3. Medium-Term Projections

3.1 Current State, Short-Term Outlook and Assumptions

Changes in Key Forecast Variables

Economic activity remained strong. In this period, aggregate demand conditions were higher than expected in the forecasts of the April Inflation Report, mainly due to the increase in external demand. The strong course of economic activity was also reflected in the labor market, and employment rose while unemployment rates decreased. In this context, output gap forecasts for the first half of 2022 have been revised upwards (Table 3.1.1).

In the second quarter of 2022, consumer inflation and the B index reached 78.62% and 64.42%, respectively, exceeding the forecast range of the April Inflation Report. The major drivers of the rise in inflation were supply shock waves, international energy and food prices, transportation costs and production bottlenecks that have been effective since last year due to supply-demand mismatches caused by re-opening, geopolitical developments, and trade restrictions. In addition to cost-related effects, pricing detached from economic fundamentals, the increased backward pricing in inflation and the shortened average period for prices to remain unchanged were effective in the rise in inflation.

Table 3.1.1: Development of Main Forecast Variables*

	2022-I	2022-II
Output Gap (%)	1.8 (1.5)	0.5 (-0.2)
Consumer Inflation (Quarter-End, Annual % Change)	61.1 (61.1)	78.6 (68.4)
B** Index Inflation (Quarter-End, Annual % Change)	51.3 (51.3)	64.4 (60.3)

* Numbers in parentheses are from the April Inflation Report.
** B index is the CPI excluding unprocessed food, alcohol, tobacco, energy and gold.

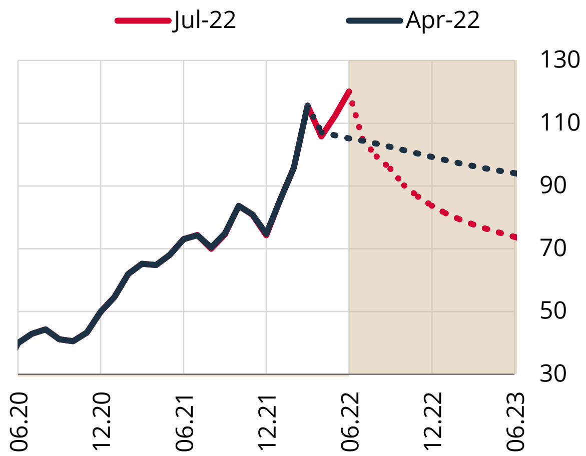
Assumptions of Exogenous Variables

Escalating geopolitical risks caused a weakening in the global economic activity. Global growth rates remained strong in the first quarter of 2022 thanks to the post-pandemic reopening. As of the second quarter, global economic activity started to show signs of weakening compared to the projections of the April Inflation Report. Supply shocks caused by the conflict between Ukraine and Russia affected commodity prices, supply chains and trade volume. Other important factors shaping the environment were concerns about the course of the pandemic in China, and the tightening of global financial conditions. Thus, the Export Weighted Global Growth Index, which reflects the external demand outlook of the Turkish economy, was revised downwards. On the other hand, it is considered that higher energy prices supporting the growth outlook of energy exporting countries and Turkey's dynamic export structure with market flexibility will limit the risks to external demand.

Major central banks underline that inflation may remain on the rise for a longer-than-expected period due to higher energy prices and supply-demand mismatch. Considering increased bond yields and market pricing for the upcoming period, global financial conditions are assumed to be tighter compared to the April Inflation Report.

