

BRIEFING ON 2021-IV INFLATION REPORT

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Governor

October 28, 2021

Ankara



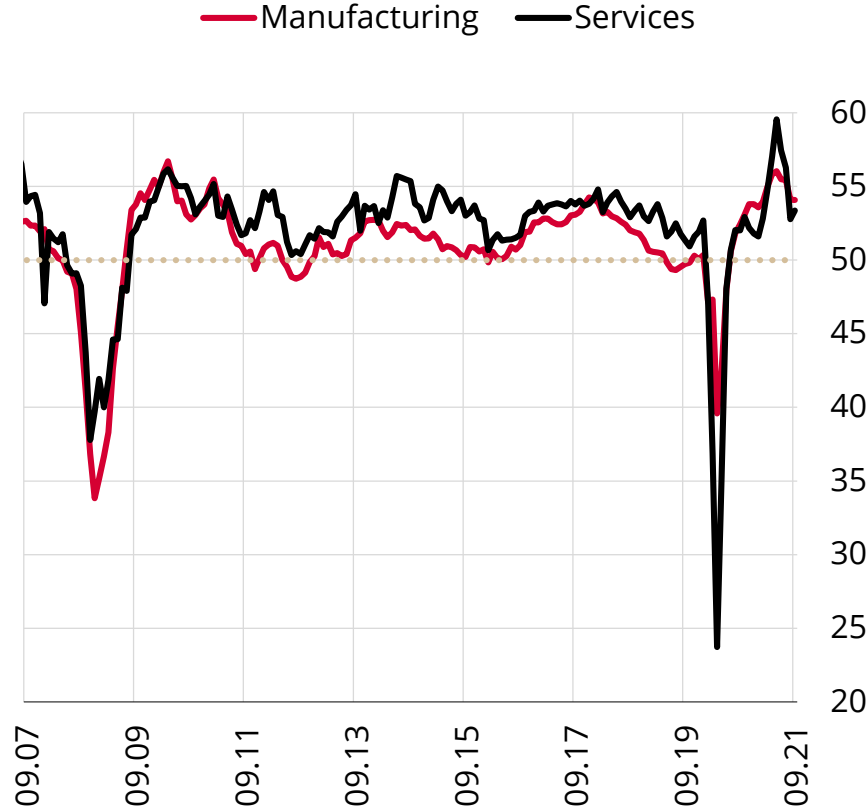
Outline

- **Macroeconomic Outlook**
- **The Determinants of Inflation**
- **Medium Term Projections**

MACROECONOMIC OUTLOOK

Global Growth

Global PMI



Source: IHS Markit

Last Observation: September 2021

Growth Forecasts of Turkey's Main Trading Partners*

	2020	2021 Growth Forecasts in April	2021 Growth Forecasts in July	2021 Growth Forecasts in October
Euro Area	-6.5	4.2	4.6	5.1
Germany	-4.6	3.3	3.4	2.8
USA	-3.5	6.2	6.6	5.7
United Kingdom	-9.8	5.4	6.8	6.9
Italy	-8.9	3.9	4.9	5.9
France	-8.0	5.3	5.6	6.1
Spain	-10.8	5.5	5.9	5.6
Netherlands	-3.7	2.6	3.0	4.1
Israel	-2.4	5.1	5.1	5.8
Russia	-3.0	2.9	3.5	4.2
Romania	-3.9	5.0	6.9	7.4
Poland	-2.7	4.1	4.8	5.2
Belgium	-6.3	3.8	4.5	5.4
China	2.3	8.7	8.6	8.2

