	6.17
6	Mustard Oil	0.01	30.75	56.76	0.06
7	Pulse Masoor	0.16	-7.09	50.33	0.48
8	Motor Fuel	2.91	25.43	44.35	10.82
9	Gram Whole	0.09	-0.16	39.56	0.26
10	Nimco	0.12	13.80	27.46	0.27
Total		6.87			33.73
C. Ranked by Weights					
1	House Rent	19.26	6.21	5.58	8.28
2	Milk Fresh	7.11	15.41	12.62	7.03
3	Readymade Food	5.52	11.18	15.05	6.65
4	Education	4.88	1.19	10.39	4.15
5	Electricity Charges	4.56	21.83	-11.81	-3.95
6	Wheat Flour	3.01	28.54	19.17	4.81
7	Appliances/Articles/Products For Personal	2.98	11.84	10.35	2.46
8	Motor Fuel	2.91	25.43	44.35	10.82
9	Cotton Cloth	2.22	12.07	12.54	2.33
10	Meat	2.04	14.15	24.79	4.73
Total		54.49			47.31

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 12.4 percent in May 2022.

Table A5: Top Ten Contributors to Urban CPI Inflation (MoM) in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Wheat Flour	3.01	3.45	10.51	102.01
2	Chicken	1.36	-9.40	16.98	86.69
3	Onions	0.59	42.83	36.17	55.25
4	Motor Fuel	2.91	0.10	3.19	39.04
5	Meat	2.04	3.25	3.98	32.66
6	Eggs	0.51	0.37	13.07	20.45
7	Education	4.88	0.55	1.06	16.59
8	Readymade Food	5.52	0.25	0.82	14.91
9	Transport Services	1.75	-0.97	2.69	14.15
10	Milk Fresh	7.11	1.27	0.59	13.22
Total		29.68			394.97
B. Ranked by Percentage Change					
1	Onions	0.59	42.83	36.17	55.25
2	Chicken	1.36	-9.40	16.98	86.69
3	Eggs	0.51	0.37	13.07	20.45
4	Wheat Flour	3.01	3.45	10.51	102.01
5	Stationery	0.35	0.12	8.00	8.30
6	Garbage Collection	0.11	0.22	7.21	2.81
7	Gram Whole	0.09	5.67	6.68	2.07
8	Pulse Masoor	0.16	1.13	5.96	2.92
9	Wheat Products	0.09	-3.28	5.86	1.92
10	Plastic Products	0.05	0.50	4.75	0.69
Total		6.32			283.11
C. Ranked by Weights					
1	House Rent	19.26	1.12	0.00	0.00
2	Milk Fresh	7.11	1.27	0.59	13.22
3	Readymade Food	5.52	0.25	0.82	14.91
4	Education	4.88	0.55	1.06	16.59
5	Electricity Charges	4.56	-7.84	-15.46	-193.37
6	Wheat Flour	3.01	3.45	10.51	102.01
7	Appliances/Articles/Products For	2.98	0.65	1.38	12.82
8	Motor Fuel	2.91	0.10	3.19	39.04
9	Cotton Cloth	2.22	2.05	0.10	0.76
10	Meat	2.04	3.25	3.98	32.66
Total		54.49			38.64

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

Table A6: Top and Bottom Fifteen Contributors to Urban CPI Inflation (YoY) in May 2022

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-21	May-22		
A. Ranked by Weighted Contribution					
1	Motor Fuel	2.91	25.43	44.35	10.82
2	House Rent	19.26	6.21	5.58	8.28
3	Milk Fresh	7.11	15.41	12.62	7.03
4	Readymade Food	5.52	11.18	15.05	6.65
5	Cooking Oil	1.10	20.62	60.05	6.44
6	Vegetable Ghee	1.03	22.10	58.70	6.17
7	Wheat Flour	3.01	28.54	19.17	4.81
8	Meat	2.04	14.15	24.79	4.73
9	Education	4.88	1.19	10.39	4.15
10	Liquefied Hydrocarbons	0.51	-1.97	103.09	3.66
11	Onions	0.59	-31.52	153.44	3.51
12	Transport Services	1.75	4.29	22.45	2.76
13	Fresh Vegetables	1.53	12.53	24.42	2.61
14	Appliances/Articles/Products For	2.98	11.84	10.35	2.46
15	Cotton Cloth	2.22	12.07	12.54	2.33
Total		56.44			76.41
Bottom 15 Contributors					
1	Electricity Charges	4.56	21.83	-11.81	-3.95
2	Condiments And Spices	1.33	26.71	-17.50	-2.74
3	Sugar	1.11	21.62	-13.74	-1.36
4	Potatoes	0.45	-15.59	-21.60	-1.03
5	Pulse Moong	0.17	-17.22	-24.03	-0.33
6	Gas Charges	1.08	0.00	0.00	0.00
7	Therapeutic Appliances And	0.01	8.77	5.39	0.00
8	Postal Services	0.02	10.35	1.45	0.00
9	Dental Services	0.02	8.53	6.26	0.01
10	Major Tools & Equipments	0.01	15.05	17.07	0.01
11	Carpets	0.03	1.87	7.75	0.02
12	Gur	0.04	4.63	5.10	0.02
13	Newspapers	0.07	0.00	3.35	0.02
14	Motor Vehicle Tax	0.05	0.00	7.62	0.03
15	Dessert Preparation	0.04	6.26	10.32	0.03
Total		8.99			-9.27

Table A7: Top and Bottom Fifteen Contributors to Urban CPI Inflation (MoM) in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Wheat Flour	3.01	3.45	10.51	102.01
2	Chicken	1.36	-9.40	16.98	86.69
3	Onions	0.59	42.83	36.17	55.25
4	Motor Fuel	2.91	0.10	3.19	39.04
5	Meat	2.04	3.25	3.98	32.66
6	Eggs	0.51	0.37	13.07	20.45
7	Education	4.88	0.55	1.06	16.59
8	Readymade Food	5.52	0.25	0.82	14.91
9	Transport Services	1.75	-0.97	2.69	14.15
10	Milk Fresh	7.11	1.27	0.59	13.22
11	Appliances/Articles/Products For	2.98	0.65	1.38	12.82
12	Rice	1.18	0.39	3.40	12.72
13	Washing Soap/Detergents/Match	1.41	1.36	2.19	10.36
14	Cigarettes	0.72	4.39	4.68	9.89
15	Motor Vehicles	0.81	5.42	3.30	9.57
Total		36.78			450.33
Bottom 15 Contributors					
1	Electricity Charges	4.56	-7.84	-15.46	-193.37
2	Fresh Vegetables	1.53	14.41	-15.26	-85.93
3	Fresh Fruits	1.44	21.07	-12.94	-77.47
4	Tomatoes	0.35	51.53	-37.73	-72.35
5	Condiments And Spices	1.33	0.46	-1.58	-7.44
6	Sugar	1.11	-0.70	-2.05	-6.41
7	Potatoes	0.45	1.43	-0.40	-0.54
8	Gur	0.04	-1.23	-2.50	-0.30
9	Beans	0.04	1.05	-0.93	-0.14
10	Fish	0.39	-0.07	-0.01	-0.01
11	Postal Services	0.02	0.00	0.00	0.00
12	Motor Vehicle Tax	0.05	0.00	0.00	0.00
13	Honey	0.10	0.15	0.00	0.00
14	Woolen Readymade Garments	0.43	0.00	0.00	0.00
15	Communication Services	1.88	0.00	0.00	0.00
Total		13.72			-443.96

Table A8: Top and Bottom Fifteen Contributors to MoM Urban CPI Food Inflation in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Wheat flour	3.01	3.45	10.51	102.01
2	Chicken	1.36	-9.40	16.98	86.69
3	Onions	0.59	42.83	36.17	55.25
4	Meat	2.04	3.25	3.98	32.66
5	Eggs	0.51	0.37	13.07	20.45
6	Readymade food	5.52	0.25	0.82	14.91
7	Milk fresh	7.11	1.27	0.59	13.22
8	Rice	1.18	0.39	3.40	12.72
9	Cigarettes	0.72	4.39	4.68	9.89
10	Wheat	0.61	-0.25	2.06	4.44
11	Beverages	0.89	0.41	1.68	4.20
12	Sweetmeat	0.35	0.32	2.24	2.96
13	Pulse masoor	0.16	1.13	5.96	2.92
14	Pan prepared	0.14	0.00	4.26	2.71
15	Gram whole	0.09	5.67	6.68	2.07
Total		24.29			367.13
Bottom 15 Contributors					
1	Fresh vegetables	1.53	14.41	-15.26	-85.93
2	Fresh fruits	1.44	21.07	-12.94	-77.47
3	Tomatoes	0.35	51.53	-37.73	-72.35
4	Condiments and Spices	1.33	0.46	-1.58	-7.44
5	Sugar	1.11	-0.70	-2.05	-6.41
6	Potatoes	0.45	1.43	-0.40	-0.54
7	Gur	0.04	-1.23	-2.50	-0.30
8	Beans	0.04	1.05	-0.93	-0.14
9	Fish	0.39	-0.07	-0.01	-0.01
10	Honey	0.10	0.15	0.00	0.00
11	Butter	0.09	0.79	0.03	0.01
12	Dry fruits	0.33	-0.57	0.02	0.02
13	Ice cream	0.10	0.27	0.11	0.04
14	Mustard oil	0.01	2.31	1.93	0.12
15	Besan	0.08	1.03	1.14	0.27
Total		7.40			-250.14

