7. Medium-Term Projections

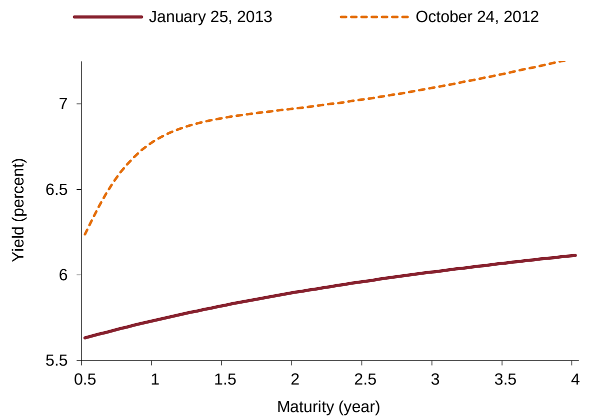
This Chapter summarizes the underlying forecast assumptions and presents the medium-term inflation and output gap forecasts as well as the monetary policy outlook over the upcoming 3-year horizon.

7.1. Current State, Short-Term Outlook and Assumptions

Monetary Conditions

Market rates have declined since October amid the CBRT's accommodative liquidity policies, which have been implemented as of mid-2012 and continued into the last quarter, and higher global risk appetite as well as credit rating upgrade by a rating agency. The yield curve shifted down across all maturities in the inter-reporting period, while long-term yields recorded a more notable decline relative to short-term yields (Chart 7.1.1).

Chart 7.1.1.
Yield Curve*



* Calculated from the compounded returns on bonds quoted at the ISE Bonds and Bills Market by using ENS method.
Source: ISE, CBRT.

Inflation

Annual consumer inflation went down to 6.2 percent in the last quarter of 2012, remaining below the projections presented in the October Inflation Report (Chart 1.2.1). This was mainly attributed to increases in unprocessed food prices, which were below seasonal averages; the marked deceleration in alcoholic beverages and tobacco products as well as the moderate course of international non-farm commodity prices and the slowdown in the economic activity.

On the back of developments in fresh fruits and vegetable prices, unprocessed food prices remained below October Inflation Report forecasts in the last quarter of 2012. It is envisaged that the favorable contribution from unprocessed food prices is temporary. Accordingly, unprocessed food prices are revised upwards, while processed food prices are revised downwards in 2013 projections. The assumption for food inflation was preserved at 7 percent due to the counterbalancing of these two reverse revisions (Table 7.1.1).

Table 7.1.1.
Revisions to 2012 Assumptions

		January 2013	October 2012
Output Gap	2012Q3	-2.15	-2.00
	2012Q4	-2.17	-2.07
Food Price Inflation (Year-end Percent Change)	2013-2015	7.0	7.0
Import Prices (Average Annual Percent Change, USD)	2012	-2.3	-1.9
	2013	-0.2	0.2
Oil Prices (Annual Average, USD)	2012	112	112
	2013	108	107
Export-Weighted Global Production Index (Average Annual Percent Change)	2012	1.1	1.2
	2013	1.7	1.7

Demand Conditions

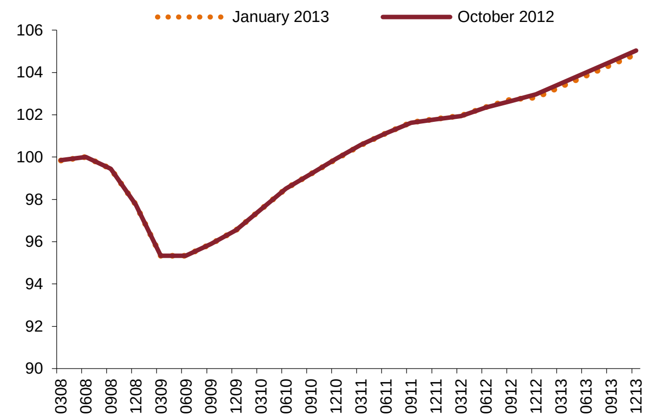
In the third quarter of 2012, the economic activity exhibited a slightly weaker growth than presented in the October Inflation Report. During this period, domestic demand remained sluggish due to contraction in the private investment, while net exports were the main driver of growth.

