Box 7.1

An Evaluation of End-2019 Inflation Forecasts

Under the inflation targeting regime, the CBRT provides the public with comprehensive reviews of inflation developments through reports. This box gives a summary of the end-2019 inflation forecasts announced in Inflation Reports throughout 2019, along with the changes in the main assumptions underlying these forecasts.

Since the final quarter of 2018 when inflation uncertainty increased, the Central Bank has clearly communicated that the inflation projections shared in the Inflation Reports were interim targets. In the following period, formulating a monetary stance conducive to a sustainable disinflation process and consistent with inflation projections contributed substantially to the improvement in forecast credibility and monetary policy predictability. These developments played a central role in having inflation expectations gradually converge to the Bank's forecasts and reaching a better consensus between survey participants. In fact, owing to the tight monetary stance, inflation stood close to the lower bound of the Inflation Report forecasts throughout the year and the mid-point of these forecasts was revised downwards (Chart 1.b).

Revisions to assumptions for food and international crude oil prices stood out among external assumptions (Table 1). The sharp rise in unprocessed food inflation in the first quarter of 2019 was followed by a decline in the second quarter due to favorable supply conditions. In addition, oil prices were revised to reflect the fluctuations stemming from the slowdown in global trade and growth and negative supply-side developments. Import prices were also revised in line with changes in oil prices. On the other hand, because of uncertainty regarding international trade and the decline in global trade volume, the global growth outlook was revised downwards.

Table 1: Inflation Report Assumptions for 2019

	January IR	April IR	July IR	October IR	Actual
Food Prices (year-end % change)	13.0	16.0	15.0	10.0	10.9
Export-Weighted Global Production Index (annual average % change)	2.28**	2.07	2.03	1.96	1.85*
Import Prices (annual average % change)	-2.2	0.0	-3.1	-4.0	-4.0*
Brent Crude Oil Prices (annual average, USD/bbl)	63.1	67.2	65.0	63.4	64.0

Source: CBRT.
* Forecasts as of January 2020.
** Due to a methodological change in the calculation of the index, the assumption for 2019 differs from the value published as 2.57% in the January Inflation Report. In this table, values obtained from the new index are used.

Inflation was 11.8% at the end of 2019. The key driver of the fall in inflation throughout the year was the positive impact that improved inflation expectations and pricing practices had on the underlying trend of inflation thanks to a tight monetary stance. In addition, the stable course of the Turkish lira and mild levels of oil prices helped inflation to decline. On the other hand, the volatility in unprocessed food prices caused both upward and downward revisions to year-end inflation forecasts (Table 2).

January Inflation Report (2019-I)

Amid financial volatilities and heightened uncertainty in the third quarter of 2018, inflation rates surged. Owing to reduced financial volatility and the relatively improved underlying inflation trend backed by the tight monetary stance, consumer inflation fell to 20.3% at the end of 2018.

Output gap forecasts were revised downwards for the second half of 2018, and those for 2019 were based on an outlook in which net exports would contribute positively to growth, the tightness in financial conditions would taper off and the fiscal policy would be formulated in line with the rebalancing process in the economy (Chart 1.a).
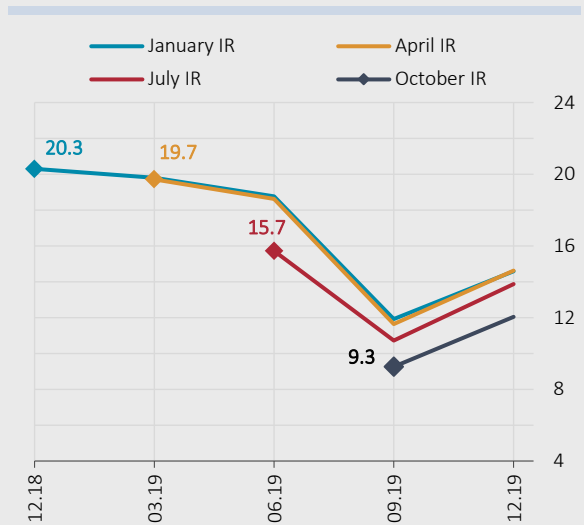
With a tight policy stance that focused on bringing inflation down and providing macroeconomic rebalancing through enhanced policy coordination, consumer inflation was projected to be 14.6 percent at end-2019 (Chart 1.b).

Chart1.a: Revisions to Average Output Gap Forecasts (%)
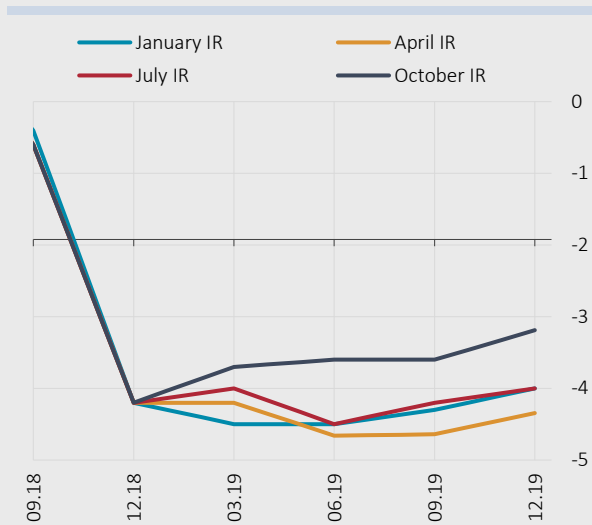
Source: CBRT.

