

Macro: Inflationary process becomes evident

Consumer prices rose by 9.09% in August and annual inflation increased from 47.8% to 58.94%. Thus, cumulative inflation for the July-August period reached 19.4%, indicating that the 37% depreciation in the last three months was largely passed through to prices along with wage and tax increases. CPI sub-items show that high price increases are widespread. The concentration of the distribution of monthly price increases, which had been multi-peaked and indicated that inflation uncertainty had been quite high in previous months, around 10% in the last two months is very useful to observe the spread of inflation across sub-items.

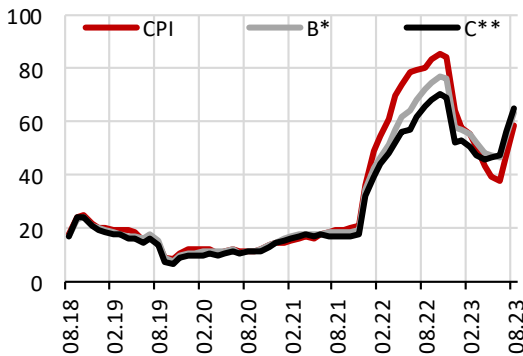
Last month, we stated that depending on the degree of deterioration in pricing behaviour, the upper bound of the model forecast band would contain 70%. Consumer inflation, which reached 19.4% cumulatively in the last two months, confirms the non-linear effects of the deterioration in expectations and pricing behaviour, as was the case during the major shock periods in 2018 and 2021. Although there are upside risks due to uncertainties regarding monetary and exchange rate policies, **we forecast year-end inflation in the 65-70% range.**

Domestic producer prices rose by 5.9%, close to our forecast (5.0%) shared in last month's note. Thus, annual producer price inflation rose to 49.4% from 44.5%. Current levels of exchange rates and international prices point to a monthly increase of around 4.0% in producer prices for September. Accordingly, we expect producer price pressures on consumer prices to continue. We maintain our view that the **reevaluation rate** (twelve-month average of annual D-PPI inflation as of October), which will serve as a reference for administered price increases at the beginning of 2024, **will approach 60% and will be an important component of CPI rigidity.**

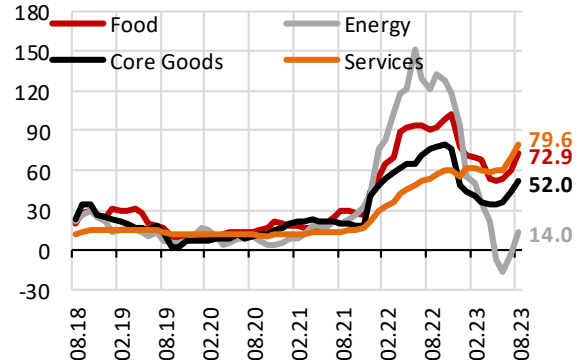
Consumer Price Index (CPI)

In August, monthly inflation was 9.09%, well above market forecasts (AA Finans: 7.3%, Foreks: 7.1%, Bloomberg HT: 7.0%) but in line with our own forecast (9.2%). Thus, cumulative inflation reached 19.4% in the July-August period, indicating that the 37% depreciation in the last three months was largely passed through to prices along wage and tax hikes. In the same period, annual inflation increased by 20.7 points to 58.94%.

**Chart 1. CPI and Core CPI
(annual % change)**



**Chart 2. CPI Sub-Indices
(annual % change)**



* CPI excluding unprocessed food, energy, alcoholic beverages and tobacco products, and gold

** CPI excluding energy, food and non-alcoholic beverages, alcoholic beverages and tobacco products, and gold

Source: Turkstat

Similar to headline CPI, annual inflation in core CPI indicators also posted strong increases. Annual inflation in the B index increased by 9.2 points to 63.5%, while annual inflation in the C index rose by 8.75 points to 64.85% (Chart 1). While the exchange rate pass-through was most notable in core goods, increases in wages, fuel and food prices continued to have impact on services items.

Across main subcategories, annual inflation increased significantly in all groups (Chart 2). In August, monthly price increases were widespread across 12 expenditure groups, while monthly price changes were high in all expenditure groups (Tables 1 and 2).