The last quarter data suggest that the economy has started to recover. The surge in the production and imports of consumption goods in October and November, the recent course of consumer confidence and the improvement in the investment demand indicate that the expected revival in domestic demand has started. The acceleration in loans in the last quarter of the year also supports the recovery of the final domestic demand.

The global growth outlook remained virtually unchanged since the publication of the October Inflation Report. Accordingly, export-weighted global growth index also remained nearly unchanged (Chart 7.1.2). Correspondingly, exports are expected to display further mild growth in the upcoming period on the back of market and product diversification.

Against this backdrop, output gap forecasts for the last two quarters of 2012 were revised slightly downwards in inter-reporting period (Table 7.1.1).

Chart 7.1.2.
Export-Weighted Global Economic Activity Index*
(2008Q2=100)



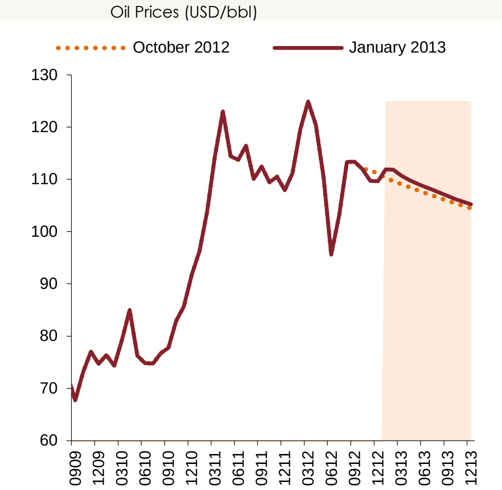
* For methodology, see Inflation Report 2010-II, Box 2.1 "Foreign Demand Index for Turkey".
Source: Bloomberg, Consensus Forecasts, CBRT.

Import Prices

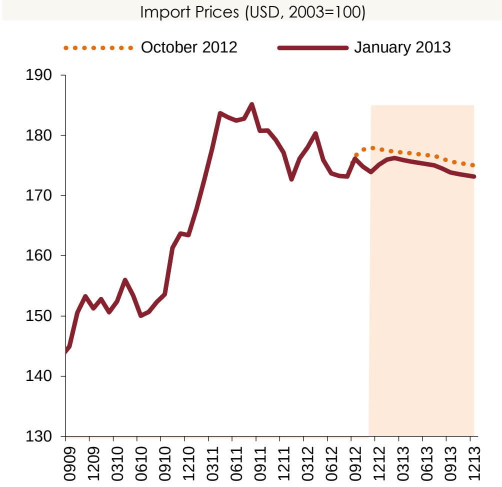
In the last quarter of the year, international oil prices were in line with the October Inflation Report assumptions (Chart 7.1.3a). Hence, the average oil price assumptions for 2013 remained nearly unchanged (Table 7.1.1).

Meanwhile, import prices declined slightly in the inter-reporting period amid falling non-energy commodity prices (Chart 7.1.3b). The assumption for import prices were revised slightly downwards on the back of the favorable course in non-energy import prices. Yet, this revision had no significant effect on 2013 inflation forecast.

Chart 7.1.3.
Revisions to Oil and Import Price Assumptions



Source: Bloomberg, CBRT.



Source: TurkStat, CBRT.