Chart1.b: Revisions to Inflation Forecasts in 2019*,** (%)

Source: CBRT, TURKSTAT.
* The series show the projected inflation path from the start of the corresponding period to the end of year.
** The initial points in series show the actual inflation values.

April Inflation Report (2019-II)

In line with the January Inflation Report projections, consumer inflation declined to 19.7% in the first quarter of 2019 (Chart 1.b). Meanwhile, core inflation posted a more visible decline, standing at 17.7%, a level that was below the projection of 19.2%. The fall in headline inflation was rather limited relative to the fall in core inflation because of high unprocessed food inflation.

Economic activity was forecast to follow a stronger course in the first half of 2019 relative to the previous report with the support of public expenditures, easing financial conditions thanks to fiscal incentives and an improved risk premium, and the strong contribution of net exports. Accordingly, output gap forecasts for the first half of the year were revised upwards (Chart 1.a).

In this period, the global risk appetite improved slightly on the back of prospects of a prolonged monetary policy normalization across advanced economies. However, Turkey's risk premium was not substantially improved as a result of some geopolitical developments. Moreover, unfavorable supply conditions brought the assumption for food price inflation up from 13% to 16% for 2019. Despite these factors, with a tight policy stance that focused on bringing inflation down and providing macroeconomic rebalancing through enhanced policy coordination, the January Inflation Report year-end inflation forecast remained intact at 14.6% in the April Inflation Report.

July Inflation Report (2019-III)

Consumer inflation slowed to 15.7% in the second quarter of 2019, a rate that was lower than the April Inflation Report forecast of 18.6%. The lower-than-expected consumer inflation was mostly driven by the sharp decline in unprocessed food inflation and the fall in oil prices. Additionally, a mild domestic demand and the tight monetary stance supported the fall in inflation.

Based on the assumption that net exports would continue to stimulate growth, and financial conditions would gradually ease owing to an improved inflation outlook and a reduced country risk premium, output gap forecasts for the year were revised upwards (Chart 1.a).

The second quarter's consumer inflation that came in 2.9 points lower than the April Inflation Report projection, the impending fall in the underlying trend of inflation, and the downward revisions to assumptions for oil prices, TL-denominated import prices and food prices brought the year-end inflation forecast down by 0.7 points from the April forecast to 13.9% (Chart 1.b).

October Inflation Report (2019-IV)

In the third quarter of 2019, consumer inflation fell to 9.3%, nearing the lower bound of the July Inflation Report forecast. The significant slowdown in inflation observed since September 2019 was driven by the stable course of the Turkish lira, the improvement in inflation expectations, mild domestic demand conditions, and the high base effect from the previous year.

In line with the backward revisions to national income data and the data flow since the previous reporting period, output gap forecasts were revised upwards for the first three quarters of the year. For the final quarter, based on the assumption that financial conditions would be more supportive, the output gap was predicted to close slightly (Chart 1.a).

On the back of favorable supply conditions, assumption for the year-end food inflation forecast was lowered by 5 points to 10%. In addition, following the downward revisions to oil and TL-denominated import prices and the improvement in the underlying inflation trend, the year-end consumer inflation forecast was lowered by 1.9 points from the previous report to 12.0% (Chart 1.b).

Actual Inflation at the end of 2019

The year-end consumer inflation was 0.2 points below the October Inflation Report projections. The key drivers were the stable Turkish lira, a mild domestic demand, and a more favorable than projected underlying inflation trend. Food inflation stood at 10.9%, overshooting the October Inflation Report assumption of 10%, while TL-denominated import prices rose at a slightly slower rate than the assumptions. The last column of Table 2 displays how each of these factors contributed to the deviation between expected and actual year-end inflation rates.

Table 2: Revisions to end-2019 Inflation Forecasts

	January IR	April IR	July IR	October IR
Inflation Forecasts (%)	14.6	14.6	13.9	12.0

Sources of Revisions*

	Apr-Jan	Jul-Apr	Oct-Jul	Dec-Oct
Food	0.7	-0.2	-1.2	0.2
Import Prices (TL)	0.3	-0.3	-0.3	-0.1
Underlying Inflation	-0.3	-0.6	-1.1	-0.3
Output Gap	-0.1	0.2	0.1	0
Adjustments to Alcoholic Beverages, Tobacco Products and Other Taxes	-0.6	0.2	0.6**	0

Source: CBRT.
* The first three columns show the sources of revisions in the inter-reporting period, while the last column shows the sources of the deviation between actual inflation and the October Inflation Report forecast. Inflation ended 2019 at 11.8%.
** The increase in prices of tobacco products in the October Inflation Report.

In conclusion, end-2019 inflation forecasts were gradually revised downwards throughout the year. These revisions were enabled by the positive impact the tight policy monetary stance and the disinflation-oriented strong policy coordination had on main inflation drivers including exchange rate, pricing behavior and expectations. Downward revisions to assumptions for food inflation and oil prices as of the second quarter of the year also played a major role. The CBRT has transparently communicated to the public the revisions to forecasts and their reasons through Inflation Reports, fulfilling the commitment of accountability on a regular basis.