3. Medium-Term Projections

3.1 Current State, Short-Term Outlook and Assumptions

Changes in Key Forecast Variables

Economic activity remained strong in the fourth quarter of 2021 on the back of external demand. Although aggregate demand conditions were slightly below previous projections in this period, they were still above their trend. Thanks to strong economic activity, the labor market continued to recover while unemployment rates fell. Leading indicators suggest that economic activity lost momentum in the first quarter of 2022 due to domestic demand, as projected in the January Inflation Report. Thus, the outlook presented in the January Inflation Report regarding output gap forecasts for the last quarter of 2021 and the first quarter of 2022 has been left mostly unchanged (Table 3.1.1).

Having exceeded the forecast range of the January Inflation Report, consumer inflation and B index inflation came in at 61.1% and 51.3%, respectively, in the first quarter of 2022. This deviation from forecasts was driven through costs and expectations by pricing formations that are not supported by economic fundamentals and import prices that surged amid geopolitical developments. In line with the forecasts of the January Inflation Report, demand conditions that lost momentum due to domestic demand, a stable exchange rate despite geopolitical developments, and anti-inflationary public finance actions prevented a gloomier inflation outlook.

Table 3.1.1: Development of Main Forecast Variables*

	2021-IV	2022-I
Output Gap	2.7	1.5
(%)	(2.9)	(1.6)
Consumer Inflation	36.1	61.1
(Quarter-End, Annual % Change)	(36.1)	(50.1)
B** Index Inflation	34.9	51.3
(Quarter-End, Annual % Change)	(34.9)	(44.6)

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

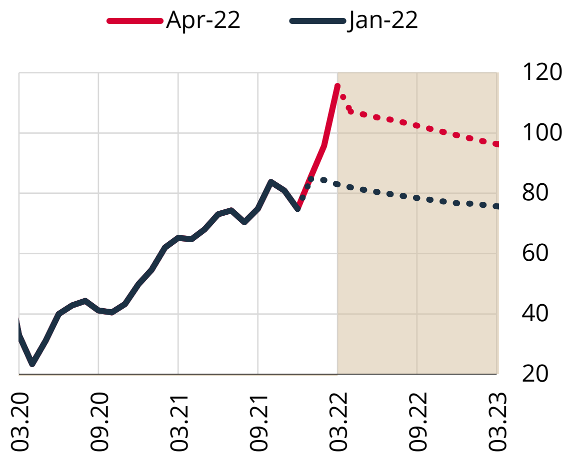
Assumptions on Exogenous Variables

The Russia-Ukraine conflict as well as China's renewed lockdown measures added to the downside risks to global economic activity. The tensions between Ukraine and Russia that turned into a full-fledged conflict at the end of February affect the global economy through commodity prices, supply and trade. Commodity prices are on the rise across the board, especially for energy and food, while the global growth outlook is adversely affected by supply constraints, which were about to ease thanks to the lifting of pandemic restrictions but tightened again after the sanctions against Russia. In fact, recently released high frequency data reflect such negative effects, and the course of the war and sanctions will play an important role in global growth. On the other hand, uncertainty remains as to how much China's renewed lockdown measures in major trade and financial hubs amid a surge in new cases will affect the global supply chain. Against this background, the export-weighted global growth index, a measure of Turkey's external demand outlook, was revised downwards. Meanwhile, the fact that higher energy prices benefit the growth outlook for energy exporting countries combined with Turkey's dynamic export structure offering market flexibility will curb the negative outlook for its external demand.

Global inflation continued to rise at a remarkable clip amid recent developments. Thus, global financial conditions are assumed to be tighter than anticipated in the previous reporting period. Supply constraints, production bottlenecks and international commodity prices, which have been increasing due to geopolitical developments, pushed up global inflation to historic highs. Therefore, monetary policy stances of central banks across advanced and emerging economies varied according to their macroeconomic outlooks, while their communications for the future reflected a similar divergence. Currently, major central banks maintain their accommodative stances and continue with asset purchases, albeit at a reduced pace, but markets expect the Fed and ECB to tighten their policies in the upcoming period.

Assumptions regarding international crude oil prices and USD-denominated import prices have been revised upwards. After having soared in the previous reporting period, both the level and volatility of crude oil prices increased significantly due to the risks sparked by the war (Chart 3.1.1). In the following period, waning prospects of an EU oil embargo against Russia led to a slight decline in crude oil prices. On the other hand, the release of strategic reserves by countries and the pandemic-driven impending drop in China's energy demand helped bring prices down. In this period, nevertheless, sharp increases were seen in crude oil prices as well as import prices, particularly for other energy items and agricultural commodities (Chart 3.1.2). Thus, crude oil and USD-denominated import price assumptions based on futures price curves have been revised upwards (Table 3.1.2).