- **Food:** The monthly price increase in the food group accelerated to 8.48% (s.a. 8.78%). Annual inflation rose by 12.1 pp to 72.9%, well above the overall CPI inflation. The fact that price increases spread across almost all food items in the 5-digit level reveals the impact of cost factors such as wages, exchange rates and fuel.

Unlike recent months, processed food prices increased at a higher rate than unprocessed food prices in August (Table 2). As we pointed out in the previous report, the lagged effects of the exchange rate hikes in bread-cereals and fats and oils as well as the 35% increase in raw milk purchase price effective from 1 August played a role in this development.

Bread prices increased by 18.5% in August, following the 14.4% increase in July. Thus, the cumulative increase in bread prices in the last two months reached 35.5%. On the other hand, price increases in other items of bread-cereals group such as rice, pasta and flour remained lower (6-7% mom) compared to bread, signalling that price increases in this group may continue in the coming period with items other than bread.

The increase in raw milk prices is partially reflected on the prices of dairy products. In August, monthly price increases in milk and dairy products were around 11-12%. Historical relations point out that raw milk price increases are passed on to product prices at a very high rate. Therefore, we think that high-rated price increases in this group will continue in September.

Following a moderate trend since the beginning of 2023 (0.8% on monthly average), fats and oils prices increased by 13.2% in August. Apart from items such as margarine-butter, which are affected by the milk price increase, there are also significant price increases in liquid oils, especially olive oil.

High-rated price increases in unprocessed food prices continued. Prices of fresh fruits and vegetables rose by 9.3% mom (11.3% s.a.), while other unprocessed food prices recorded a more limited increase (1.95%), as the rise in meat prices remained relatively low. Sharp increases in fuel prices have a negative impact on fresh fruit and vegetable prices through transportation costs. We expect the cost-side inflationary impacts of fuel prices to persist for a while.

- **Energy:** While monthly inflation in energy group was 14.2%, annual energy inflation returned to positive territory with an increase of 16.9 points to 14.0%.

The 26.1% increase in fuel products continued to be the main driver of monthly energy inflation. A significant portion of the monthly inflation in this item was realised due to the carry-over effect of the increases in the second half of the previous month. Thus, the cumulative increase in fuel products reached 81.2% in the last 3 months. It is possible to argue that price increases in this item will weaken significantly as the depreciation in the Turkish lira decelerates.

On the other hand, municipal water prices continued to contribute to the group inflation. This month, municipal water prices rose by 7.4% (up 6.0% in July). On the other hand, the flat course

of electricity and natural gas prices continued to restrain energy group inflation. There will be no price hikes in these two items in September as well.

- **Core goods:** Monthly inflation in core goods, which is characterised by rapid and high exchange rate pass-through, remained high at 8.6% (s.a. 6.9%). The monthly increase in durable goods (excluding gold) slowed slightly compared to last month with 7.8% (s.a. 7.6%). Among durable goods, the purchase of vehicles remained strong with an increase of 8.7% (s.a. 5.7%), while the monthly price increase in electrical and non-electrical household appliances accelerated to 9.4%. On the other hand, the ongoing low increases in clothing prices were replaced by an increase of 8.3% (s.a. 4.3%) in August. Still, annual clothing inflation was 30.0%, well below our market observations and the overall CPI.

Prices in the other core goods items also recorded a very high increase of 9.9%. As in the previous month, 13.8% increase in medicine prices (two-month cumulative increase: 32.0%) and 10.35% increase in personal care item (coded 1213), which includes personal hygiene and cleaning products with VAT rate raised from 8% to 20%, stood out in this group. These two items were particularly affected by exchange rates and tax adjustments, which ended in August.

- **Services:** Price rises in the services group stayed high due to wage adjustments and price changes in food and fuel. Prices in the services group went up by 9.2% mom (8.7% a.m.), while annual services inflation increased by around 10 points to 79.6%. Thus, services remain the main group with the highest annual inflation (Chart 2).

Prices in the restaurants-hotels group continued to be affected by food and wage increases. Prices in this group rose by 7.1% mom (s.a. 7.3%). Annual inflation in catering services reached 91.2%.

Meanwhile, rent increases continued to accelerate despite the 25% ceiling; s.a. monthly increase exceeded 7%. Annual rent inflation was 87.8%.