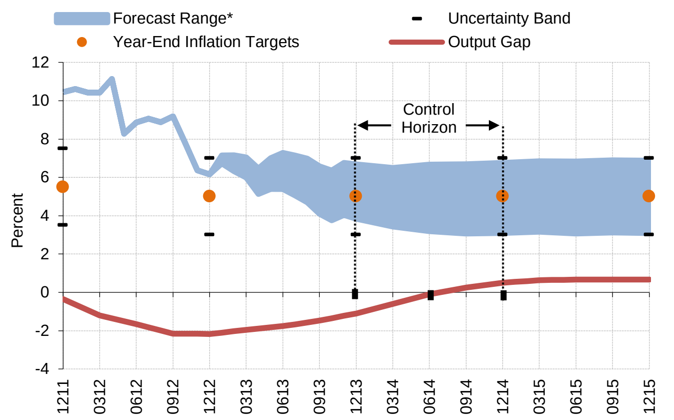
Fiscal Policy and Tax Adjustments

Medium-term forecasts are based on MTP projections. Accordingly, primary expenditures to GDP ratio is expected to remain broadly unchanged and the structural budget balance is expected to follow a horizontal course. Tax adjustments to tobacco and energy prices are assumed to be unchanged in the remaining of the year. Furthermore, projections are based on the outlook that other tax adjustments and administered prices are assumed to be consistent with the inflation targets and the automatic pricing mechanisms.

7.2. Medium-Term Outlook

Forecasts are based on the assumption that loans will grow by 15 percent and the real effective exchange rate will stay nearly constant. Accordingly, inflation is expected to be, with 70 percent probability, between 3.9 and 6.7 percent (with a mid-point of 5.3 percent) at the end of 2013, and between 3.1 and 6.7 percent (with a mid-point of 4.9 percent) at the end of 2014. Inflation is expected to stabilize around 5 percent in the medium term (Chart 7.2.1).

Chart 7.2.1.
Inflation and Output Gap Forecasts



* Shaded region indicates the 70 percent confidence interval for the forecast.

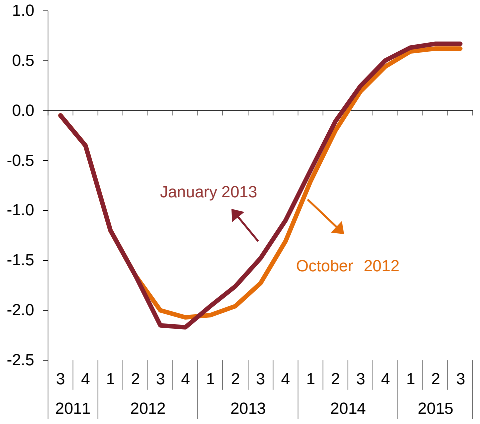
Having edged up amid price adjustments to tobacco products in January, inflation is expected to re-settle on its declining course. Even though inflation is projected to soar temporarily in May and June due to energy-price-driven base effects, inflation will resume its downward path and decline to 5.3 percent at year-end. Core inflation indicators are envisioned to maintain their favorable course in the short term and stay below 5 percent at the year-end. (Chart 7.2.1).

Chart 7.2.2 presents revisions to output gap forecasts. Output gap was revised upwards for the first quarter of 2013 amid the recent surge in capital inflows and the acceleration in loans. Amid adopted measures, loans and aggregate demand are expected to grow in tandem with the October Inflation Report projections starting from the second half of 2013.

Despite the absence of revision to year-end forecast, short-term inflation was revised downwards due to recent developments in unprocessed food prices (Chart 7.2.3). The favorable effect of the unprocessed food prices on inflation is assumed to be temporary and gradually taper off. Consequently, inflation is assumed to converge to October Inflation Report projections towards the year-end.

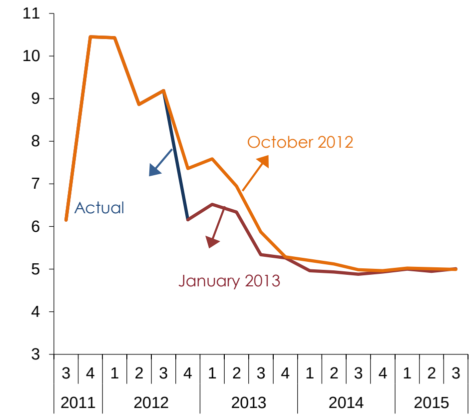
Comparison of October 2012 and January 2013 Inflation Report Forecasts

Chart 7.2.2.
Output Gap Forecast



Source: TurkStat, CBRT.