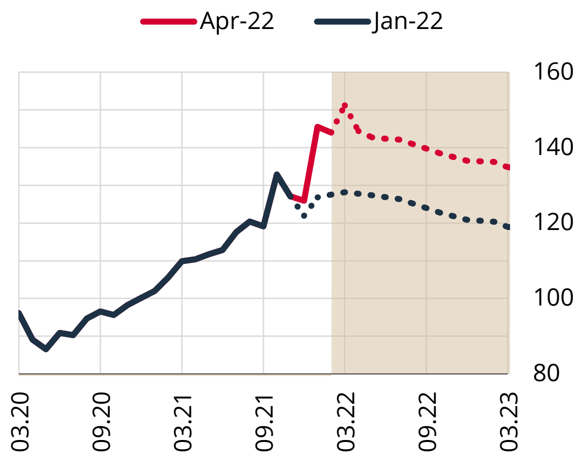
Chart 3.1.1: Revisions to Oil Price Assumptions* (USD/Bbl)



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.

Assumptions for food prices have been revised upwards for 2022 and 2023. Annual inflation in food and non-alcoholic beverages jumped to 70.3% in the first quarter of 2022. The rise in food inflation was largely driven by higher international prices of agricultural commodities and input items, primarily energy, due to geopolitical developments. Food price inflation is likely to remain elevated for some time amid supply constraints in the upcoming period, before falling later in the year due to a base effect and ending 2022 at 49.0% and 2023 at 15.0% (Table 3.1.2).

Table 3.1.2: Revisions to Assumptions*

	2022	2023
Export-Weighted Global Production Index (Annual Average % Change)	3.0 (4.3)	3.3 (3.0)
Oil Prices (Average, USD)	102.2 (80.4)	93.9 (74.3)
Import Prices (USD, Annual Average % Change)	22.2 (8.2)	-7.0 (-6.7)
Food Prices (Year-End % Change)	49.0 (24.2)	15.0 (10.0)

* Numbers in parentheses are from the January Inflation Report.

Although adjustments to administered prices had a larger impact on inflation in the first quarter of 2022, public finances remain supportive of prices. In the first quarter of the year, prices of electricity, natural gas, alcohol, tobacco and raw milk, which are largely administered by the state, registered sharp increases. On the other hand, public finance actions such as tax reductions, subsidies, export restrictions, reduced customs duties and agricultural input stimulus hindered a more negative inflation outlook.

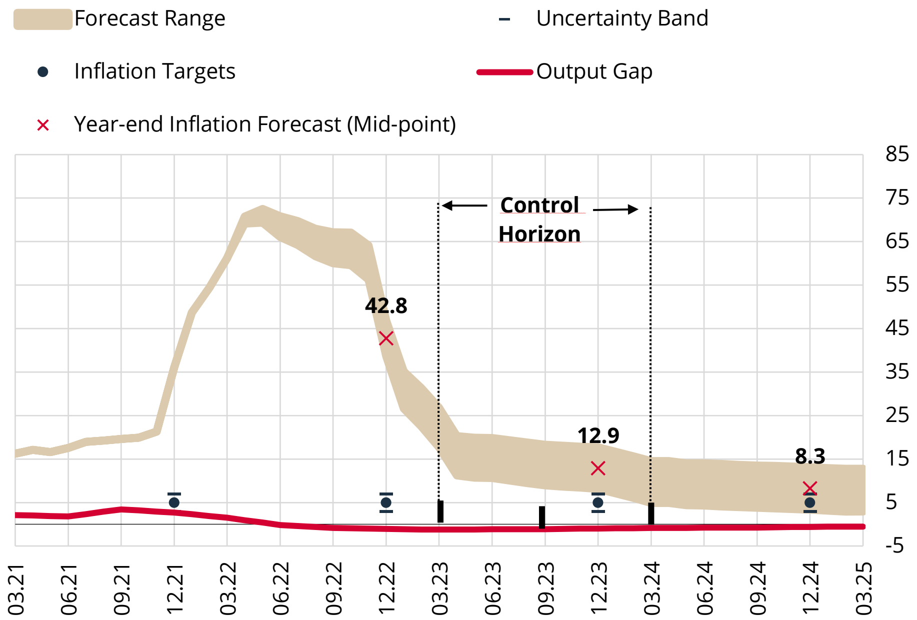
Medium-term projections are based on an outlook in which macroeconomic policies are determined with a medium-term perspective and in a coordinated manner with a focus on bringing inflation down. In this context, it is assumed that adjustments to administered prices will be determined to support disinflation in the medium term. A strong policy coordination prioritizing disinflation is critical to maintaining improvements in 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 continue to be determined with the focus on evaluating the sources of the risks to inflation, their permanence and how they can be controlled by monetary policy, targeting sustainable price stability with a cautious approach. It is envisaged that the disinflation process will start on the back of the liraization-oriented steps taken and decisively pursued for sustainable price and financial stability along with the resolution of the ongoing conflict and the elimination of the base effects on inflation. Accordingly, inflation is projected to be 42.8% at the end of 2022; fall to 12.9% at the end of 2023; and fall to 8.3% by the end of 2024. With a 70% probability, inflation is expected to be between 46.9% and 38.7% (with a mid-point of 42.8%) at end-2022, and between 17.7% and 8.1% (with a mid-point of 12.9%) at end-2023, and between 13.2% and 3.4% (with a mid-point of 8.3%) at end-2024 (Chart 3.2.1).