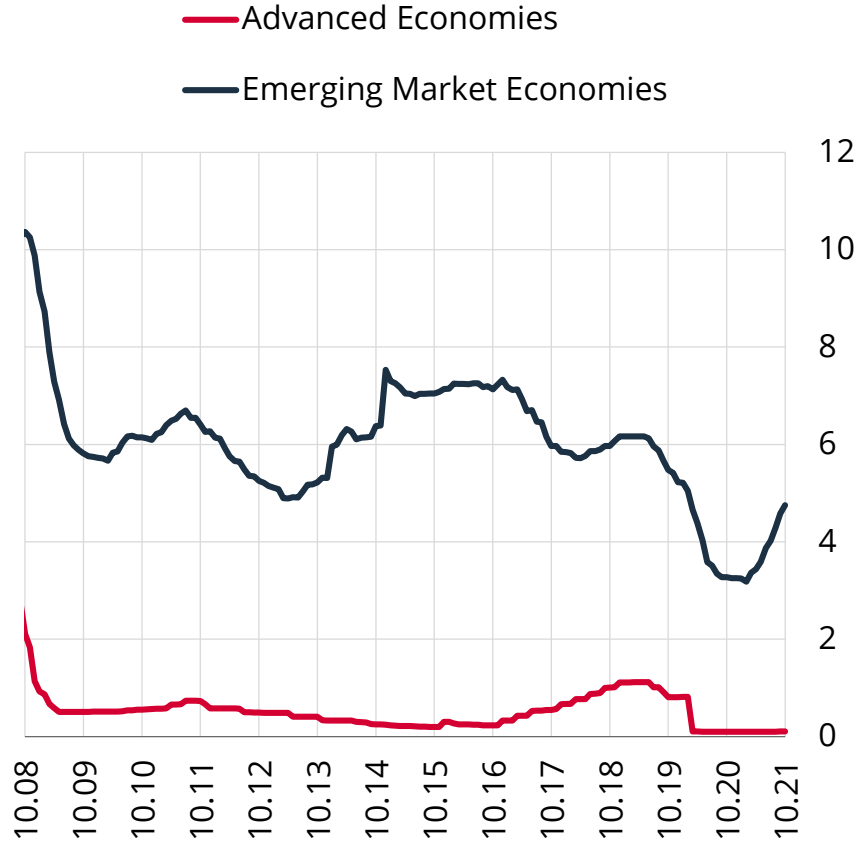
Source: Consensus Economics

Last Observation: October 2021

* Countries are listed according to their share in Turkey's exports in 2021.

Global Inflation and Policy Rates

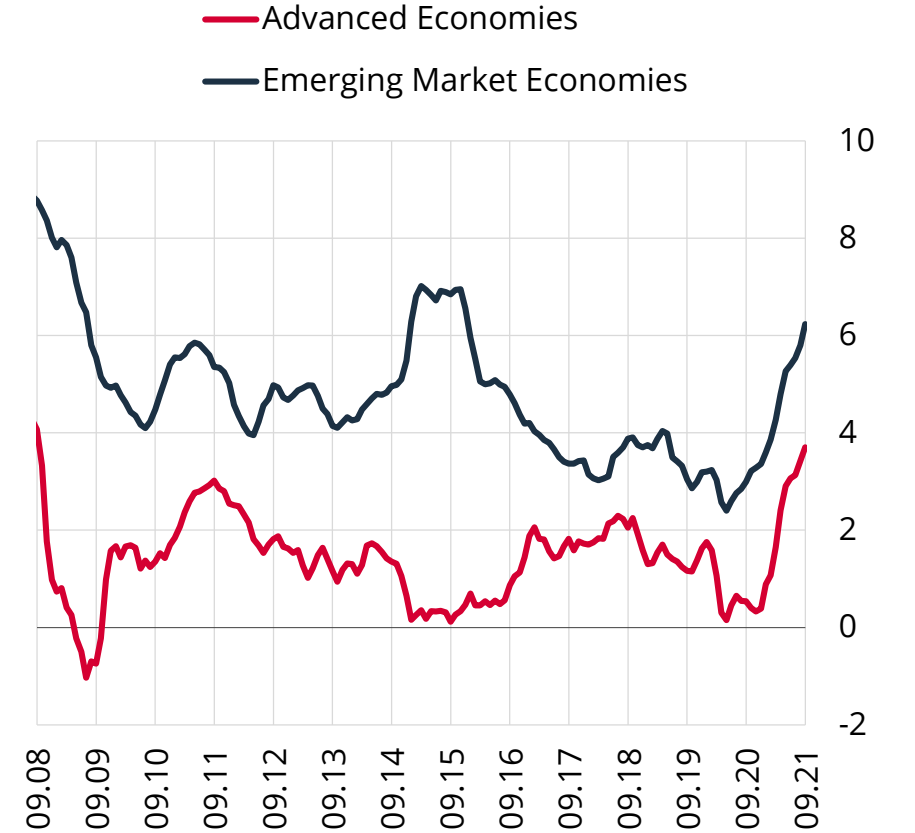
Policy Rates in Advanced* and Emerging Market** Economies