Table A9: Top and Bottom Fifteen Contributors to MoM Urban CPI Non-Food Inflation in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Motor fuel	2.91	0.10	3.19	39.04
2	Education	4.88	0.55	1.06	16.59
3	Transport services	1.75	-0.97	2.69	14.15
4	Appliances/Articles/Products for	2.98	0.65	1.38	12.82
5	Washing soap/detergents/match	1.41	1.36	2.19	10.36
6	Motor vehicles	0.81	5.42	3.30	9.57
7	stationery	0.35	0.12	8.00	8.30
8	Household equipments	1.00	3.88	2.05	6.66
9	Readymade garments	1.32	1.37	1.27	4.99
10	Tailoring	1.07	6.37	1.35	4.83
11	Household servant	0.77	0.37	1.79	4.06
12	Personal Effects n.e.c.	0.94	0.81	0.87	3.70
13	Furniture and furnishing	0.48	0.95	2.46	3.64
14	Liquefied Hydrocarbons	0.51	-3.75	1.32	3.37
15	Text books	0.67	0.38	1.64	2.95
Total		21.84			145.04
Bottom 15 Contributors					
1	Electricity charges	4.56	-7.84	-15.46	-193.37
2	Communication Services	1.88	0.00	0.00	0.00
3	Motor vehicle tax	0.05	0.00	0.00	0.00
4	Gas charges	1.08	0.00	0.00	0.00
5	Postal services	0.02	0.00	0.00	0.00
6	Woolen readymade garments	0.43	0.00	0.00	0.00
7	House rent	19.26	1.12	0.00	0.00
8	Therapeutic Appliances and	0.01	0.01	0.01	0.00
9	Carpets	0.03	0.06	0.07	0.01
10	Dental services	0.02	0.58	0.48	0.02
11	Accommodation Services	0.13	0.00	0.07	0.02
12	Major tools & equipments	0.01	4.50	2.00	0.05
13	Hospitals services	0.57	0.00	0.03	0.06
14	Electrical Appliances for Personal	0.05	1.26	0.52	0.06
15	Solid Fuel	0.42	-1.00	0.06	0.07
Total		28.51			-193.08

Table A10: Top Ten Contributors to Rural CPI Inflation (YoY) in May 2022

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-21	May-22		
A. Ranked by Weighted Contribution					
1	Vegetable Ghee	2.38	25.35	59.87	12.32
2	Milk Fresh	10.38	9.23	14.09	8.45
3	Motor Fuels	2.49	26.97	43.73	7.01
4	Readymade Food	3.80	11.58	21.20	5.40
5	Wheat	3.47	27.66	22.25	4.95
6	Wheat Flour	3.43	26.02	20.15	4.46
7	Solid Fuel	4.48	9.10	15.95	4.37
8	Liquefied Hydrocarbons	1.00	4.34	77.74	4.10
9	Onions	0.90	-34.37	151.37	3.79
10	Fresh Vegetables	2.09	-1.18	39.29	3.76
Total		34.42			58.61
B. Ranked by Percentage Change					
1	Onions	0.90	-34.37	151.37	3.79
2	Tomatoes	0.51	9.74	147.73	1.87
3	Liquefied Hydrocarbons	1.00	4.34	77.74	4.10
4	Mustard Oil	0.01	28.99	62.14	0.06
5	Cooking Oil	0.60	28.98	61.15	3.10
6	Vegetable Ghee	2.38	25.35	59.87	12.32
7	Pulse Masoor	0.21	-4.76	52.88	0.53
8	Gram Whole	0.11	1.73	48.60	0.30
9	Motor Fuels	2.49	26.97	43.73	7.01
10	Fresh Vegetables	2.09	-1.18	39.29	3.76
Total		10.30			36.84
C. Ranked by Weights					
1	Milk Fresh	10.38	9.23	14.09	8.45
2	House Rent	8.61	6.58	5.73	2.96
3	Solid Fuel	4.48	9.10	15.95	4.37
4	Readymade Food	3.80	11.58	21.20	5.40
5	Wheat	3.47	27.66	22.25	4.95
6	Electricity Charges	3.44	21.83	-11.81	-2.32
7	Wheat Flour	3.43	26.02	20.15	4.46
8	Cotton Cloth	2.84	12.48	11.59	2.40
9	Motor Fuels	2.49	26.97	43.73	7.01
10	Vegetable Ghee	2.38	25.35	59.87	12.32
Total		45.32			50.00

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 15.9 percent in May 2022.

Table A11: Top Ten Contributors to Rural CPI Inflation (MoM) in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Chicken	1.46	-9.26	17.73	46.54
2	Readymade Food	3.80	0.44	5.90	36.73
3	Onions	0.90	50.38	28.60	29.88
4	Milk Fresh	10.38	0.92	2.05	29.31
5	Wheat Flour	3.43	0.63	5.28	28.49
6	Motor Fuels	2.49	0.12	3.15	15.03
7	Meat	1.71	2.41	3.13	10.08
8	Vegetable Ghee	2.38	5.60	1.33	9.20
9	Wheat	3.47	-2.44	1.56	8.94
10	Cigarettes	1.24	2.93	5.42	8.72
Total		31.26			222.92
B. Ranked by Percentage Change					
1	Onions	0.90	50.38	28.60	29.88
2	Chicken	1.46	-9.26	17.73	46.54
3	Eggs	0.57	-4.51	10.48	8.25
4	Gram Whole	0.11	5.48	8.33	1.50
5	Potatoes	0.74	-0.14	6.95	7.29
6	Readymade Food	3.80	0.44	5.90	36.73
7	Cigarettes	1.24	2.93	5.42	8.72
8	Wheat Flour	3.43	0.63	5.28	28.49
9	Mustard Oil	0.01	2.46	5.16	0.17
10	Text Books	0.50	1.63	4.90	2.96
Total		12.76			170.53
C. Ranked by Weights					
1	Milk Fresh	10.38	0.92	2.05	29.31
2	House Rent	8.61	0.98	0.00	0.00
3	Solid Fuel	4.48	0.55	0.07	0.50
4	Readymade Food	3.80	0.44	5.90	36.73
5	Wheat	3.47	-2.44	1.56	8.94
6	Electricity Charges	3.44	-7.84	-15.46	-67.65
7	Wheat Flour	3.43	0.63	5.28	28.49
8	Cotton Cloth	2.84	3.95	0.33	1.63
9	Motor Fuels	2.49	0.12	3.15	15.03
10	Vegetable Ghee	2.38	5.60	1.33	9.20
Total		45.32			62.18

Note: Weighted contribution is estimated by multiplying the weights by the price change of an item; this is then reported as a share in MoM change in Rural CPI, which is 0.6 percent in May 2022.

Table A12: Top and Bottom Fifteen Contributors to Rural CPI Inflation (YoY) in May 2022

Items/ Contributors	Weights	YoY Change		Weighted Contribution (%)	
		May-21	May-22		
A. Ranked by Weighted Contribution					
1	Vegetable Ghee	2.38	25.35	59.87	12.32
2	Milk Fresh	10.38	9.23	14.09	8.45
3	Motor Fuels	2.49	26.97	43.73	7.01
4	Readymade Food	3.80	11.58	21.20	5.40
5	Wheat	3.47	27.66	22.25	4.95
6	Wheat Flour	3.43	26.02	20.15	4.46
7	Solid Fuel	4.48	9.10	15.95	4.37
8	Liquefied Hydrocarbons	1.00	4.34	77.74	4.10
9	Onions	0.90	-34.37	151.37	3.79
10	Fresh Vegetables	2.09	-1.18	39.29	3.76
11	Cooking Oil	0.60	28.98	61.15	3.10
12	House Rent	8.61	6.58	5.73	2.96
13	Fresh Fruits	1.45	-5.11	27.71	2.93
14	Meat	1.71	16.33	22.87	2.89
15	Transport Services	1.80	2.98	26.58	2.63
Total		48.59			73.12
Bottom 15 Contributors					
1	Electricity Charges	3.44	21.83	-11.81	-2.32
2	Sugar	2.03	21.67	-13.13	-1.84
3	Condiments And Spices	1.49	3.98	-14.63	-1.77
4	Potatoes	0.74	-12.45	-21.31	-1.42
5	Pulse Moong	0.25	-18.79	-25.24	-0.42
6	Motor Vehicle Tax	0.02	0.00	-5.56	-0.01
7	Accommodation Services	0.14	0.03	0.00	0.00
8	Newspapers	0.02	2.40	0.00	0.00
9	Postal Services	0.01	0.00	0.00	0.00
10	Garbage Collection	0.01	8.75	8.99	0.00
11	Dessert Preparation	0.01	11.49	7.04	0.01
12	Communication Services	1.65	0.69	0.09	0.01
13	Dental Services	0.02	7.84	8.41	0.01
14	Gur	0.15	6.94	0.93	0.01
15	Water Supply	0.06	36.99	1.63	0.01
Total		10.04			-7.73

Table A13: Top and Bottom Fifteen Contributors to Rural CPI (MoM) Inflation in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Chicken	1.46	-9.26	17.73	46.54
2	Readymade Food	3.80	0.44	5.90	36.73
3	Onions	0.90	50.38	28.60	29.88
4	Milk Fresh	10.38	0.92	2.05	29.31
5	Wheat Flour	3.43	0.63	5.28	28.49
6	Motor Fuels	2.49	0.12	3.15	15.03
7	Meat	1.71	2.41	3.13	10.08
8	Vegetable Ghee	2.38	5.60	1.33	9.20
9	Wheat	3.47	-2.44	1.56	8.94
10	Cigarettes	1.24	2.93	5.42	8.72
11	Eggs	0.57	-4.51	10.48	8.25
12	Potatoes	0.74	-0.14	6.95	7.29
13	Rice	1.55	2.72	2.33	6.90
14	Personal Effects N.E.C.	1.21	0.51	2.36	5.66
15	Transport Services	1.80	-0.11	1.98	5.19
Total		37.13			256.21
Bottom 15 Contributors					
1	Fresh Vegetables	2.09	6.27	-20.05	-71.43
2	Tomatoes	0.51	62.18	-50.78	-69.17
3	Electricity Charges	3.44	-7.84	-15.46	-67.65
4	Fresh Fruits	1.45	26.47	-1.68	-4.93
5	Sugar	2.03	-1.48	-1.63	-4.32
6	Condiments And Spices	1.49	-0.38	-0.47	-1.05
7	Fish	0.26	0.00	-0.22	-0.08
8	Dry Fruits	0.25	0.02	-0.09	-0.04
9	Beans	0.09	3.64	-0.02	0.00
10	House Rent	8.61	0.98	0.00	0.00
11	Marriage Hall Charges	2.25	0.00	0.00	0.00
12	Communication Services	1.65	0.00	0.00	0.00
13	Hospitals Services	1.01	0.30	0.00	0.00
14	Doctor Clinic Fee	0.51	1.11	0.00	0.00
15	Woolen Readymade Garments	0.54	0.00	0.00	0.00
Total		26.18			-218.67