Chart 3.2.1: Inflation and Output Gap Forecasts* (%)



Sources: CBRT, TURKSTAT.

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

Given the recent inflation realizations and all the factors affecting inflation, year-end forecasts for 2022 and 2023 have been revised upwards compared to the previous Report period (Chart 3.2.2). Economic activity remained strong in the last quarter of 2021 owing both to domestic and external demand. Although data for the first quarter of 2022 indicate that economic activity decelerated slightly due to domestic demand, it remained strong. Besides, while the share of sustainable components in the composition of growth has increased, energy prices-driven risks to the current account balance remain in place. In the first quarter of 2022, the output gap forecasts were revised slightly downwards due to the slowdown in domestic demand conditions. The macroprudential measures in support of the monetary policy, and financial products such as FX-protected deposits served as a strong mechanism to restore stability in FX markets despite the large-scale global negative shocks seen in the first quarter. The recent increase in inflation has been driven by rising energy costs resulting from the heightened regional conflict, temporary effects of pricing formations that are not supported by economic fundamentals, supply-side factors such as the rise in global energy, food and agricultural commodity prices, and supply constraints. Moreover, high levels of inflation expectations continue to pose risks to pricing behavior and the inflation outlook. Against this background, inflation forecasts have been revised upwards.

Considering the analyses to decompose the impact of supply and demand shocks, the policy rate was kept unchanged at 14% in the first quarter of 2022. The MPC envisages that the disinflation process will start on the back of measures taken and decisively pursued for sustainable price and financial stability along with the resolution of the ongoing conflict and the elimination of the base effects on inflation. Accordingly, the MPC also decided to keep the policy rate unchanged in April. The cumulative impact of the policy decisions is being closely monitored, and to create an institutional basis for sustainable price stability, the comprehensive review of the policy framework continues with the aim of encouraging permanent and strengthened liraization in all policy tools of the CBRT.

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

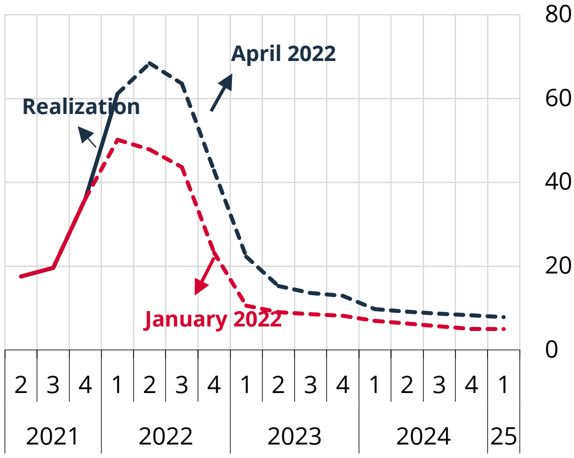
	2022	2023
2022-I (January 2022) Forecast (%)	23.2	8.2
2022-II (April 2022) Forecast (%)	42.8	12.9
Forecast Revision as Compared to the 2021-IV Period	19.6	4.7
Sources of Forecast Revisions (% Points)		
Turkish Lira-Denominated Import Prices (Including the Exchange Rate, Oil and Import Prices)	5.5	2.2
Food Prices	2.8	0.7
Administered Prices	2.1	-
Output Gap	-0.1	-0.1
Deviation from the Inflation Forecast / the Underlying Trend of Inflation	9.3	1.9

Source: CBRT.