Source: Bloomberg

Last Observation: October 2021

Consumer Inflation in Advanced* and Emerging Market ** Economies



Source: Bloomberg

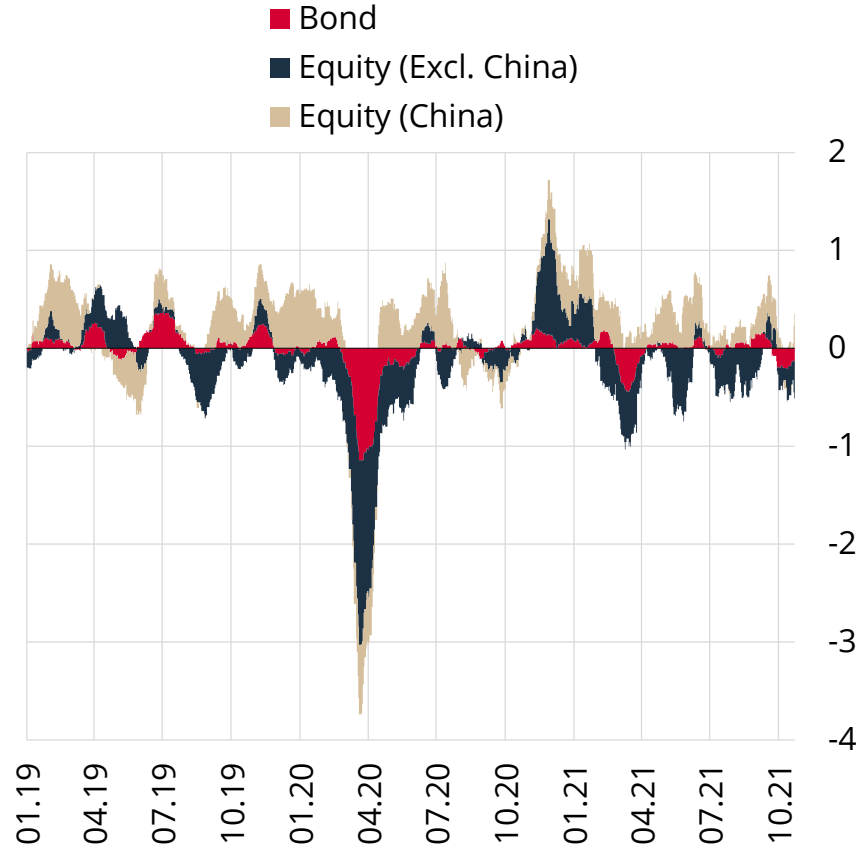
Last Observation: September 2021

* Advanced Economies: USA, Euro Area, Japan, UK, Canada, South Korea, Switzerland, Sweden, Norway, Israel.

** Emerging Market Economies: Brazil, Mexico, Russia, Poland, Indonesia, South Africa, Thailand, Czechia, Colombia, Hungary, Romania, Philippines.