The rise in exchange rates and fuel prices had a strong impact on transport services. While monthly inflation was 27.6%, annual inflation surged by 39.2 percentage points to 81.9%, as marked increases in public transport costs in larger cities stood out. In addition, intercity road and air transport continued to record high price increases.

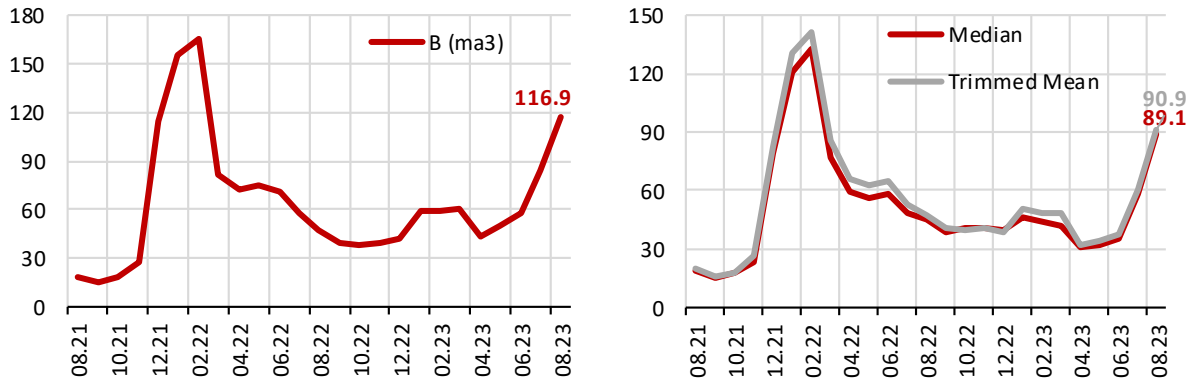
The rise in communication services was 5.1%, lower than other service groups. However, the monthly rise has been steadily increasing and may continue in the upcoming months.

Contrary to the gradual improvement in the first half of the year, the inflation trend is deteriorating rapidly (Chart 3). According to 3-month averages, the trend of the B-index rose to around 117%, while the annualised median inflation, which is obtained from the distribution of monthly inflation rates by sub-items, was 89.1% and the trimmed mean inflation was 90.9%.

The inflation trend calculated according to ICC data also points to high levels in line with the CPI with 114.6%. The increase in alignment with the CPI for the last three months points to an inflation outlook that is more in line with our field observations and forecasts (Charts 4 and 5).

CPI sub items clearly show that price increases are widespread. The CPI diffusion index shows a significant increase, while the services diffusion index remains above historical averages (see Chart 6). The monthly changes in the 5-digit subcategories of the CPI, adjusted for seasonal factors, are concentrated around 10 percent in both August and July. **The evolution of the multi-peaked distribution of price increases, which indicates that inflation uncertainty had been high in the first half, into a left-skewed distribution is quite striking in terms of the generalized effects of inflationary shocks (exchange rate, tax, etc.)** (Chart 7).

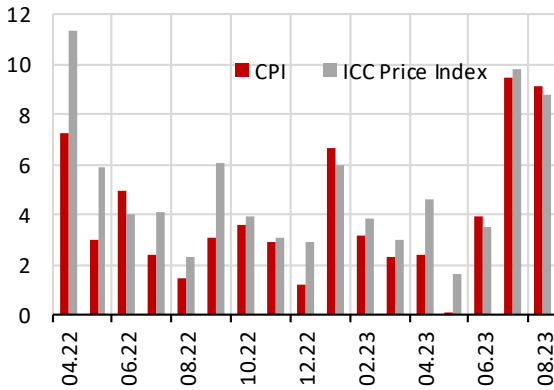
Chart 3. Underlying Inflation* (seas. adj. m-o-m, 3-month moving average, annualized)



* In calculating trimmed mean indicator, 15% of the monthly inflation distribution has been deducted from both ends.