The year-end forecast for 2022 was revised upwards by 19.6 points from 23.2% to 42.8%. Compared to the previous reporting period, the inflation forecast was increased by 5.5 points due to the revisions in the TRY-denominated import prices and by 2.8 points because of food prices. On the other hand, administered prices pushed the year-end inflation forecast up by 2.1 points largely due to hikes in alcohol-tobacco, electricity and natural gas prices, while the effect of the revision in initial conditions on the underlying trend of inflation increased the forecasts by 9.3 points. In addition, the revision in the output gap had a downward effect of 0.1 points on the inflation forecast (Table 3.2.1).

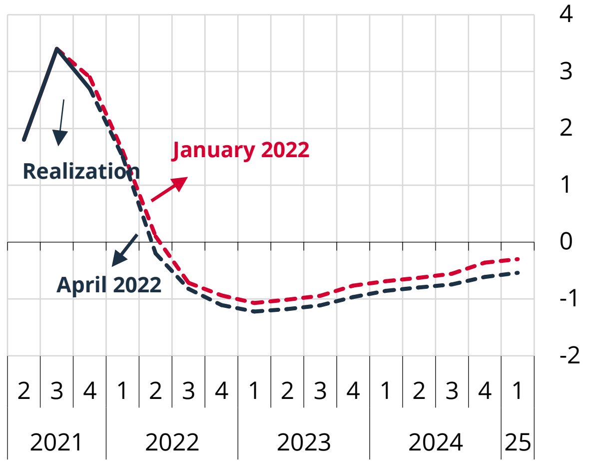
The inflation forecast for end-2023 was revised upwards to 12.9% from 8.2%. The effects of the revision in initial conditions on the underlying trend of inflation increased the year-end inflation forecast for 2023 by 1.9 points. On the other hand, the revision in the food inflation assumption increased the forecast by 0.7 points. While import prices in Turkish lira increased the forecast by 2.2 points, the revisions in the output gap had a downward effect of 0.1 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.

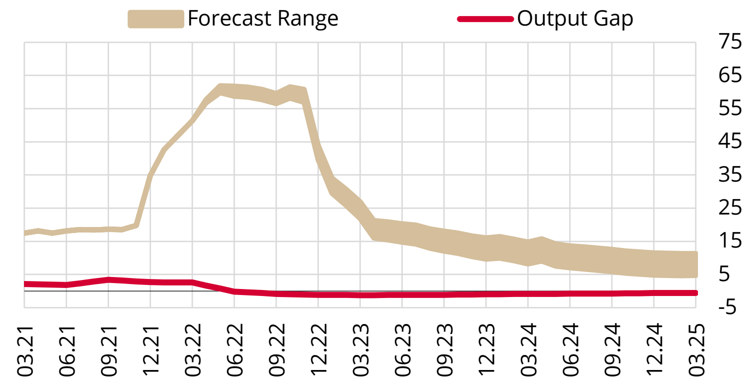
Projections are based on an outlook in which the geopolitical developments that turned into a conflict have increased downside risks to the global economic activity and the effects of rising global inflation on inflation expectations and international financial markets have become more visible. Leading indicators suggest that the global economy has been recovering albeit at a slower pace. However, geopolitical risks that turned into a conflict keep the downside risks to the global and regional economic activity in place and cause uncertainties to increase even more. The recovery in global demand, the high course of commodity prices, supply constraints becoming more evident in some sectors, particularly in the energy sector, and the elevated level of transportation costs lead to an increase in producer and consumer prices on a global scale. While the effects of high global inflation on inflation expectations and international financial markets are being monitored closely, central banks of advanced economies consider that inflation may continue to increase for a longer period than expected due to rising energy prices and the supply-demand mismatch. Although concerns about the pandemic eased, the global risk appetite decreased in the current Report period due to the rise in global inflation and the conflict between Russia and Ukraine. Moreover, in this period, exchange-rate volatility implied by options in emerging economies increased. The increase in long-term bond rates in advanced economies and the course of global financial conditions feed the risks to portfolio flows to emerging economies. The impact of such risks through the portfolio flows channel towards Türkiye are judged to remain more limited, considering the current levels of non-residents' portfolio positions.