Chart 7.2.3.
Inflation Forecast

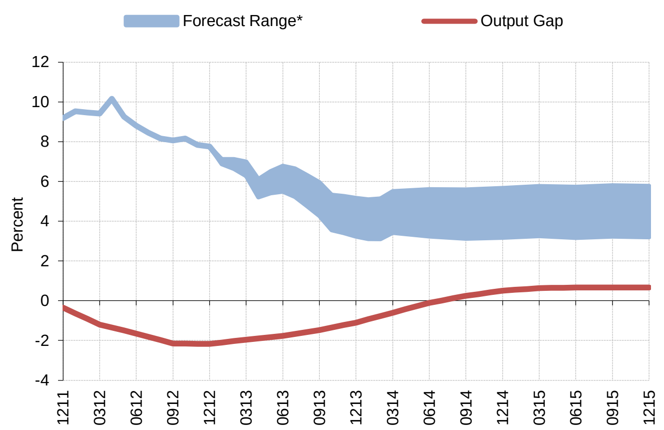


Source: CBRT.

The main message conveyed by these forecasts regarding monetary policy is the need for cautious stance to be preserved in order for inflation to near the target at the end of 2013. With respect to balancing of macro financial risks, the CBRT is assumed to react against excessive fluctuations in loans and exchange rate. In fact, despite the higher-than-envisioned loan growth in the recent period, forecasts are based on outlook where loans are expected to grow by 15 percent. Providing a plausible and robust loan growth will support both financial stability and price stability.

Unpredictable price fluctuations in items beyond the domain of the monetary policy, such as unprocessed food and tobacco are among major factors of deviations in inflation forecasts. Hence, inflation forecasts excluding unprocessed food and tobacco are publicly announced. Forecasts are based on the assumption that year-end unprocessed food inflation will be 8.5 percent. Accordingly, inflation forecasts excluding unprocessed food, tobacco and alcoholic beverages are presented in Chart 7.2.4. The inflation indicator, as measured above, is expected to follow a downward course, notwithstanding the base-effect-driven surge in the second quarter of 2013. Inflation is expected to settle on an accelerated downward track starting from the second half of the year. Inflation excluding unprocessed food, tobacco products and alcoholic beverages will stable around 4.5 percent in the last quarter of 2013.

Chart 7.2.4.
Inflation Forecast Excluding Unprocessed Food, Tobacco and Alcoholic Beverages



* Shaded region indicates the 70 percent confidence interval for the forecast.

Comparison of the CBRT's Forecasts with Inflation Expectations

It is critical that economic agents, being aware of the temporary factors, should focus on the underlying medium-term inflation, and therefore, take the inflation target as a benchmark in their pricing plans and contracts. In this respect, to serve as a reference guide, the CBRT's current inflation forecasts should be compared to inflation expectations of other economic agents. Accordingly, year-end inflation expectations as well as 12-month and 24-month ahead inflation expectations of the Survey of Expectations' respondents are slightly above our baseline scenario forecasts (Table 7.2.1). However, it is worth noting that these expectations, which have followed a flat course for a prolonged period of time, have improved remarkably in the last couple months.

Table 7.2.1.
CBRT Inflation Forecasts and Expectations

	CBRT Forecast	CBRT Survey of Expectations*	Inflation Target**
2013 Year-end	5.3	6.3	5.0
12-month ahead	5.2	6.1	5.0
24-month ahead	4.9	5.8	5.0

* January 2013, second survey period results.
** Calculated by linear interpolation of year-end inflation targets for 2013- 2015.
Source: CBRT.