Portfolio Flows

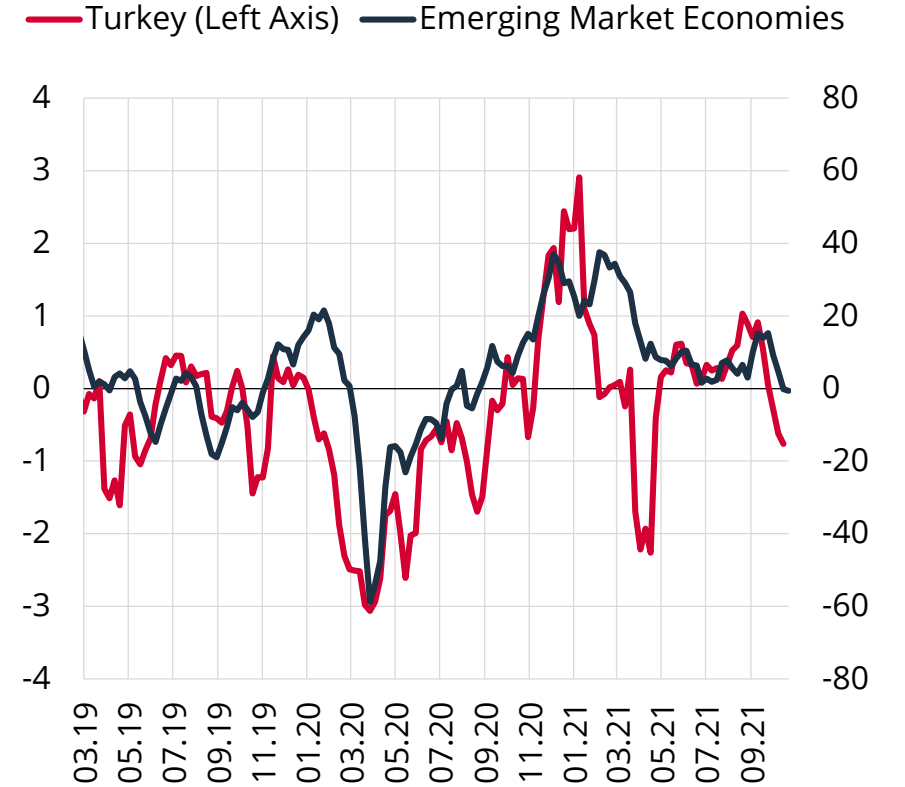
Portfolio Flows to Emerging Market Economies (Billion USD, 4-Week Moving Average)



Source: IIF

Last Observation: October 22, 2021

Portfolio Flows to Turkey and Emerging Market Economies* (4-Week Cumulative, Billion USD)