Table A14: Top and Bottom Fifteen Contributors to MoM Rural CPI Food Inflation in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Chicken	1.46	-9.26	17.73	46.54
2	Readymade Food	3.80	0.44	5.90	36.73
3	Onions	0.90	50.38	28.60	29.88
4	Milk fresh	10.38	0.92	2.05	29.31
5	Wheat Flour	3.43	0.63	5.28	28.49
6	Meat	1.71	2.41	3.13	10.08
7	Vegetable ghee	2.38	5.60	1.33	9.20
8	Wheat	3.47	-2.44	1.56	8.94
9	Cigarettes	1.24	2.93	5.42	8.72
10	Eggs	0.57	-4.51	10.48	8.25
11	Potatoes	0.74	-0.14	6.95	7.29
12	Rice	1.55	2.72	2.33	6.90
13	Milk products	0.96	1.42	2.63	3.43
14	Cooking oil	0.60	2.54	1.67	2.87
15	Butter	0.33	0.22	3.09	1.62
Total		33.53			238.26
Bottom 15 Contributors					
1	Fresh Vegetables	2.09	6.27	-20.05	-71.43
2	Tomatoes	0.51	62.18	-50.78	-69.17
3	Fresh fruits	1.45	26.47	-1.68	-4.93
4	Sugar	2.03	-1.48	-1.63	-4.32
5	Condiments and Spices	1.49	-0.38	-0.47	-1.05
6	Fish	0.26	0.00	-0.22	-0.08
7	Dry fruits	0.25	0.02	-0.09	-0.04
8	Beans	0.09	3.64	-0.02	0.00
9	Honey	0.03	0.31	0.00	0.00
10	Dessert Preparation	0.01	1.41	0.16	0.00
11	Milk powder	0.11	0.15	0.04	0.01
12	Gur	0.15	-1.76	0.34	0.07
13	Besan	0.07	2.27	0.82	0.08
14	Wheat Products	0.11	0.31	0.74	0.12
15	Ice Cream	0.06	0.33	1.77	0.14
Total		8.71			-150.60

Table A15: Top and Bottom Fifteen Contributors to MoM Rural CPI Non-Food Inflation in May 2022

Items/ Contributors	Weights	MoM Change		Weighted Contribution (%)	
		Apr-22	May-22		
A. Ranked by Weighted Contribution					
1	Motor Fuels	2.49	0.12	3.15	15.03
2	Personal Effects n.e.c.	1.21	0.51	2.36	5.66
3	Transport Services	1.80	-0.11	1.98	5.19
4	Readymade Garments	1.13	1.20	3.01	5.02
5	Household Equipments	1.28	2.42	2.28	4.57
6	Tailoring	1.30	3.60	2.15	4.22
7	Appliances/Articles/Products for	2.27	1.09	1.11	3.39
8	Drugs and Medicines	1.58	1.36	1.21	3.10
9	Text Books	0.50	1.63	4.90	2.96
10	Washing Soaps, Detergents and	1.70	1.16	1.00	2.61
11	Education	2.13	0.96	0.80	2.29
12	Furniture and Furnishing	0.58	1.39	2.40	2.09
13	Liquefied Hydrocarbons	1.00	-0.34	0.91	1.81
14	Cotton Cloth	2.84	3.95	0.33	1.63
15	Personal Grooming Services	1.54	1.20	0.61	1.55
Total		23.35			61.14
Bottom 15 Contributors					
1	Electricity Charges	3.44	-7.84	-15.46	-67.65
2	Accommodation Services	0.14	0.00	0.00	0.00
3	Newspapers	0.02	0.00	0.00	0.00
4	Communication Services	1.65	0.00	0.00	0.00
5	Postal Services	0.01	0.00	0.00	0.00
6	Motor Vehicle Tax	0.02	0.00	0.00	0.00
7	Woolen Readymade Garments	0.54	0.00	0.00	0.00
8	Marriage Hall Charges	2.25	0.00	0.00	0.00
9	Medical Tests	0.40	0.11	0.00	0.00
10	Water Supply	0.06	0.73	0.00	0.00
11	Mechanical Services	0.36	0.63	0.00	0.00
12	Hospitals Services	1.01	0.30	0.00	0.00
13	Doctor Clinic Fee	0.51	1.11	0.00	0.00
14	House Rent	8.61	0.98	0.00	0.00
15	Dental Services	0.02	0.00	0.45	0.01
Total		19.05			-67.64

Table A16: Distribution of Price Changes (YoY) - Selected Urban CPI Items: May 2022

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Chilies Powder National 200 Gm Packet, Ginger (Adrak), Bananas (Kela) Local, Pulse Moong (Washed), Potatoes, Sugar Refined, Cardamom Small (Average Quality), Cumin Seed (Zeera) White	Turmeric Powder National 50 Gm Packet, Coriander Seed Powder National 200 Gm Packet, Chicken Farm Broiler (Live), Eggs Farm, Jam-E-Shireen Standard Size (800 MI), Ice Cream Walls	Gur (Average Quality), Milk Tetra Pack 1 Litre (Milk Pak/Haleeb/Olpers), Fish Rahu (Medium Size), Powdered Milk Nido 390 Gm Polybag, Pulse Mash	Custard Powder Rafhan 300 Gm Packet, Suji, Gram Whole Black (Average Quality), Rice Basmati 385/386, Tomato Ketchup Mitchells/National 1 Kg Polybag, Curd, Mineral Water Nestle 1.5 Liter, Rice Irri-6/9
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, Ladies Sponge Chappal Bata, Gents Shoes Servis, Children Shoes Power Lite Bata,	Linen, Ladies (Average Quality),	Full Pant Boy Length 24"/26", Pullover Gents Oxford/Bonanza, Dopatta Cotton (Average Quality), Shirt Boy Length 24"/26", Dopatta Geogette (Average Quality), Awami Suit Gents Wash & Wear (Average Quality), Shoe Repair Full Sole, Gents Sandal Bata, Women Shalwar Kameez (Average Quality), Lawn	Pant Cloth Wash & Wear (Average Quality), Tailoring Charges Pant (Men), Chaddar (Wash-N-Wear) (2X2.5 Meter), Tailoring Charges Awami Suit (Male), School Uniform Boys (Pant & Shirt) 24"/26", Vest "Baniyan" For Men Average Quality, School Uniform Girls (Kameez & Shalwar) 24"/26", Heavy Weight Suiting Lawrance Pur (Average Quality), Pullover
Housing, Water, Elec, Gas & other Fuels	Electricity Charges 51-100 Units, Electricity Charges 101-300 Units, Electricity Charges 301-700 Units, Electricity Charges Combined, Electricity Charges Upto 50 Units, Electricity Charges Above 700 Units, Gas Charges Upto 3.3719 Mmbtu	Bricks New 1St Class,	Water Charges Per House, Painter Wage Rate, House Rent Combined, Cement Blocks (6"X8"X12"), Sand (Black Pit), Synthetic Enamel Ici Balti 3.64 Litre,	Mason Wage Rate, Firewood Whole, Plumber Wage Rate, Bajri, Charges For Refuse/Waste Collection, Electrician Charges, Unskilled Labor Wage Rate, Cement (Local) 50 Kg Bag, Iron Bars (M.S. Bar) 1/2 " 40 Grade, Lpg 11.67 Kg Cylinder,
Furnishing & Household Equip. Maintenance etc		Phenyl Tyfon/Finis 2.75 Litre Bottle, Boot Polish Cherry/Kiwi 42 MI, Finis 400 MI Bottle, Bed Sheet Double With Two Pillow Covers (Superior Quality), Towel Medium Size (3' X 2), Dining Table Wit Glass Top And Six Chairs (Average Quality).	Cleanser Powder Vim 900 Gm Polybag, Bed Sheet Single (Superior Quality), Blanket Single (Sn), Plain Carpet, Central Table Set With Glass Top, Sewing Machine (Sn) Without Cover, Cot Iron (Charpai), Readymade Quilt (3 Kg), Water Set	Chair Plastic (Chairman) (Average Quality), Sofa Set Five Seater, Household Servant Female Part Time, Match Box, Bucket (Balti) Plastic Medium Size, Dinner Set Plastic 72 Pieces Super Quality, Tea Set Pakistani (China-Ware) Set Of 21 Pieces, Refrigerator Dawlance/Pel 10 Cubic Feet
Health	Hydriyllin Syrup 120 MI Bottle,	Sugar Test (Random/Fasting) Charges Of Both, Ventolin Tablets 2 Mg, Blood Test (Cp) Charges, Gynecologist Fee Per Visit, Dental Surgeon Fee Per Visit, Electronic Bp Checking Apparatus,	Ecg Charges, Glucometer, Daonil Tablets 5 Mg, Dettol Medium Bottle, Amoxil Capsule 250 Mg, Physiotherapist Fee Per Visit, Dental Extraction Fee, Cost Of Surgery (C-Section), Flagyl Tablets 400 Mg, Cac 1000 Tablets Sandoz Bottle,	Inderal Tablets 10 Mg, Lederplex Syrup Bottle, Johar Joshanda Instant (Sachet) Packet, Glaxose-D 400 Gm Packet, Doctor (Mbbs) Clinic Fee, X-Ray (Chest) Charges, Entox Tablets, Betnovate-N Ointment 10 Gm Tube, Urine Test (Dr) Charges, Ultrasound Abdominal, Panadol Tablets
Transport	Car Suzuki 800 Cc Without Ac,	Train Fare Business Class Per Person,	Mini Bus Fare Minimum Within City, Motorcycle Service Charges, Car Tax 800 Cc To 1500 Cc,	Train Fare Ac Sleeper Per Person, Bus Fare Minimum Within City, Train Fare Ac Lower Per Person, Auto Rickshaw Fare, Mini Bus Fare Maximum Within City, Car Toyota 1300 Cc Xli, Taxi Four Seater Fare, Tire Car Mehran Tubeless (General), Mobil Oil (Havoline 20W-50), Suzuki Fare
Communication	Mobile Call Charges, Telephone Call Charges,	Courier Charges Minimum Within Zone Outside City (Tcs), Internet Charges (Dsl) 1 Mb (Unlimited),	Mobile Set With Rear Camera And Without Touch Screen,	
Recreation & Culture	Newspaper Daily Jang, Akhbar-E-Jehan Weekly, Mag The Weekly (Magazine),	Cable Charges, Urdu Book Ba/B.Sc, English Book Ba/B.Sc,	Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, Led Sony/Samsung 32" Colored, Laptop Dell/Hp/Acer Core I5, Display (14'-15'), English Book Class Vi, Mathematics Book Class Ix And X (Text Book Board),	Mathematics Book Class Xi (Text Book Board), Urdu Book Class Ix And X (Text Book Board), Mathematics Book Class V (Text Book Board), English Book Class Xi Complete Set, English Book Class Ix And X, Pen Ink Dollar 57 MI Bottle, Newspaper Daily Dawn, Exercise Book (With Lines)
Education		Government College Fee First Year, Private College Fee First Year, Government University Fee M.S.C / M.A., Coaching Fee For Class Xi/Xii Science Group, Coaching Fee For Class	Tuition Fee Private University M.Sc./M.A, Government Medical College/University Tuition Fee For Mbbs (1St Year),	Private Engineering University Tuition Fee For Be (1St Year), Private School Fee English Medium Average Standard (Class V), Private School Fee English Medium Average Standard (Class Vi), Private
Restaurant & Hotels		Government Hostel Accommodation Fee For Intermediate College Per Student,	Pizza Chicken Medium Size (Average Quality),	Burger With Shami Kabab (Average Quality), Cooked Chicken At Average Hotel, Marriage Hall Charges With Furniture, Chicken Biryani Full/Double, Marriage Hall Service Charges With Food (Average Meal), Seekh Kabab (Beef)
Miscellaneous		Wall Clock Quartz (Average Quality), Purse Ladies Medium Size (Average Quality), Face Cream Ponds Medium Size (Cold), Tissue Paper Perfumed Box 100 Napkins, Lipstick Swiss Miss/Medora (Medium), Toilet Soap Lux 75 Gm,	Tooth Brush (Shield), Hair Style Charges (At Average Beauty Parlor), Artificial Jewelry (Locket Set) (Average Quality), Shampoo Sun Silk/Pantene 90 MI Bottle, Nail Polish Swiss Miss/Medora (Medium), Pampers (Medium Size),	Hair Cut Charges For Men, Disposable Razor Gillette Blue II, Hair Removing Cream (Eu-Cream) 30MI Tube, Talcum Powder Viceroy/Black Cat Large Size, Silver Tezabi 24 Carett, Electric Hair Straightener (Philips), Perfume Medium Size Broche/Medora, Shaving Cream