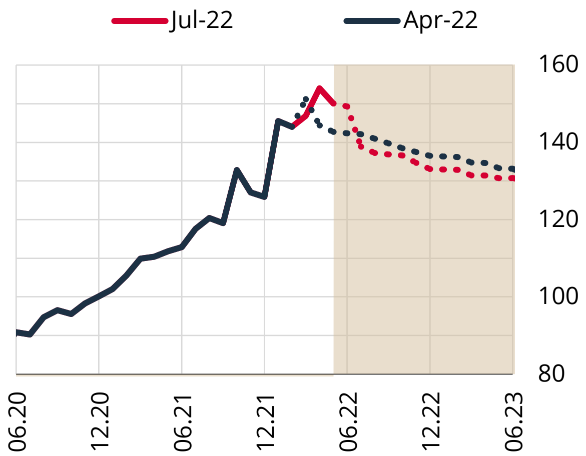
Due to the tightening financial conditions and expectations of a slowdown in global demand, international commodity prices declined from record levels. Commodity prices, which reached historic highs as the tension between Ukraine and Russia turned into a war, have dropped recently. In addition, the easing of pandemic measures in China and the increase in freight capacities also supported the decline in commodity prices. Thus, the upward deviation of the estimations at the beginning of the current reporting period was partially offset by the recent positive developments. In this context, assumptions regarding the general level of oil prices and import prices have been largely preserved for 2022 but have been revised downwards for 2023 (Table 3.1.2).

Chart 3.1.1: Revisions to Oil Price Assumptions* (USD/bbl)



Sources: Bloomberg, CBRT.
* Shaded area denotes the forecast period.

Chart 3.1.2: Revisions to Import Price Assumptions* (Index, 2015=100)



Sources: CBRT, TURKSTAT.
* Shaded area denotes the forecast period.

Food prices assumptions have been revised upwards for 2022 and 2023. Annual inflation in food and non-alcoholic beverages rose to 93.93% in the second quarter of 2022. This rise was caused by high agricultural commodity and energy prices, exchange rate developments, trade restrictions and supply constraints. It is assumed that food price inflation will remain high for a while in the upcoming period and will decline towards the end of the year, ending 2022 at 71.3% and 2023 at 25.7% (Table 3.1.2).

Table 3.1.2: Revisions to Assumptions*

	2022	2023
Export-Weighted Global Production Index (Annual Average % Change)	2.6 (3.0)	2.5 (3.3)
Oil Prices (Average, USD)	99.6 (102.2)	73.7 (93.9)
Import Prices (USD, Annual Average % Change)	23.3 (22.2)	-8.4 (-7.0)
Food Prices (Year-End % Change)	71.3 (49.0)	25.7 (15.0)

* Numbers in parentheses are from the April Inflation Report.

The effect of administered prices and tax adjustments on prices increased compared to the previous quarter, mainly due to changes in energy prices. Administered prices increased due to higher electricity and natural gas prices, label fees for electronic devices and tax regulations for alcohol-tobacco. On the other hand, the suspension of the D-PPI-indexed tax increase for tobacco, the VAT cut in household staples and the fixed rent increase of 25% throughout the year prevented a more negative outlook in inflation. Meanwhile, government incentives for some food and agricultural products and external trade measures for critical products are also considered to have a limiting effect on the short-term inflation outlook.

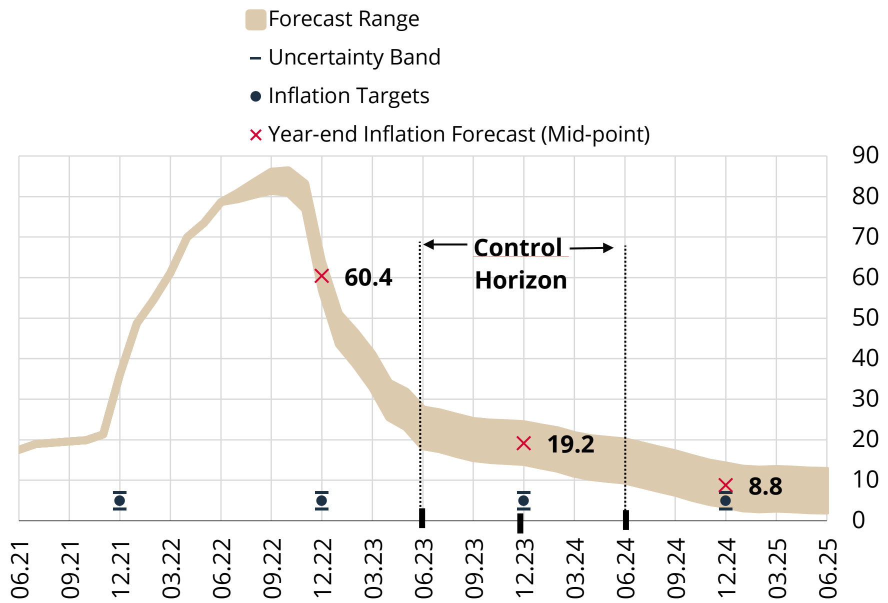
Medium-term projections are based on an outlook in which macroeconomic policies are determined with a medium-term perspective and in a coordinated manner with a focus on bringing inflation down*. In this context, it is assumed that adjustments to administered prices will be determined to support disinflation in the medium term.* A strong policy coordination prioritizing disinflation is critical to maintaining improvements in macroeconomic stability, the risk premium and perceptions of uncertainty.