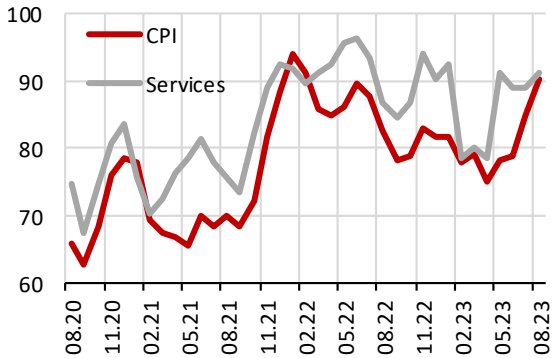
Source: Turkstat, Akbank

Chart 4. CPI and ICC Index (monthly % change)



Source: ICC, Turkstat, Akbank

Chart 6. Diffusion Index (seas. adj., increase-decrease, %)



Source: Turkstat, Akbank

Chart 5. CPI and ICC Index (seas. adj. m-o-m, 3-month moving average, annualized)

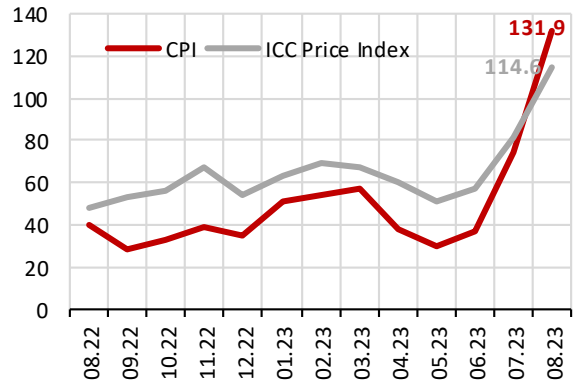
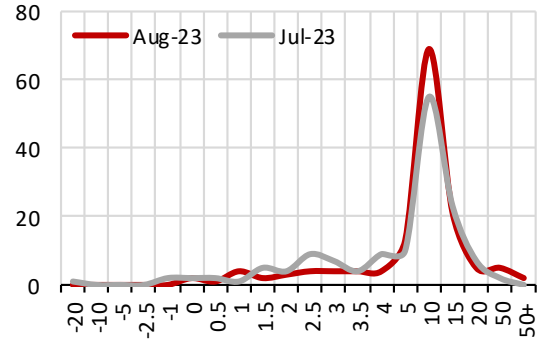


Chart 7. CPI Subgroups Monthly Inflation Histogram (seas. adj)



Source: Turkstat, Akbank

Last month, we noted that depending on the degree of deterioration in pricing behaviour, the upper bound of the model forecast band would contain 70% ([Macro: Underlying trend of inflation regains momentum](#)). Consumer inflation, which reached 19.4% cumulatively in the last two months, confirms the non-linear effects of the deterioration in expectations and pricing behaviour, as in the periods of large shocks in 2018 and 2021. **Although there are upside risks due to uncertainties regarding monetary and exchange rate policies, we forecast year-end inflation in the 65-70% range.**

Table 1. Consumer Price Index (Raw data)

	Monthly % Change			Annual % Change		
	Aug.22	Jul.23	Aug.23	Aug.22	Jul.23	Aug.23
CPI	1.5	9.5	9.1	80.2	47.8	58.9
Food and Non-Alcoholic Beverages	0.9	7.7	8.5	90.3	60.7	72.9
Alcoholic Beverages and Tobacco	0.1	11.2	3.8	82.5	46.6	52.0
Clothing and Footwear	1.3	3.2	8.3	38.0	22.7	31.1
Housing, Water, Electricity, Gas and Other Fuels	2.1	6.0	6.9	71.8	19.3	25.0
Furnishings, household equipment, maintenance of the house	3.4	8.9	9.4	92.0	50.1	58.9
Health	7.0	13.6	8.0	58.4	76.0	77.5
Transport	-1.8	17.8	16.6	116.9	43.4	70.2
Communication	1.9	6.2	4.3	27.1	43.0	46.4
Recreation and Culture	3.3	6.1	7.9	58.7	45.3	51.7
Education	6.6	2.7	3.1	34.3	53.6	48.6
Restaurants and Hotels	3.3	11.9	7.1	80.9	82.6	89.3
Miscellaneous Goods and Services	3.9	8.7	7.5	71.2	52.8	58.2

Source: TURKSTAT

Table 2. Core Indicators (Raw Data)