Table A17: Distribution of Price Changes (YoY) - Selected Rural CPI Items: May 2022

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Food & Non-Alcoholic Beverages	Chilies Powder Loose, Pulse Moong (Washed), Ginger (Adrak), Potatoes, Bananas (Kela) Local, Sugar Refined, Coriander Seed Powder Loose,	Eggs Farm, Gur (Average Quality), Chicken Farm Broiler (Live), Salt Powder Loose, Jam-E-Shireen Standard Size (800 MI), Muskmelon (Kharbuza),	Ice Cream Walls Cup (Large Size), Powdered Milk Nido 390 Gm Polybag, Custard Powder Rafhan 300 Gm Packet, Pulse Mash (Washed), Tinda, Cold Drink (Pepsi/Coca-Cola) 1.5 Liter Bottle, Fruit Juice Small Packet 250 MI,	Almonds (Badam) Kaghazi With Shell (Average Quality), Fish Fresh, Mango Kalmi (Average Quality), Rice Basmati 385/386, Bread Plain (Medium Size), Lady Finger (Bhindi), Groundnuts (Moong Phali) With Shell, Tea Lipton Yellow Label 190 Gm Packet, Curd, Gram Whole Black
Alcoholic Beverages & Tobacco			Cigarettes Gold Leaf 20'S Packet, Cigarettes Capstan 20'S Packet,	Pan Prepared (Sweet With Beetle Nuts), Chewing Tobacco (Niswar), Tobacco Hukka Twisted,
Clothing & Footwear			Footware Gents Local (Average Quality), Shirting (Average Quality), Footware Children Local (Average Quality), Dopatta Georgette (Average Quality), Tailoring Charges Simple Suit (Female),	Footware Ladies Local (Average Quality), Lawn Printed (Average Quality), Georgette (Average Quality), Chaddar (Wash-N-Wear) (2X2.5 Meter), Tailoring Charges Awami Suit (Male), Linen, Ladies (Average Quality), Long Cloth, Pullover Gents (Average Quality), School Uniform Girls (Kameez & Shalwar) 24"/26", Full Pant Boy Length 24"/26", School Uniform Boys
Housing, Water, Elec, Gas & other Fuels	Electricity Charges 51-100 Units, Electricity Charges 101-300 Units, Electricity Charges 301-1000 Units, Electricity Charges Combined, Electricity Charges Upto 50 Units, Electricity Charges Above 1000 Units,	Water Charges Per House,	House Rent Combined, Bricks New 1St Class, Charges For Refuse/Waste Collection, Painter Wage Rate,	Electrician Charges, Mason Wage Rate, Plumber Wage Rate, Carpenter Wage Rate, Sand (Black Pit), Bajri, Firewood Whole, Unskilled Labor Wage Rate, Coal, Kerosene Oil, Cement (Local) 50 Kg Bag, Lpg 11.67 Kg Cylinder,
Furnishing & Household Equip. Maintenance etc		Boot Polish Cherry/Kiwi 42 MI, Cleanser Powder Vim 900 Gm Polybag,	Finis 400 MI Bottle, Water Set (Omroc) 6 Glass,	Refrigerator Dawlance/Pel 10 Cubic Feet Double Door, Robin Blue Liquid 75 MI Bottle, Towel Medium Size (2' X 3'), Bucket (Balti) Plastic Medium Size, Blanket Single (Sn), Water Cooler 9/10 Litre Plastic Super Quality, Tea Set Pakistani (China-
Health		Hydryllin Syrup 120 MI Bottle, Blood Test (Cp) Charges, Cost Of Surgery (C-Section),	Daonil Tablets 5 Mg, X-Ray (Chest) Charges, Dental Surgeon Fee Per Visit, Dettol Medium Bottle, Cac 1000 Tablets Sandoz Bottle, Inderal Tablets 10 Mg,	Amoxil Capsule 250 Mg, Physiotherapist Fee Per Visit, Doctor (Mbbs) Clinic Fee, Johar Joshanda Instant (Sachet) Packet, Panadol Tablets Plain,
Transport	Car Tax 800 Cc To 1500 Cc, Car Suzuki 800 Cc Without Ac,		Motorcycle Service Charges,	Tire Cycle, Chingchi Rickshaw Charges, Minimum, Tire Motorcycle Cd 70 (Back Wheel), Train Fare Economy Per Person, Motorcycle Honda Cd 70, Mobil Oil (Havoline 20W-50), Bicycle, Tire Car Mehran Tubeless (General), Hi-Speed
Communication	Postal Registration Charges, Mobile Call Charges, Telephone Call Charges,	Internet Charges (Dsl) 1 Mb (Unlimited), Mobile Set With Rear Camera And Without Touch Screen,		
Recreation & Culture	Newspaper Daily Jang,	Led Sony/Samsung 32" Colored,	Cable Charges, Personal Computer With Led Monitor (17") Dell/Hp/Acer Core I5, English Books Class Xi Complete Set, English Books Class Vi, Urdu Books Class Ix And X (Text Book Board),	Exercise Book (With Lines) 80 To 100 Pages, English Books Class Ix And X, Pets Feed, Ballpoint Pen Local, Lead Pencil Goldfish, Urdu Books Class V (Text Book Board),
Education			Private School Fee English Medium Average Standard (Class Vi), Vocational Training Basic Computer Short Course Fee (3 Months), Private School Fee English Medium Average Standard (Class I), Private School Fee English Medium	
Restaurant & Hotels	Government Hostel Accommodation Fee For Intermediate College Per Student, Private Hostel Accommodation Fee For Intermediate College Per Student,			Marriage Hall Service Charges With Food (Average Meal), Chicken Biryani Full/Double, Chicken Roast (Full) (Average Quality), Marriage Hall Charges With Furniture, Seekh Kabab (Beef) (Average Quality), Pizza Chicken Medium Size
Miscellaneous		Blade Treet Ordinary (10 No. Packet), Toilet Soap Lux 75 Gm,	Purse Ladies Medium Size (Average Quality), Shaving Cream (Touchme Large/Admiral), Disposable Razor Gillette Blue II, Suitcase Ragzine (24"X16"X6") (Average Quality),	Tooth Paste Colgate 75 Gm, Shampoo Sun Silk/Pantene 90 MI Bottle, Talcum Powder Viceroy/Black Cat, Artificial Jewelry (Locket Set) (Average Quality), Hair Color (Kala Kola), Tooth Brush (Shield), Trunk Medium Size (Average Quality), Hair Removing Cream (Fu-Cream) 30MI Tube