7.3. Risks and Monetary Policy

Although global risk perceptions have improved considerably in the recent period, persisting volatility in the cross border capital flows necessitate monetary policy to be flexible on both sides. Ongoing monetary expansion in advanced economies, commitment to maintain this policy until economic indicators improve, and increasing global risk appetite have been the major factors leading to an acceleration in capital flows to emerging markets. Nevertheless, the deleveraging process in advanced economies may impede the recovery in the economic activity and thus slow down the improvement in the budget balances. In fact, despite steps taken to resolve problems in the Euro Area, outlook for credit markets and economic growth remains weak. Meanwhile, uncertainty indices regarding the economic policy in major advanced economies are still at high levels. Overall, although fragilities regarding global economy have eased considerably in the recent period, they remain to be important. Therefore, it is likely that the recent improvement in the risk sentiment may reverse course in the forthcoming period. Should such a risk materialize, the CBRT will take necessary measures via the flexible policy framework it has developed.

Accelerating capital inflows and weak global economic outlook may aggravate macro financial risks, should they persist for a while. The recent policies pursued by the CBRT aim to prevent the build-up of risks arising from long-lasting capital inflows. In this respect, in order to prevent rapid credit growth and appreciation pressures, short-term interest rates are kept at low levels while tightening through reserve requirement policy. Macro prudential measures will continue to be taken, should the recent global trends persist and credit growth expectations exceed 15 percent for a long period.

On the other hand, aggregate demand and commodity prices may increase faster than expected and monetary policy may normalize in advanced economies, should measures taken towards the solution of problems regarding the global economy be completed sooner and more decisively than envisaged. Materialization of such a risk would increase pressures on inflation, and thus require a tightening using all policy instruments.

To sum up, the policy framework designed by the CBRT to balance macro financial risks, coupled with the rich set of instruments it has developed, offers a flexible framework to contain the impact of global shocks on the domestic economy.

Unprocessed food prices continue to pose risks regarding inflation outlook. Developments in unprocessed food prices were the main factors explaining the lower-than-expected inflation in 2012. The possibility of this trend reversing in 2013 poses an upside risk on inflation. The CBRT will not respond to volatility in unprocessed food prices, yet will deliver the necessary tightening should this lead to a persistent increase and deterioration in the pricing behavior.

The CBRT monitors fiscal policy developments and tax adjustments closely with regard to their effects on the inflation outlook. Forecasts presented in the baseline scenario take the framework outlined in the MTP as given. In this respect, it is assumed that fiscal discipline will be sustained and there will be no unanticipated hikes in administered prices. A revision in the monetary policy stance may be considered, should the fiscal stance deviate significantly from this framework, and consequently, have an adverse effect on the medium-term inflation outlook.

Prudent fiscal and financial sector policies are crucial for preserving the resilience of our economy against existing global imbalances. Strengthening the structural reform agenda that would ensure the sustainability of the fiscal discipline and reduce the savings deficit would support macroeconomic stability in the medium term. This will also provide more flexibility for monetary policy and improve social welfare by keeping interest rates of long-term government securities persistently at low levels. In this respect, steps towards implementation of the structural reforms envisaged by the MTP remain to be of utmost importance.

Box 7.1 Sources of Revisions to 2012 Year-end Inflation Forecasts

Commodity and food prices played a major role on revisions to the year-end inflation forecasts in 2012. The high volatility of these prices led to assumption changes throughout the year. Furthermore, unforeseen adjustments to taxes and administered prices also caused upward revisions to year-end forecasts towards the end of the year. The year-end inflation realization was below October Inflation Report forecast mainly owing to the better–than-expected favorable course of unprocessed food prices.

As a requirement of the inflation targeting regime, the CBRT is liable to account to the public through reports. Accordingly, this Box summarizes revisions to 2012 year-end inflation forecasts throughout the year, in addition to the underlying reasons.