	Monthly % Change			Annual % Change		
	Aug.22	Jul.23	Aug.23	Aug.22	Jul.23	Aug.23
CPI	1.5	9.5	9.1	80.2	47.8	58.9
Goods	0.9	9.4	9.0	89.9	40.2	51.5
Energy	-2.7	12.7	14.2	121.7	-2.9	14.0
Food and Non-alcoholic Beverages	0.9	7.7	8.5	90.3	60.7	72.9
Unprocessed Food	-2.0	9.5	5.6	79.5	79.7	93.6
Fresh Fruits and Vegetables	-6.3	17.6	9.3	50.8	76.5	106.0
Other Unprocessed Food	0.1	5.2	3.4	95.3	82.1	88.1
Processed Food	3.4	6.1	11.2	100.4	46.8	57.8
Bread and Cereals	3.8	10.2	13.1	106.7	46.6	59.8
Other Processed Food	3.2	4.1	10.2	97.0	47.0	56.9
Goods excl. Energy and Food	2.7	9.7	7.9	78.4	44.5	51.9
Core Goods	3.1	9.4	8.6	76.9	44.3	52.0
Clothing and Footwear	1.2	3.0	8.3	37.4	21.5	30.0
Durable Goods (excl. Gold)	2.7	12.5	7.8	91.8	55.2	63.0
Other Core Goods	4.6	8.7	9.9	80.1	43.4	50.6
Services	3.2	9.8	9.2	54.3	69.7	79.6
Rent	4.4	7.7	7.9	30.8	81.7	87.8
Restaurant-Hotels	3.3	11.9	7.1	80.9	82.6	89.3
Transportation Services	0.2	10.0	27.6	90.3	42.8	81.9
Telecommunication Services	1.6	3.7	5.1	20.3	46.5	51.6
Other Services	4.0	10.3	7.2	49.7	68.3	73.6
CPI	1.5	9.5	9.1	80.2	47.8	58.9
A (CPI excl. seasonal products)	1.8	9.5	9.1	84.7	48.3	58.9
B (CPI excl. unproc. food, energy, alc. bev., tobacco and gold)	3.2	8.9	9.3	72.5	54.3	63.5
C (CPI excl. energy, food and non-alc. bev., alc. bev., tob. and gold)	3.1	9.6	8.9	66.1	56.1	64.8
D (CPI excl. unproc. food, alc. bev. and tobacco)	2.1	9.4	9.9	80.2	44.0	55.0
E (CPI excl. alcoholic beverages and tobacco)	1.5	9.4	9.3	80.1	47.9	59.3
F (CPI excluding administered and directed prices)	1.4	9.8	9.2	80.1	53.9	65.7

Source: TURKSTAT

Domestic Producer Price Index (D-PPI)

D-PPI increased by 5.9% mom, while annual producer inflation rose from 44.5% to 49.4% (Table 3). Domestic producer prices rose by 5.9%, close to our forecast (5.0%) shared in last month's note due to recent wage and exchange rate developments. The increase was widespread across all sub-items.

Current levels of exchange rates and international prices point to a monthly increase of around 4.0% in producer prices for September. Accordingly, we expect producer price pressures on consumer prices to continue. We maintain our view that the revaluation rate (twelve-month average of annual D-PPI inflation as of October), which will serve as a reference for administered price increases at the beginning of 2024, will approach 60% and will be an important component of CPI rigidity..

Table 3. Domestic Producer Price Index

	Monthly % Change			Annual % Change		
	Aug.22	Jul.23	Aug.23	Aug.22	Jul.23	Aug.23
Domestic PPI	2.4	8.2	5.9	143.7	44.5	49.4
Intermediate Goods	3.2	8.9	3.8	127.8	45.5	46.4
Durable Consumption Goods	4.6	10.4	8.7	99.5	54.9	61.1
Non-durable Consumption Goods	3.7	6.2	5.7	124.1	63.3	66.5
Energy	-1.7	5.7	14.3	303.5	3.8	20.7
Capital Goods	3.0	11.7	4.0	96.5	63.3	64.9

Source: TURKSTAT

Bu rapor Akbank Ekonomik Araştırmalar tarafından hazırlanmıştır.

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