Table A18: Distribution of Price Changes (YoY) - WPI Items: May 2022

Groups	Decrease or no change	Subdued increase (Greater than 0% but less than 5%)	Moderate increase (5% but less than 10%)	Double digit increase (10% or more)
Agriculture Forestry & Fisher Product	Edible Roots / Potatoes, Stimulant & Spice Crops, Fresh Fruits, Eggs,	Poultry, Fish Live Fresh or Chilled, Raw Animal Materials / Wool, Millet / Bajra, Fuel Wood in Logs, Dry Fruits,	Cotton Seeds, Hides, Skins & Fur Skins, Raw, Maize,	Unmanufactured Tobacco, Raw Milk from Bovine Animals, Rice, Sorghum / Jowar, Sugar Crops, Wheat, Pulses, Other Oil Seeds, Vegetables, Fiber Crops,
Ores/Minerals, Elec, Gas & Water		Natural Gas Liquefied,		Electrical Energy, Salt & Pure Sodium Chloride, Coal not Agglomerated,
Food, Beverages, Tobacco, Textile, Apparel and Leather Product	Spices, Sugar Refined, Other Food Products, Nylon Yarn, Footwears,	Blankets, Sugar Confectionary, Chocolate, Readymade Garments, Fruit Juices, Dried Fruits & Nuts,	Ice Cream, Woolen Carpets, Milk & Cream in Solid Form, Other Leather N.E.C, Synthetic Carpets, Bed Sheets, Processed Liquid Milk, Beverages, Towels, Cotton Fabrics, Hosiery Products,	Dairy Products N.E.C, Woven Fabrics, Mineral Water, Quilts, Blended Yarn, Other Fabrics, Oil Cakes, Other Cereal Flour, Tobacco Products, Leather Without Hair, Coffee & Tea, Vegetables & Fruit Juice, Silk & Reyon Fabrics,
Other Transportable Goods except Metal Products, Machinery, and Equipments	Printing Paper, Hard Board, Dyeing Material, Insecticides,	Pesticides, Glass sheets,	Other Glass Articles, Plastic Products, Timber, Bricks, Blocks & Tiles,	Ceramics & Sanitary Fixture, Paints & Varnishes, Medicines, Matches, Mobil Oil, Soaps & Detergents, Auto Tyres, Cement, Motor Spirit, Bed Foam, Diesel Oil, Fertilizers, Kerosene Oil,
Metal Product, Machinery & Equipments	Vacuum Pumps,	Electric Wires,	Steel Products, Engines & Motors,	Fridge, WashM, SewM, Fans, Iron, Radio & Television, Bicycles, Lighting Equipments, Motor Vehicles, Motorcycles, Tractors, Lathe Machines, Pipe Fittings, Steel Bar & Sheets, Air Conditioners, Cultivators, Concrete Mixture,

Table A19: International Commodity Prices/Indices				
Commodity/Indices	Jun-21	May-21	Apr-22	May-22
Energy				
Crude Oil (US\$ per barrel)*	71.8	66.4	103.4	110.1
Energy Index (2010 = 100)	93.9	86.3	153.2	160.9
Food				
Rice (\$/MT)	466.0	493.0	431.0	464.0
Wheat (\$/MT)##	263.5	271.0	672.5	650.7
Sugar (US cent/ pound)^	17.4	17.3	19.7	19.4
Palm Oil (\$/MT)	1,004.4	1,136.5	1,682.7	1,716.9
Soybean Oil (\$/MT)	1,518.2	1,574.7	1,947.5	1,962.9
Non-Food Non-Energy				
Cotton Outlook 'A' Index #^	94.5	90.9	155.3	163.7
Metal Price Index (2010 = 100)	119.0	121.9	146.1	130.0
Copper (\$/MT)	9,631.5	10,162.0	10,161.4	9,377.2
Aluminum (\$/MT)	2,446.7	2,433.5	3,244.4	2,830.3
Iron Ore (\$ cents/dry MT)	214.4	207.7	151.3	131.2
Tin (\$/MT)	32,502.6	32,246.2	42,991.1	35,769.4
Nickel (\$/MT)	17,979.6	17,577.1	33,132.7	28,062.6
Zinc (\$/MT)	2,951.9	2,965.7	4,360.4	3,751.5
Lead (\$/MT)	2,191.0	2,181.8	2,380.4	2,142.5
Uranium (\$/MT)@	32.3	31.4	53.0	47.8
DAP (\$/MT)	604.8	574.6	954.0	842.5
Urea (\$/MT)	393.3	331.6	925.0	707.5

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 May 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	153.61
Nov	109.95	116.18	130.90	141.83	158.18
Dec	109.92	115.82	130.45	140.86	158.16
Jan	110.01	116.12	133.04	140.56	158.78
Feb	109.72	117.12	131.64	143.09	160.61
Mar	109.96	119.46	131.69	143.61	161.88
Apr	111.15	120.33	130.59	145.09	164.50
May	111.65	121.05	131.01	145.24	165.23
Jun	112.58	121.63	132.08	144.82	
Seasonally Adjusted Series					
Jul	106.99	114.18	123.82	135.41	146.85
Aug	107.19	113.90	125.96	136.40	147.87
Sep	107.67	113.56	126.53	138.01	150.44
Oct	108.23	115.25	127.97	139.35	152.15
Nov	108.80	114.89	129.35	140.07	156.16
Dec	109.82	115.64	130.17	140.49	157.68
Jan	110.24	116.39	133.35	140.90	159.17
Feb	110.40	117.76	132.27	143.69	161.21
Mar	110.56	120.07	132.30	144.23	162.54
Apr	111.17	120.36	130.63	145.14	164.55
May	112.27	121.72	131.73	146.04	166.13
Jun	113.35	122.52	133.12	146.05	

Table A21: Urban CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	107.71	114.94	124.95	134.73	146.41
Aug	107.93	114.58	126.77	135.82	147.12
Sep	108.38	114.49	127.72	137.53	150.08
Oct	109.34	117.04	129.75	139.27	152.59
Nov	110.03	116.94	131.05	140.16	156.96
Dec	110.08	116.57	130.57	139.67	157.46
Jan	110.28	117.07	132.77	139.45	157.56
Feb	110.12	118.08	131.32	142.61	159.03
Mar	110.43	120.29	131.49	142.99	160.07
Apr	111.94	121.29	130.60	144.91	162.63
May	112.53	122.11	130.99	145.19	163.13
Jun	113.34	122.52	131.89	144.54	
Seasonally Adjusted Series					
Jul	107.39	114.67	124.73	134.56	146.29
Aug	107.68	114.39	126.66	135.78	147.15
Sep	108.04	114.18	127.42	137.25	149.81
Oct	108.53	116.18	128.79	138.24	151.45
Nov	109.13	115.92	129.84	138.81	155.40
Dec	110.19	116.59	130.52	139.54	157.25
Jan	110.57	117.41	133.18	139.89	158.06
Feb	110.83	118.75	131.97	143.24	159.66
Mar	111.09	120.95	132.15	143.65	160.76
Apr	111.79	121.13	130.44	144.72	162.41
May	112.91	122.53	131.43	145.67	163.66
Jun	113.98	123.27	132.77	145.61	

Table A22: Rural CPI Data Series Original and Seasonally Adjusted					
Original Series					
Period	FY18	FY19	FY20	FY21	FY22
Jul	106.30	113.30	122.22	136.36	147.28
Aug	106.37	112.96	124.56	136.84	148.34
Sep	107.54	113.01	125.55	139.51	151.74
Oct	109.05	115.23	128.28	142.79	155.15
Nov	109.83	115.03	130.67	144.34	160.03
Dec	109.68	114.70	130.28	142.65	159.21
Jan	109.60	114.68	133.44	142.23	160.62
Feb	109.11	115.68	132.13	143.82	162.99
Mar	109.25	118.21	132.00	144.55	164.62
Apr	109.95	118.89	130.58	145.37	167.31
May	110.33	119.45	131.03	145.32	168.39
Jun	111.44	120.29	132.36	145.24	
Seasonally Adjusted Series					
Jul	106.37	113.45	122.45	136.68	147.69
Aug	106.45	113.16	124.91	137.33	148.97
Sep	107.12	112.63	125.19	139.16	151.39
Oct	107.77	113.86	126.72	141.03	153.21
Nov	108.30	113.33	128.62	141.98	157.31
Dec	109.28	114.20	129.65	141.91	158.34
Jan	109.74	114.84	133.61	142.44	160.86
Feb	109.76	116.27	132.72	144.38	163.54
Mar	109.77	118.74	132.54	145.11	165.23
Apr	110.23	119.19	130.93	145.78	167.79
May	111.29	120.50	132.18	146.59	169.85
Jun	112.40	121.39	133.63	146.72	

Table A23: National CPI Monthly & Average Seasonal Factors						
Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	100.15	100.09	100.03	99.98	99.94	100.04
Aug	100.11	100.03	99.95	99.88	99.82	99.96
Sep	100.35	100.30	100.26	100.22	100.20	100.27
Oct	100.92	100.92	100.93	100.95	100.96	100.94
Nov	101.06	101.12	101.19	101.25	101.29	101.18
Dec	100.09	100.16	100.21	100.27	100.30	100.20
Jan	99.79	99.77	99.77	99.76	99.75	99.77
Feb	99.38	99.45	99.53	99.58	99.63	99.51
Mar	99.45	99.49	99.54	99.57	99.59	99.53
Apr	99.98	99.98	99.97	99.97	99.97	99.97
May	99.45	99.45	99.45	99.45	99.46	99.45
Jun	99.33	99.28	99.22	99.16		99.25

Table A24: Urban CPI Monthly & Average Seasonal Factors						
Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	100.30	100.23	100.18	100.12	100.08	100.18
Aug	100.23	100.17	100.09	100.03	99.98	100.10
Sep	100.32	100.27	100.23	100.20	100.18	100.24
Oct	100.75	100.74	100.74	100.75	100.75	100.75
Nov	100.82	100.88	100.93	100.97	101.00	100.92
Dec	99.90	99.98	100.04	100.09	100.13	100.03
Jan	99.74	99.71	99.70	99.69	99.69	99.70
Feb	99.36	99.44	99.51	99.56	99.60	99.49
Mar	99.41	99.45	99.50	99.54	99.57	99.50
Apr	100.13	100.14	100.13	100.13	100.14	100.13
May	99.66	99.66	99.66	99.67	99.68	99.66
Jun	99.44	99.39	99.34	99.27		99.36

Table A25: Rural CPI Monthly & Average Seasonal Factors

Period	FY18	FY19	FY20	FY21	FY22	Average
Jul	99.93	99.87	99.81	99.76	99.72	99.82
Aug	99.92	99.82	99.72	99.64	99.58	99.74
Sep	100.39	100.34	100.29	100.25	100.23	100.30
Oct	101.19	101.21	101.23	101.25	101.26	101.23
Nov	101.41	101.50	101.59	101.66	101.73	101.58
Dec	100.37	100.44	100.49	100.52	100.55	100.47
Jan	99.87	99.86	99.85	99.85	99.85	99.86
Feb	99.41	99.49	99.56	99.61	99.67	99.55
Mar	99.52	99.56	99.59	99.62	99.63	99.58
Apr	99.75	99.75	99.73	99.72	99.72	99.73
May	99.14	99.13	99.13	99.13	99.14	99.13
Jun	99.15	99.10	99.05	98.99		99.07