3.2 Medium-Term Projections

The CBRT formulates monetary policy decisions with a medium-term perspective based on all factors affecting inflation and their interaction, focusing on the achievement of price stability on a lasting basis.

The monetary policy stance will be determined with the focus on evaluating the sources of the risks to inflation, their permanence and to what extent they can be controlled by monetary policy, targeting sustainable price stability with a prudent approach. The disinflationary process is expected to start with the steps taken and resolutely implemented to achieve sustainable price stability and stronger financial stability as well as the re-establishment of the global peace environment. Accordingly, inflation is projected to be 60.4% at the end of 2022; fall to 19.2% at the end of 2023; and sustain the downward trend by receding to 8.8% by the end of 2024. With a 70% probability, inflation is expected to be between 56.9% and 63.9% (with a mid-point of 60.4%) at end-2022, and between 14.5% and 23.9% (with a mid-point of 19.2%) at end-2023, and between 3.9% and 13.7% (with a mid-point of 8.8%) at end-2024 (Chart 3.2.1).

Chart 3.2.1: Inflation Forecasts* (%)



Sources: CBRT, TURKSTAT.

* Shaded area denotes the 70% confidence interval for the forecast.

Year-end inflation forecasts for 2022 and 2023 have been revised upwards compared to the previous reporting period (Chart 3.2.2). The recent rise in inflation was due to energy cost increases caused by geopolitical developments, temporary effects of pricing detached from economic fundamentals, and strong negative supply shocks led by rising global energy, food, and agricultural commodity prices. Moreover, heightened inflation expectations continue to pose risks to pricing behavior and the inflation outlook. Inflation forecasts were revised upwards due to the impact of these developments on inflation, especially in the second quarter.

In the first half of 2022, the policy rate was kept constant at 14% in light of the analyses made of the decomposition of supply and demand shocks. In order to institutionalize price stability in a sustainable manner, a comprehensive policy framework review process is ongoing to promote permanent and strengthened liraization in all policy instruments of the CBRT. In addition, credit, collateral, and liquidity policy steps, whose evaluation processes have been completed, are put into action in a way that strengthens the effectiveness of the monetary policy transmission mechanism.

Table 3.2.1: Revisions to Year-End Inflation Forecasts for 2022 and 2023 and Sources of Revisions

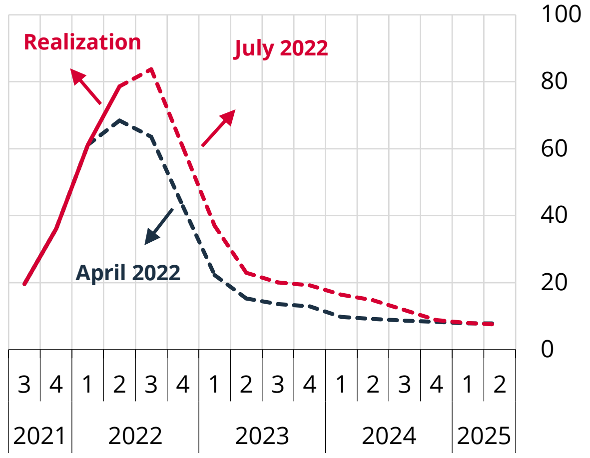
	2022	2023
2022-II (April 2022) Forecast (%)	42.8	12.9
2022-III (July 2022) Forecast (%)	60.4	19.2
Forecast Revision as Compared to the 2022-II Period	+17.6	+6.3
Sources of Forecast Revisions (% Points)		
Turkish Lira-Denominated Import Prices (Including the Exchange Rate, Oil and Import Prices)	+7.4	+0.1
Food Prices	+3.0	+1.0
Administered Prices	+0.4	+0.3
Output Gap	+0.3	-0.1
Unit Labor Cost	+2.4	+0.6
Deviation from the Inflation Forecast / the Underlying Trend of Inflation	+4.1	+4.4