January Inflation Report

Due to adoption of monetary tightening at the end-2011 for containing the upside risks to inflation as well as the deterioration in the global growth, assumptions were based on an outlook where demand conditions restrict inflation in 2012. Accordingly, in the first half of 2012, inflation was envisioned to remain elevated due to cumulative effects of the depreciation in the Turkish lira, hikes to administered prices and unfavorable developments in unprocessed food prices; whereas inflation was projected to fall rapidly in the last quarter as the base effects taper off. In this respect, year-end inflation for 2012 was assumed to be 6.5 percent in the January 2012 Inflation Report. In view of the adverse effects due to monetary tightening which is implemented to attain the inflation target, forecasts were based on an outlook where inflation declines to 5 percent in mid-2013.

Table.1. Inflation Report Assumptions

		January 2012	April 2012	July2012	October 2012	Actual
Food Prices (Annual Percent Change)	**2012**	7.5	7.5	7.0	7.0	3.9
Export-Weighted Global Production Index (Annual Average Percent Change)	**2012**	1.4	1.4	1.1	1.2	1.1*
Import Prices (Annual Average Percent Change)	**2012**	-0.3	-0.7	-3.9	-1.9	-2.3*
Oil Prices (USD/bbl)	**2012**	110	120	110	112	112

* As of January 28, 2013.

April Inflation Report

In the last quarter of 2011, economic activity was mainly in line with the January Inflation Report forecasts. Domestic demand was flat and the largest contribution to growth was provided by net external demand. Domestic and external demand were balanced further during this period.

Energy price hikes in April led to soaring of inflation in the short term. However, year-end inflation forecast was preserved at 6.5 percent based on an outlook with higher support from monetary stance and demand conditions to disinflation. Amid soaring oil prices in the first quarter of 2012, annual average oil price assumption was pulled up to USD 120 in April Inflation Report from USD 110 in January Inflation Report (Table 1). On the other hand, import prices excluding energy followed a relatively favorable course, thus partially offsetting the adverse effects of higher oil prices on inflation.

July Inflation Report

Economic activity remained in line with the April Inflation Report forecasts in the first quarter; while export-weighted global production index was revised down slightly, thus keeping the initial point of the output gap forecast unchanged.

Owing to the favorable course of unprocessed food prices in the second quarter, the contribution of food prices to inflation remained below April Inflation Report forecasts. Accordingly, food inflation assumption for the year-end was pulled down from 7.5 percent to 7.0 percent (Table 1). The revision to food inflation reduced the 2012 year-end inflation forecast by about 0.15 percent.

Amid the deterioration in the global growth outlook and demand-side developments, oil prices remained low in the second quarter compared to the previous reporting period. Accordingly, annual average oil price assumption for 2012 was revised down from USD 120 to USD 110. Similarly, import price assumption for 2012 was also revised downward in the inter-reporting period. As a result of these revisions, import prices pulled down 2012 year-end inflation forecast by 0.15 percent.

In sum, 2012 year-end inflation forecast was revised downward by 0.3 percent owing to favorable developments regarding inflation (Table 2).

October Inflation Report

In the second quarter of 2012, economic activity remained weak compared to the outlook presented in the July Inflation Report. During this period, domestic demand slowed down due to investments; while net exports lagged behind forecasts amid developments in the global growth outlook. In accordance with these developments in domestic and external demand indicators, output gap forecasts were revised downward compared to the previous reporting period. This revision led to a 0.1 percent decline in the 2012 year-end inflation forecast.

In the third quarter of the year, oil prices hovered above July Inflation Report assumptions. Hence, the oil price assumption for 2012 was pulled up to USD 112. Similarly, import prices were also revised upward (Table 1). These revisions and exchange rate developments led to 0.4 percent increase in the 2012 year-end inflation forecast. Meanwhile, the assumption for annual food inflation was cautiously preserved at 7.0 percent.

Additional fiscal measures adopted in end-September led to SCT rate hikes in fuel, automobile and alcoholic beverages, thereby affecting inflation adversely. These tax adjustments, which were unforeseen in the July Inflation Report, led to 0.9 percent increase in the year-end inflation forecast (Table 2).