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	2.98
Dec	-0.03	-0.31	-0.34	-0.68	-0.02
Jan	0.08	0.26	1.99	-0.21	0.39
Feb	-0.26	0.86	-1.05	1.80	1.15
Mar	0.22	2.00	0.04	0.36	0.79
Apr	1.08	0.73	-0.84	1.03	1.62
May	0.46	0.60	0.32	0.10	0.44
Jun	0.83	0.48	0.82	-0.29	
Seasonally Adjusted Series					
Jul	-0.21	0.74	1.06	1.72	0.54
Aug	0.19	-0.25	1.73	0.73	0.70
Sep	0.45	-0.30	0.46	1.18	1.73
Oct	0.51	1.49	1.13	0.97	1.14
Nov	0.53	-0.32	1.08	0.52	2.63
Dec	0.94	0.65	0.63	0.29	0.98
Jan	0.38	0.65	2.44	0.30	0.94
Feb	0.14	1.18	-0.81	1.98	1.28
Mar	0.15	1.96	0.03	0.37	0.83
Apr	0.55	0.24	-1.26	0.63	1.24
May	0.99	1.13	0.84	0.62	0.96
Jun	0.96	0.66	1.05	0.01	

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	1.67
Nov	0.63	-0.09	1.00	0.64	2.86
Dec	0.05	-0.32	-0.37	-0.35	0.32
Jan	0.18	0.43	1.68	-0.16	0.06
Feb	-0.15	0.86	-1.09	2.27	0.93
Mar	0.28	1.87	0.13	0.27	0.65
Apr	1.37	0.83	-0.68	1.34	1.60
May	0.53	0.68	0.30	0.19	0.31
Jun	0.72	0.34	0.69	-0.45	
Seasonally Adjusted Series					
Jul	-0.22	0.61	1.19	1.35	0.47
Aug	0.27	-0.25	1.54	0.90	0.59
Sep	0.33	-0.18	0.61	1.08	1.81
Oct	0.46	1.75	1.07	0.72	1.10
Nov	0.55	-0.22	0.81	0.42	2.61
Dec	0.97	0.58	0.52	0.53	1.19
Jan	0.35	0.70	2.03	0.25	0.51
Feb	0.23	1.14	-0.91	2.40	1.02
Mar	0.24	1.86	0.14	0.28	0.68
Apr	0.64	0.14	-1.30	0.75	1.03
May	1.00	1.16	0.77	0.66	0.77
Jun	0.94	0.60	1.02	-0.04	

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	3.15
Dec	-0.14	-0.29	-0.30	-1.17	-0.51
Jan	-0.07	-0.02	2.43	-0.29	0.89
Feb	-0.45	0.87	-0.98	1.12	1.48
Mar	0.13	2.19	-0.10	0.51	1.00
Apr	0.64	0.58	-1.08	0.57	1.63
May	0.35	0.47	0.34	-0.03	0.65
Jun	1.01	0.70	1.02	-0.06	
Seasonally Adjusted Series					
Jul	-0.20	0.94	0.88	2.28	0.66
Aug	0.07	-0.25	2.00	0.47	0.87
Sep	0.63	-0.47	0.23	1.33	1.63
Oct	0.60	1.09	1.22	1.35	1.20
Nov	0.50	-0.47	1.50	0.67	2.68
Dec	0.90	0.77	0.80	-0.05	0.65
Jan	0.43	0.57	3.06	0.37	1.59
Feb	0.01	1.25	-0.67	1.36	1.66
Mar	0.02	2.12	-0.14	0.51	1.04
Apr	0.42	0.38	-1.21	0.46	1.55
May	0.96	1.10	0.96	0.56	1.23
Jun	1.00	0.74	1.10	0.09	

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)

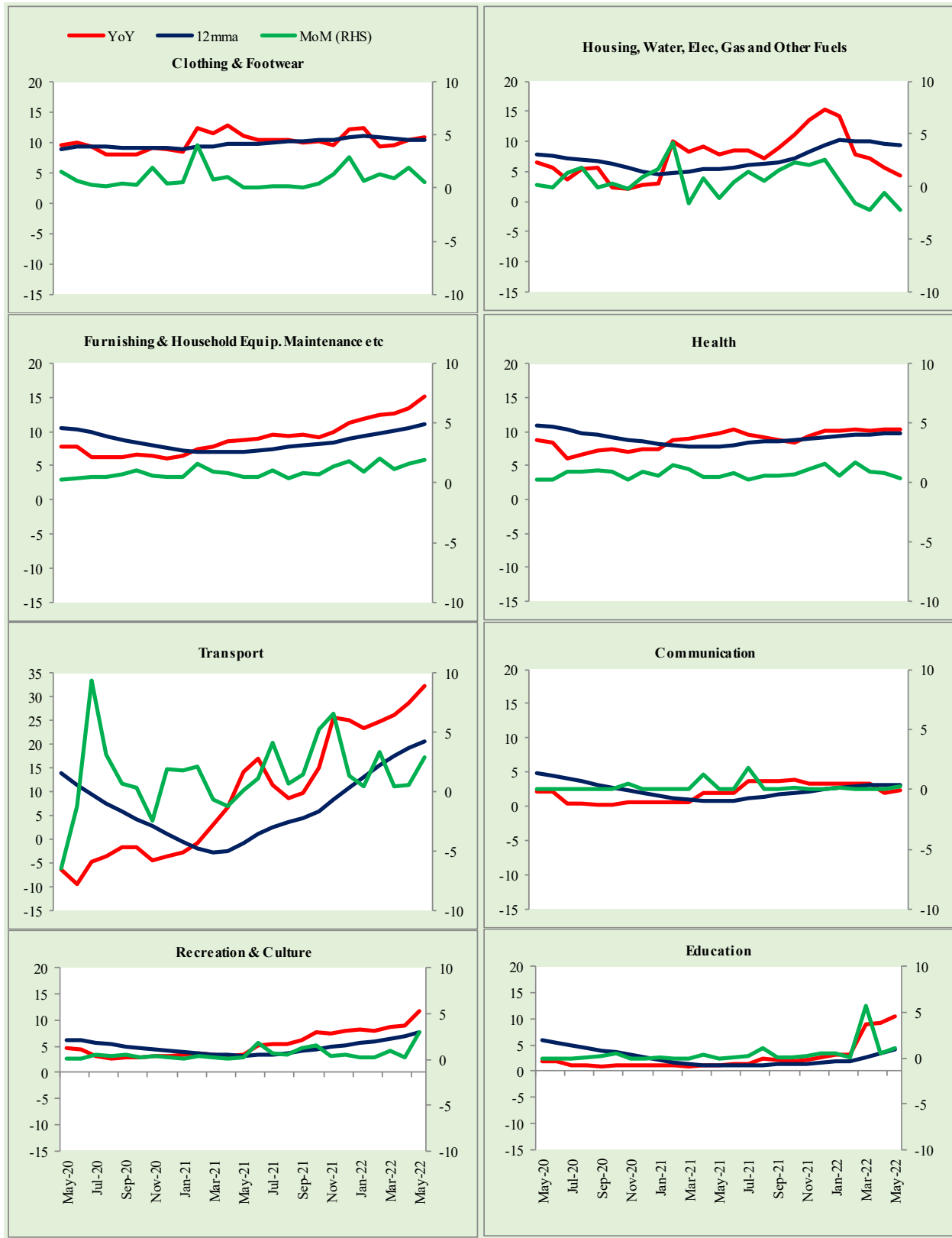


Figure A3: Rural CPI Non-food Inflation (YoY, 12MMA, MoM in percent)