Source: CBRT.

The year-end inflation forecast for 2022 was raised from 42.8% to 60.4%, up 17.6 percentage points. Compared to the previous reporting period, the update based on Turkish lira import prices increased the inflation forecast by 7.4 points, while the increase in the assumption for food prices contributed an additional 3.0 points. Furthermore, administered prices pushed the year-end inflation forecast up by 0.4 points, mainly due to the increase in electricity and natural gas prices, while the contribution of the revised initial conditions to the underlying inflation trend caused forecasts to rise by 4.1 points. Increased unit labor costs also brought the forecasts upward by 2.4 points. In addition, the revised output gap drove the inflation forecast up by 0.3 points (Table 3.2.1).

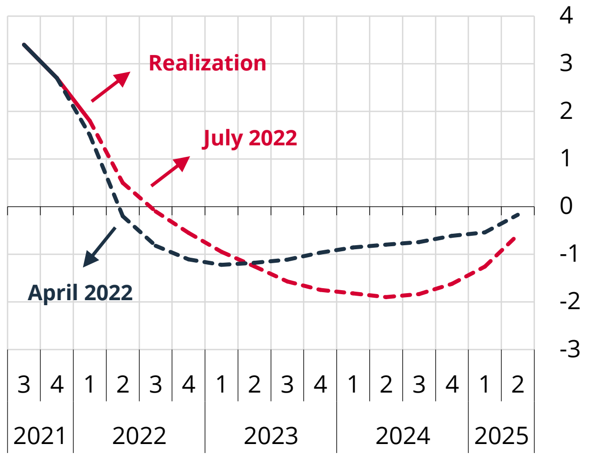
The year-end inflation forecast for 2023 was updated from 12.9% to 19.2%. The effects of the revision to the initial conditions on the underlying trend of inflation push the end-2023 inflation forecast up by 4.4 points. The update in the food prices assumption contributed 1.0 point. Moreover, Turkish lira-denominated import prices added 0.1 point to the forecast, while unit labor costs brought inflation forecasts up by 0.6 points. On the other hand, the revised output gap forecasts pulled the forecasts down by 0.1 point. Lastly, the revision to administered prices increased the estimates by 0.3 points (Table 3.2.1).

Chart 3.2.2: Inflation Forecast (Quarter-End, Annual, %)



Sources: CBRT, TURKSTAT.

Chart 3.2.3: Output Gap Forecast (%)



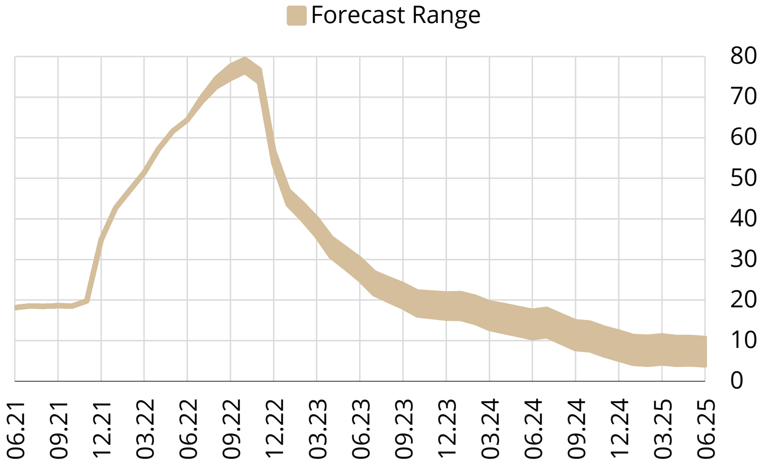
Source: CBRT.