The output gap is expected to decline gradually. Although data for the first quarter of the year show that the economic activity decelerated slightly due to domestic demand, it remains robust on the back of external demand. Nevertheless, due to geopolitical risks, rising energy costs and risks related to possible supply shortages, downside risks to external demand are higher compared to the previous reporting period, suggesting that regional divergences may become more evident. The loan-deposit spread indicating the lending tendency of banks has diverged according to loan types. While the commercial loan-deposit interest rate spread decreased compared to the previous reporting period, the consumer loan-deposit interest rate spread increased. Firms' access to Turkish lira financing sources at reasonable costs has become an essential part of the monetary policy strategy. Therefore, the goal is to make sure that market interest rates are formed in line with policy rates and at a level that supports the financing of investments and production. While on the one hand, exports and the current account balance, as well as investments and the employment are supported by targeted loans, on the other hand, macroprudential measures are taken to make sure that credit growth and credit composition contribute to the disinflationary process. Thus, the output gap is expected to contribute more to the disinflationary process.

Policy tools within the scope of the liraization strategy will be used decisively until strong indicators pointing to a permanent decrease in inflation are formed. The effectiveness of monetary policy will increase as a result of the increase in the weight of the Turkish lira in the balance sheets of households, companies and banks, the Turkish lira being the main payment instrument, and the development of loans with a speed and composition that will increase production and export capacity. The stability to be achieved in the general level of prices over time with the decisions taken within the framework of the liraization process, the decrease in country risk premiums, the continuation of reverse currency substitution and the upward trend in foreign exchange reserves, and the permanent decline in financing costs will positively affect macroeconomic stability and financial stability. In line with the goal of sustainable price stability in monetary policy, a liraization-oriented approach that also considers the risks to financial stability will continue to be conducted.

The volatilities that became more apparent in items that are beyond the control of monetary policy such as unprocessed food and energy cause a deviation in inflation forecasts. Core inflation indicators, which are obtained by excluding these items, contain more information about the underlying trend of inflation. For this reason, inflation forecasts excluding unprocessed food products, energy, alcoholic beverages, tobacco, and gold items (B index) are also shared with the public. Accordingly, the annual inflation of the B index is expected to take up a downtrend as of 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 that may change the outlook, on which the inflation forecasts are based, and the monetary stance have been shared in detail in Section 1.3. Evaluations of the channels through which these risks may influence inflation forecasts presented in Section 3.2 and the direction in which they may change the forecasts are summarized in Table 3.3.1.

Table 3.3.1: Key Risks to Inflation Forecasts*

Key Risks	Tracked Indicators
Cost Pressures ▪ Pressures on producer prices keep mounting. ▪ The Russia-Ukraine conflict and additional pandemic restrictions in China's major trade and financial cities created a new wave of supply shocks and aggravated the current supply constraints. ▪ Historically high international food prices, rising commodity and energy prices, high transportation costs and supply chain disruptions are the main factors behind these pressures.	▪ Geopolitical developments and the course of the Russia-Ukraine conflict ▪ 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

Table 3.3.1: Key Risks to Inflation Forecasts*

Uncertainties Regarding Financial Markets and the Global Macroeconomic Outlook ▪ Global inflation continues to rise sharply, while monetary policy communications of major central banks diverge. ▪ Major central banks still maintain their accommodative monetary stances and continue with their asset purchase programs, albeit at a reduced pace. ▪ Having hovered above historical averages on the back of lower real and nominal interest rates in the first quarter, loan growth is expected to return a moderate course in the first quarter and is therefore expected to contribute to disinflation. ▪ The CBRT considers that the growth rate of loans, including long-term Turkish lira investment loans, and the targeted use of accessed funds for real economic activity are important for financial stability. ▪ In this sense, the macroprudential policy toolkit will be strengthened with deeper analysis of recent credit developments.	▪ 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 ▪ Exchange rate 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, which indicates that regional divergences may become more evident. ▪ Although the Russia-Ukraine conflict poses risks to travel and transportation revenues, factors such as the dynamic capacity and market diversification flexibility of the tourism sector can partially compensate for these risks. ▪ 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. ▪ A permanently balanced current account and at sustainable levels is crucial for price stability.	▪ 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

Table 3.3.1: Key Risks to Inflation Forecasts*

Pricing Behavior and High Inflation Expectations ▪ Recent data releases indicate that the deteriorated pricing behavior adds to upside risks to inflation. ▪ One of the main reasons that cause inflation to accelerate is the increased frequency of price updates and, thus, the decline in the average period for prices to remain unchanged. ▪ Survey-based indicators show that inflation expectations continue to rise, while the distribution of expectations points to inflation uncertainty. ▪ The heightened inflation poses an upside risk to pricing behavior through expectations for the upcoming period.	▪ 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, should the path of administered price and tax adjustments exceed the path envisaged in this Report.	▪ 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)

* Each risk row on the table presents evaluations of the channel through which inflation forecasts may change. Indicators tracked are listed in the column on the right.