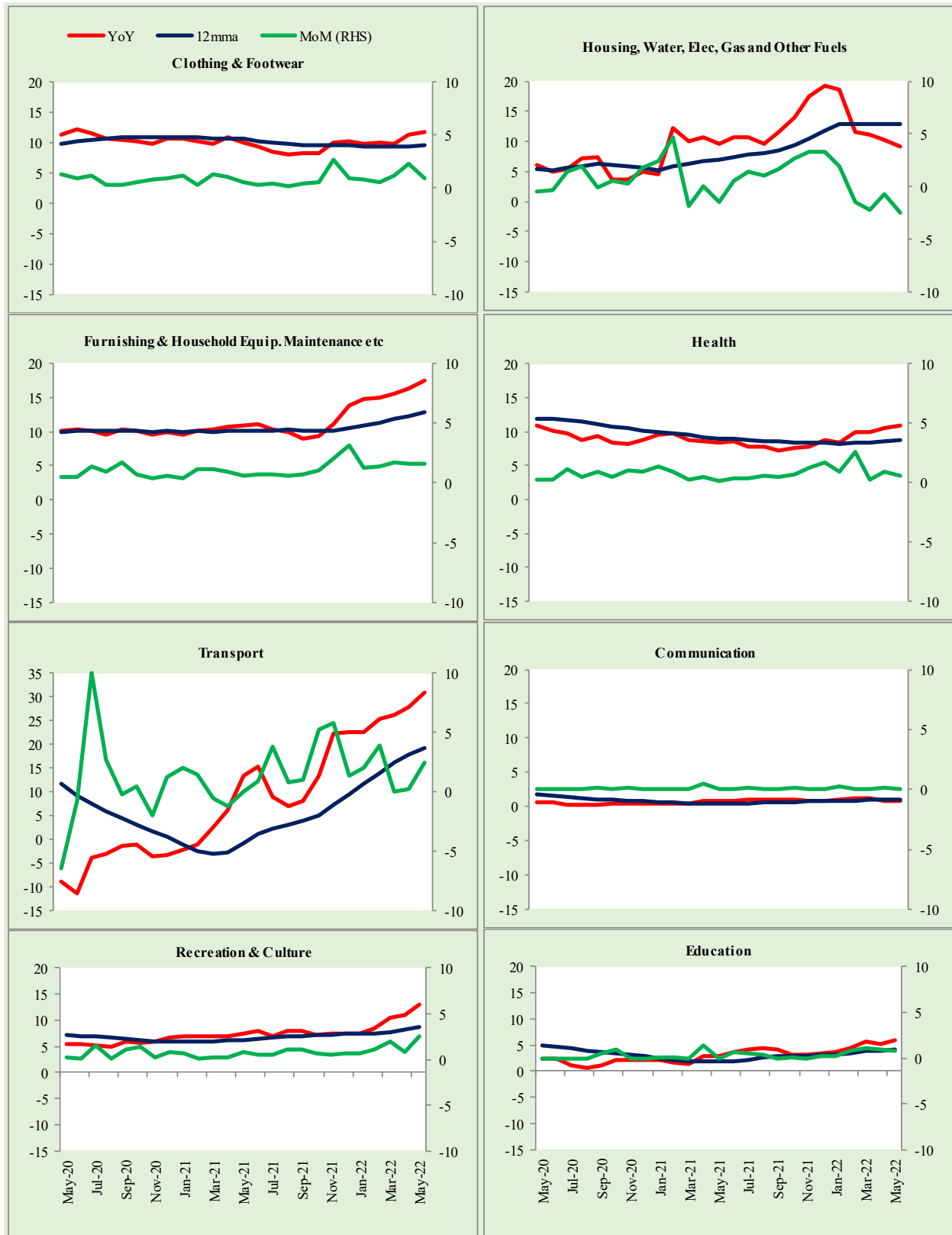
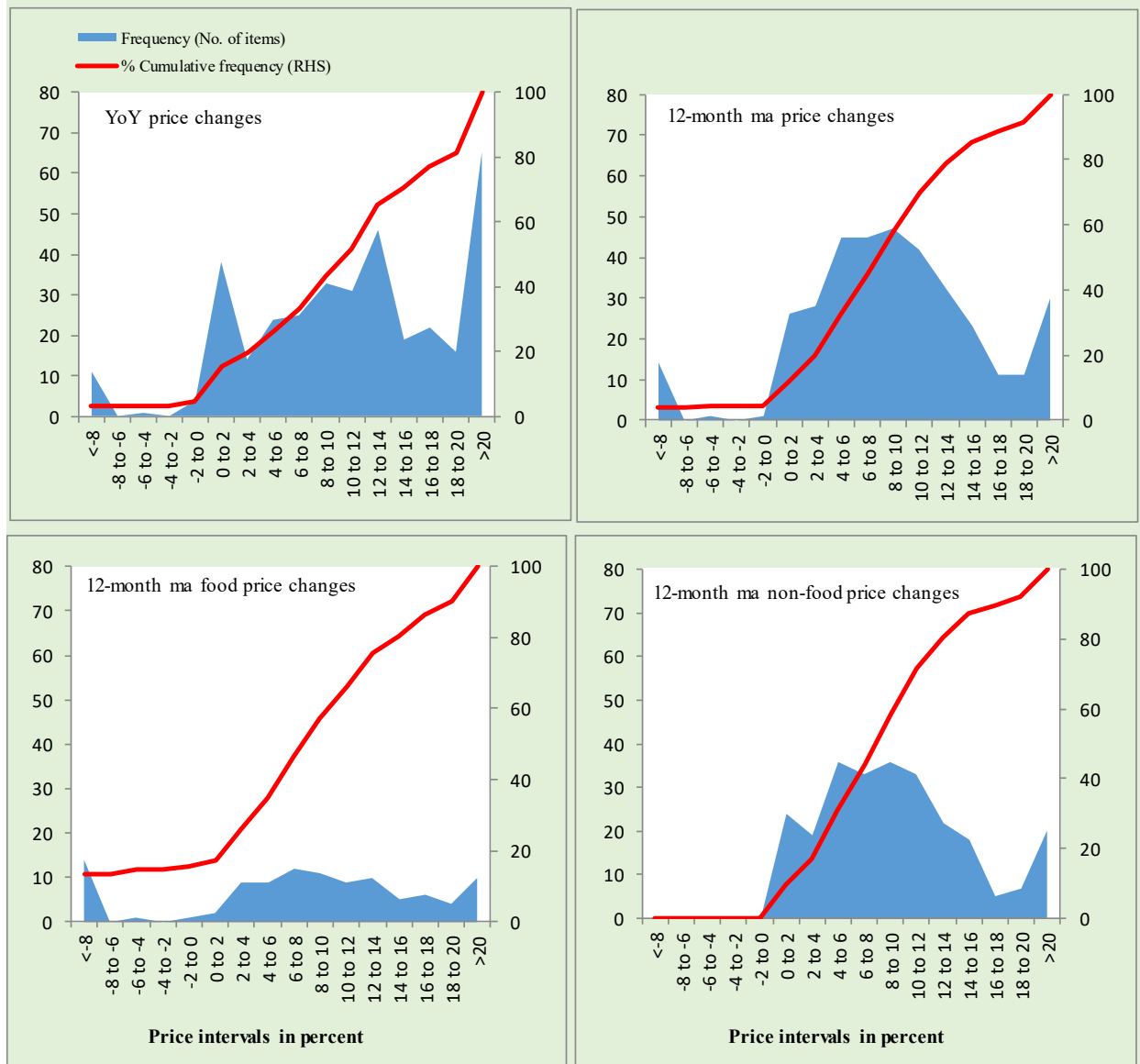
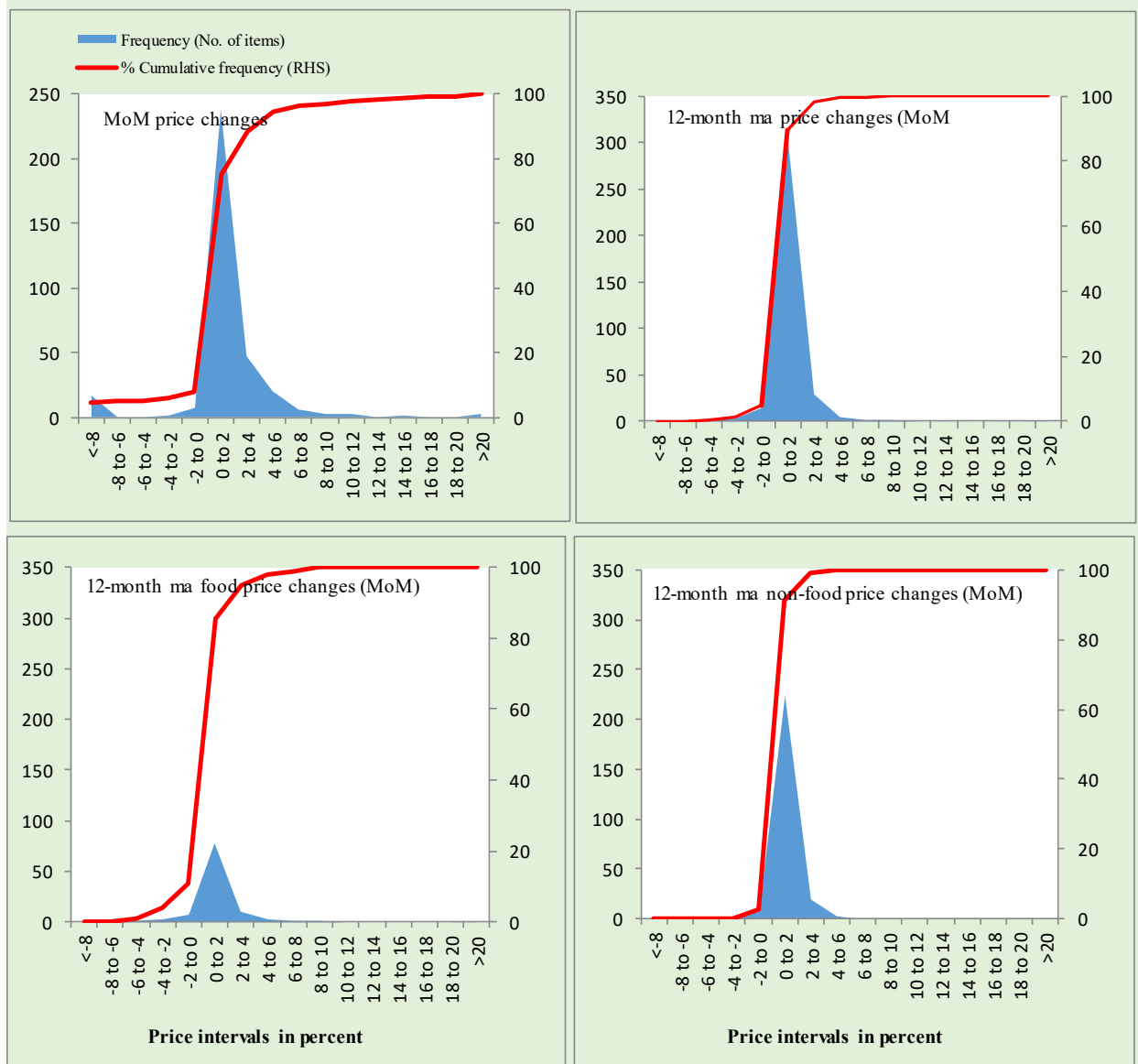


Figure A4: Frequency Distribution of Price Changes of Urban CPI Items (YoY)