Forecasts are based on an outlook in which global economic activity has weakened, global inflation continues to rise, and global financial conditions have tightened compared to the previous reporting period. Leading indicators point to an increased likelihood of a global recession. Global growth forecasts have been revised downwards due to escalating geopolitical risks and concerns about global financial conditions. Confidence indices continue to decline, falling to historic lows in July. Mounting uncertainties amid trade bans, high commodity prices, and continued supply constraints in some sectors, particularly in basic food and energy, lead to an increase in producer and consumer prices on an international scale. The effects of high global inflation on inflation expectations and international financial markets are closely monitored. Monetary policy actions and communications of major central banks diverge more markedly due to varying economic outlooks across countries. In this period, central banks increased their efforts to find solutions with new supportive actions and instruments due to heightened uncertainties over financial markets. These developments cause the global risk appetite to decline in the current reporting period. The volatility in long-term bond yields across advanced economies and the course of global financial conditions add to the risks to portfolio flows to emerging economies.

Aggregate demand conditions are expected to follow a course close to their potential in the upcoming period thanks to a macroprudential policy set strengthened by credit, collateral, and liquidity policy steps, whose evaluation processes have been completed. Data for the second quarter of 2022 indicate that economic activity remains strong. Despite the deepening of the negative outlook for global economic activity, the Turkish economy displays a resilient outlook due to the strong course of exports. In this period, the dynamic capacity of exporting companies and their flexibility in market diversification helped compensate for regional losses in exports stemming from the Russia-Ukraine conflict. Offering companies access to Turkish lira finance at affordable costs and requiring loans to be used in targeted areas, so they transform into investments that increase production capacity and support exports, have become an important part of the monetary policy strategy. Targeted loan utilization is expected to contribute positively to both sustainable growth and the current account balance. Therefore, while on the one hand, targeted loans support exports, the current account balance, and the investment and employment environment, on the other hand, whether the growth rate and composition of loans coincide with economic activity in line with their intended purpose is closely monitored. Macroprudential measures have been gradually increased recently to limit the demand for consumer loans and to counter the acceleration observed in commercial loans in the second quarter of the year. As a result of these developments, the loan-deposit interest rate gap, which reflects the tendency of banks to issue loans, increased for TRY commercial and consumer loans, surpassing long-term averages. With the increasing slowing effects of macroprudential measures on loans, it will be possible for aggregate demand conditions to contribute more to the disinflation process as envisaged. On the other hand, higher administered prices pose an upside risk to the short-term inflation outlook. A more stable general level of prices will positively affect macroeconomic stability and financial stability through a decrease in country risk premiums, continued reverse currency substitution, an ongoing upward trend in foreign exchange reserves, and a permanent decline in financing costs.

Recent unpredictable volatilities in items beyond the control of monetary policy, such as unprocessed food and energy cause inflation forecasts to deviate. Core inflation indicators obtained by excluding these items contain more information about the underlying trend of inflation. In this context, inflation (B index) forecasts excluding unprocessed food products, energy, alcoholic beverages, tobacco and gold are also shared with the public. Accordingly, annual B index inflation is expected to start a downward trend by the last quarter of 2022 (Chart 3.2.4).

Chart 3.2.4: Annual Inflation Forecast for the B Index* (%)



Sources: CBRT, TURKSTAT.
* Shaded area denotes the 70% confidence interval for the forecast.

3.3. Key Risks to Inflation Forecasts and Possible Impact Channels

Macroeconomic risks may change the outlook on which the inflation forecasts are based, and the monetary stance is shared in detail in Section 1.3. Evaluations of the channels through which these risks may influence inflation forecasts presented in Section 1.2 and the direction in which they may change the forecasts are summarized in Table 1.3.1.