In sum, 2012 year-end inflation forecast was revised upward by 1.2 percent from the July Inflation Report mainly due to import price developments, tax rate hikes and energy price adjustments.

Table 2. Sources of Revisions to 2012 Year-end Inflation Forecasts

	January 2012	April 2012	July 2012	October 2012
Inflation Forecasts (Percent)	6.5	6.5	6.2	7.4
Sources of Revisions to Inflation Forecasts in the Inter-reporting Period (percent)				
	April-January	July-April	October-July	December-October*
Food	0.0	-0.15	0.0	-0.8
Oil and Other Commodity Prices	0.1	-0.15	0.4	-0.1
Additional Fiscal Measures	0.0	0.0	0.9	0.0
Underlying Trend of Inflation	-0.1	0.0	-0.1	-0.3

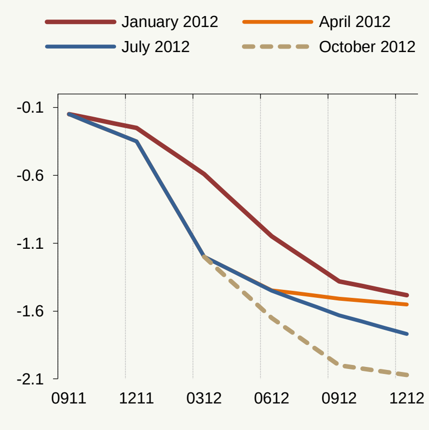
*Denotes the sources of the gap between forecast and actual. 2012 year-end inflation was realized as 6.2 percent.
Source: CBRT.

2012 Year-end Inflation Realization

In the last quarter of 2012, unprocessed food price developments played a major role on the less-than-envisioned inflation realization. Even though actual processed food inflation was slightly above forecasts, 2012 year-end food inflation, which was assumed to be 7.0 percent in October, reached 3.9 percent. Out of the 1.2 percent gap between actual inflation (6.2 percent) and the 2012 year-end inflation forecast (7.4 percent) of the October Inflation Report, 0.8 points can be attributed to the more-than-envisioned favorable course of food prices.

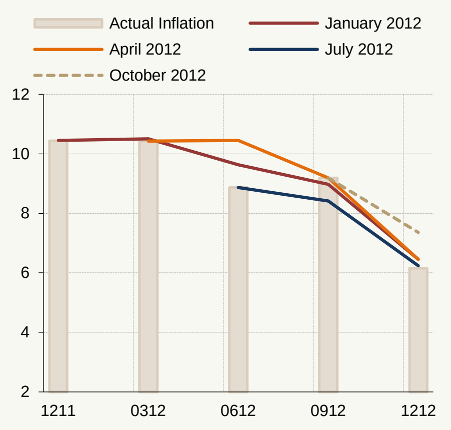
In the last quarter of 2012, import prices generally followed a positive course and registered a year-on-year decline by 2.4 percent. Together with the developments in the exchange rate, this explains the 0.1 points of the gap between actual inflation and the 2012 year-end inflation forecast (Table 2). Furthermore, national accounts data for the third quarter of the year were slightly below forecasts. Hence, output gap forecasts for the second half of 2012 were revised downward (Chart 7.2.3). Amid increased contribution from demand conditions to disinflation, the underlying trend of inflation followed a favorable course compared to the October Inflation Report (Table 2). Accordingly, the increase in the prices of core goods and services also remained relatively limited.

Chart 1. Revisions to Output Gap Forecasts in 2012



Source: CBRT.

Chart 2. Revisions to Inflation Forecasts in 2012



Source: TurkStat, CBRT.

In sum, year-end inflation forecasts differed across quarters due to oil and other commodity price developments, unforeseen food price movements and administered price adjustments (Chart 2). In line with its accountability principle, the CBRT clearly informed public about inflation forecast revisions and their sources through Inflation Reports.