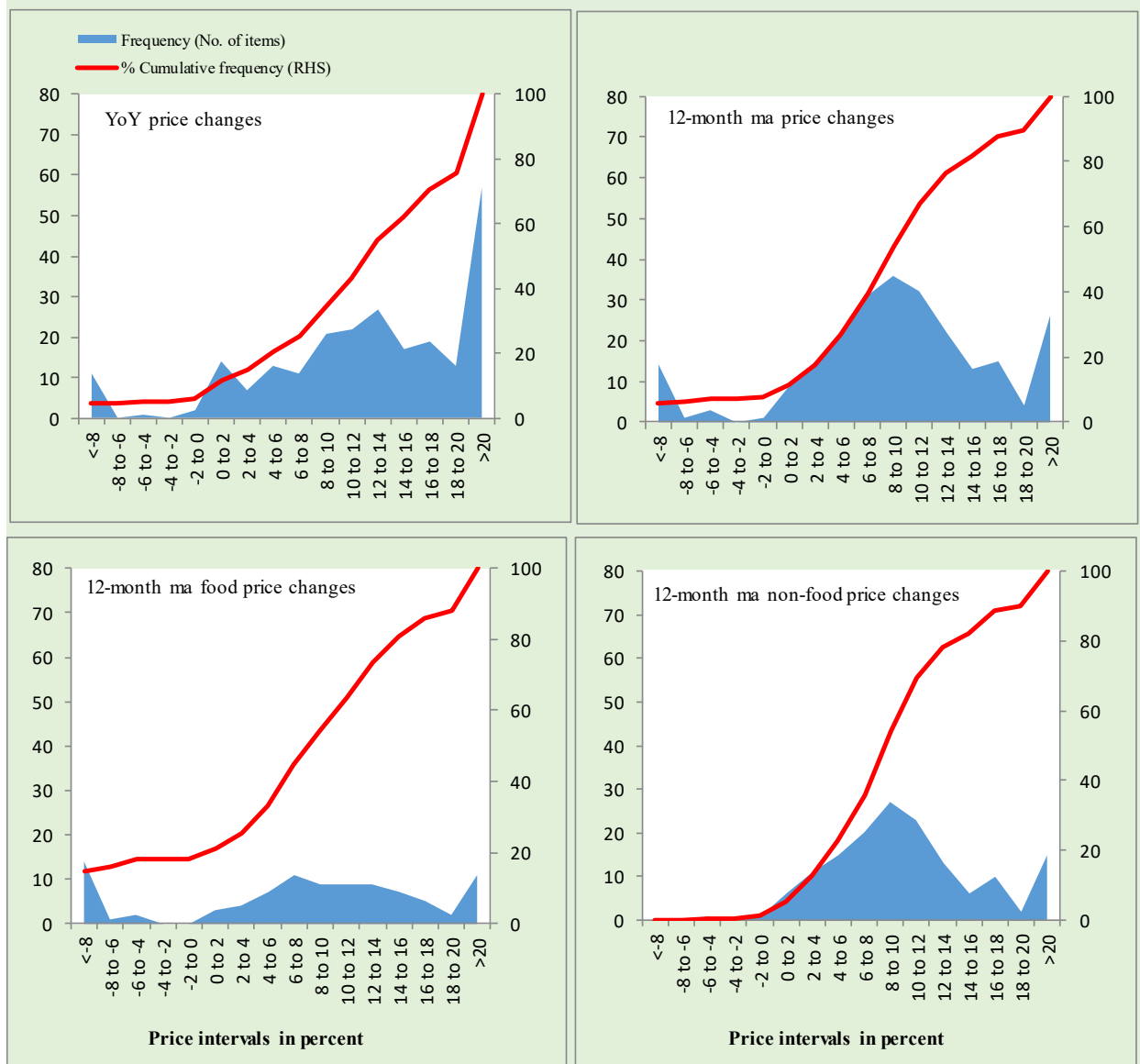
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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



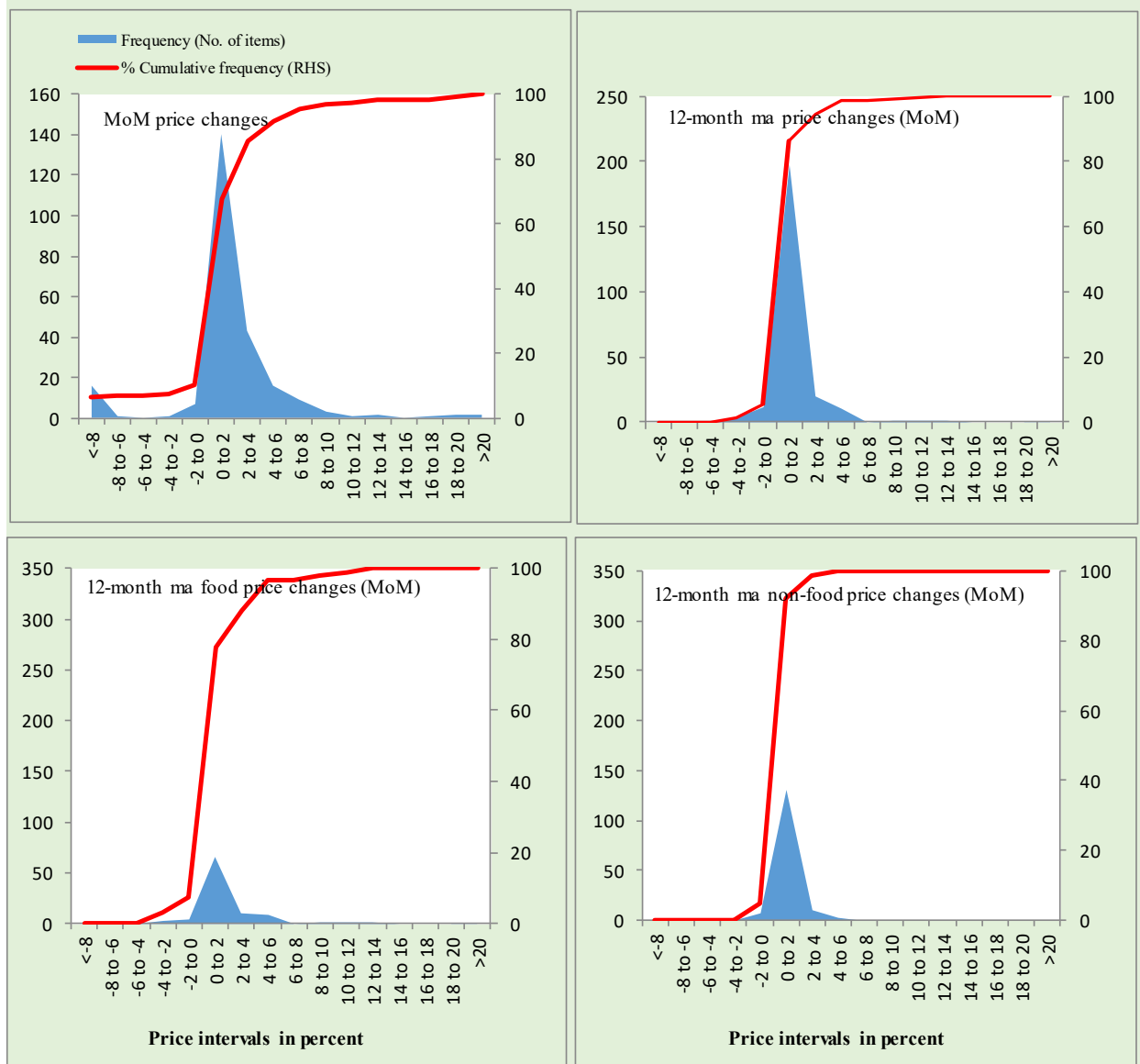
Total Items in CPI Basket (356), Food Items (103) and non-Food Items (253).

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



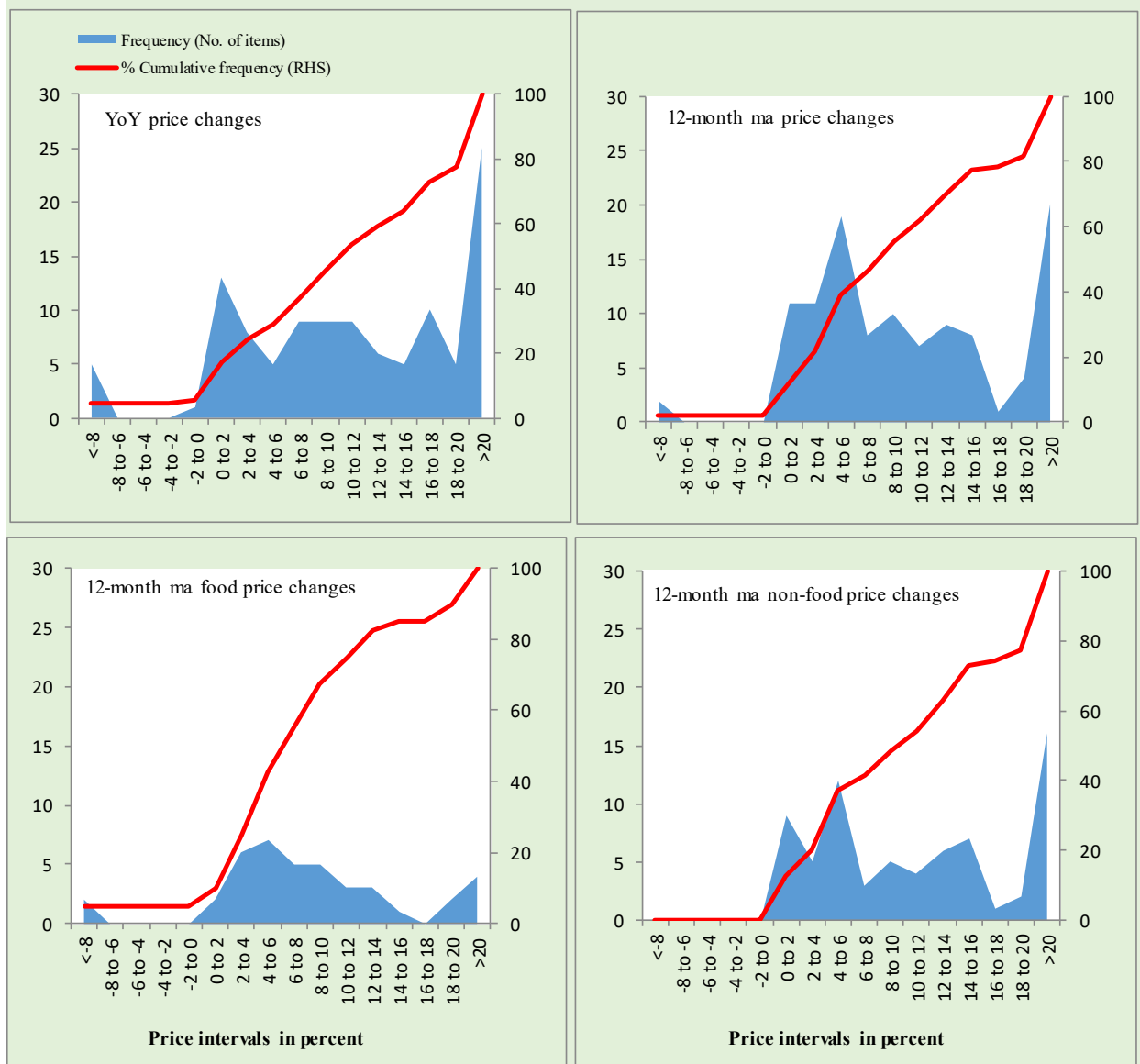
Total Items in CPI Basket (244), Food Items (94) and non-Food Items (150).

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 May 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.