Table 3.3.1: Key Risks

Cost Pressures

- The supply shock caused by the Russia-Ukraine conflict aggravated the current supply constraints, causing international commodity prices to remain high. Historically high international food prices, soaring energy prices, and supply chain disruptions add to the pressures on producer prices. On the other hand, risks looming over global growth led to a decline in commodity prices, particularly for metals. The key role Türkiye plays in resuming grain shipments from war-hit Black Sea ports to global markets may affect the course of food prices. There remain both upside and downside risks to inflation and downside risks to economic activity due to supply shocks that cause commodity prices to surge, transportation costs to rise, global trade to slow and global financial conditions to tighten.

  Tracked Indicators: Geopolitical developments and the course of the Russia-Ukraine war, the course of global growth expectations, crude oil prices and supply-demand balance, OPEC+ decisions, industrial metal prices, agricultural commodity prices, supply-demand balance in agricultural products, indicators pertaining to the divergence between producer and consumer prices, global supply indicators, transport and freight costs, climate change, drought indicators, indicators for international food prices, indicators for the domestic energy market, administered prices.

Uncertainties Regarding Financial Markets and the Global Macroeconomic Outlook

- Global inflation continues to rise sharply, while monetary policy actions and communications of major central banks diverge more markedly due to varying economic outlooks across countries. In this environment, uncertainties regarding global financial conditions raise the risk of stagflation. This poses an upside risk through financial conditions and a downside risk through international prices.
- Domestically, the growth rate of loans and the targeted use of accessed funds for real economic activity are important regarding the current account balance, asset prices, domestic/external demand balance, and healthier pricing in foreign exchange markets.

Tracked Indicators: The course of demand and growth components, developments in loan and deposit rates, credit conditions (Bank Loans Tendency Surveys), financing of the balance of payments, portfolio flows to stock and bond markets, bond yields and monetary policy stances of advanced economies, risk premium indicators, foreign exchange markets, dollarization indicators, global inflation indicators and expectations, the course of global monetary policies, demand and supply indicators for FX-protected deposits.

Geopolitical Risks, the Pandemic and Economic Activity

- Geopolitical tensions and rising commodity prices, especially for energy, add to the downside risks to global and regional economic activity expectations for 2022. There are more downside risks to external demand than in the previous reporting period, indicating regional divergences may become more evident. Moreover, the Russia-Ukraine war poses risks to travel and transportation revenues. Meanwhile, geopolitical risks, new COVID variants and waves, and their effects on domestic and international demand conditions are closely monitored.
- There remain upside risks to the current account balance due to soaring energy prices amid the Russia-Ukraine conflict. Despite the ongoing robust performance of exports and the recovery in services revenues, risks persist to soaring energy prices. Accordingly, pricing differentiations are observed according to the types of energy.

Tracked Indicators: Geopolitical developments, the course of the pandemic and vaccination in Türkiye and abroad, exports, imports and the current account balance, developments in tourism and transport, demand and inflation indicators by sectors and subsectors, wage and labor cost indices.

Pricing Behavior and High Inflation Expectations

- The deterioration in pricing continues. The frequency of price updates is getting higher, and the average period for prices to remain unchanged is getting shorter. This outlook will be shaped depending on the effectiveness of the holistic policy mix to fight inflation as well as the frequency and magnitude of the supply shocks and their visibility on the economy. The disinflationary content of implemented policies coupled with the increased coordination increase the downside risks on inflation while ongoing effects of supply shocks on the economy increase upside risks.

Tracked Indicators: Survey and market-based expectations for inflation and exchange rates, indicators for backward indexation, indicators for inflation uncertainty, financial volatility indicators.

Monetary, Fiscal and Financial Coordination

- The disinflation process may be delayed or accelerated depending on whether administered price and tax adjustments exceed or fall below the path envisaged in this Report.

Tracked Indicators: Adjustments to administered prices and taxes, developments in tax revenues and public spending, government wage policies, indicators for government budget and public debt stock, fiscal stance (structural budget balance).