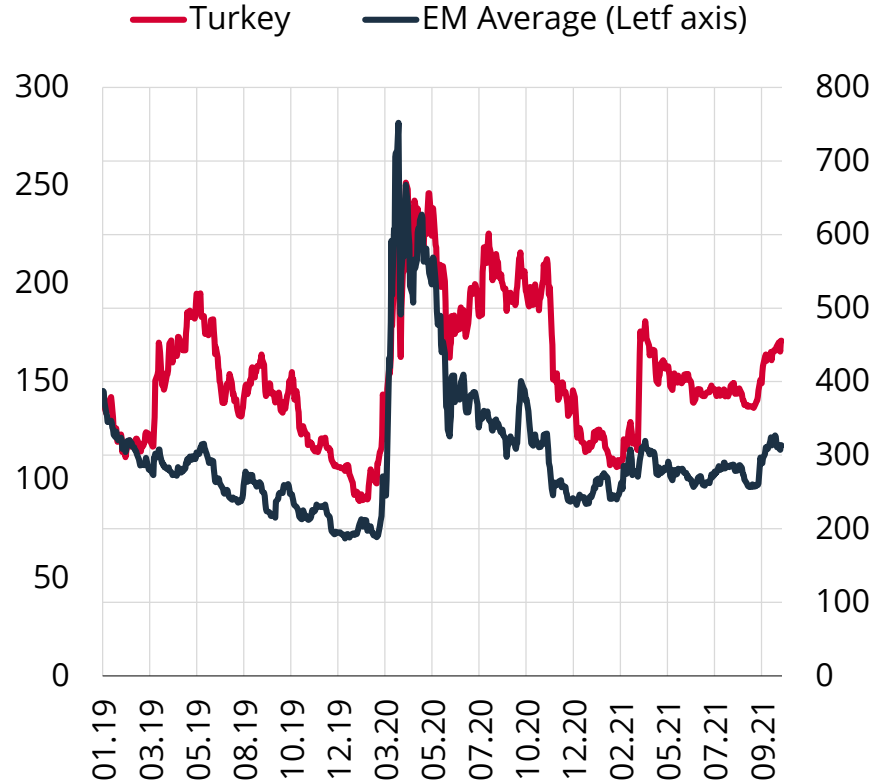
Source: EPFR, CBRT

Last Observation: October 22, 2021

* Turkey data includes portfolio flows to stocks and GDDS market. Repo is included in the GDDS data. Emerging markets data is taken from the EPFR database. It includes the weekly net investments made by all funds in this database in the developing country stock and bond markets.

Financial Indicators

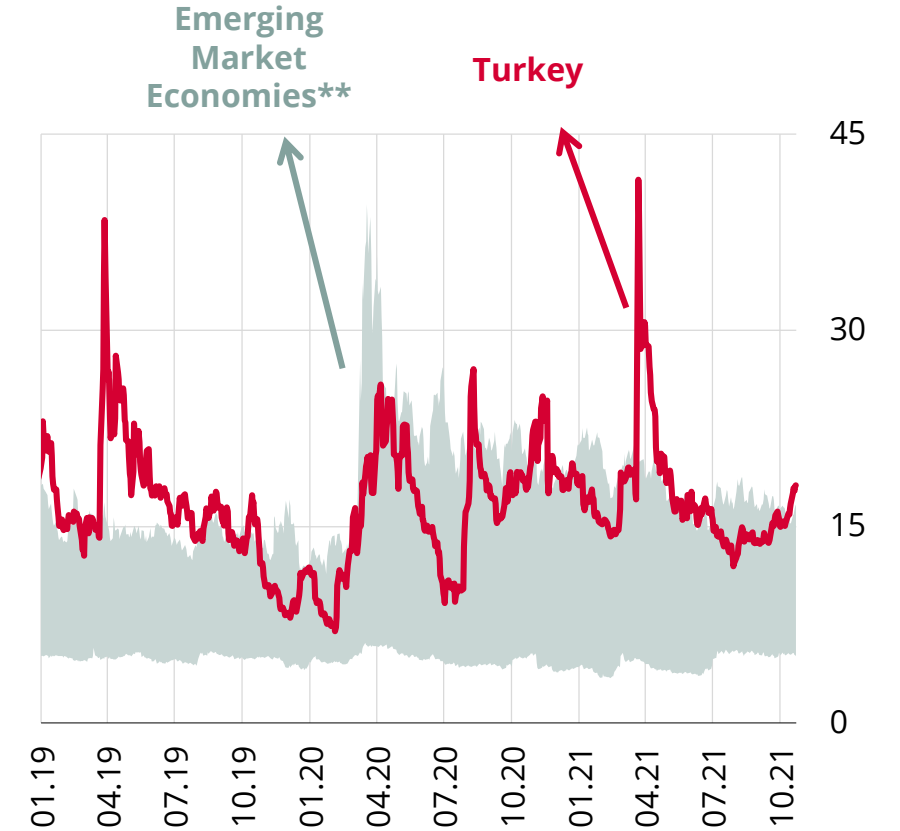
Turkey and Emerging Market Economies* Risk Premiums (5-Year CDS, Basis Points)



Source: Bloomberg

Last Observation: October 22, 2021

USD/TL Implied FX Volatility (1 Month, %)



Source: Bloomberg

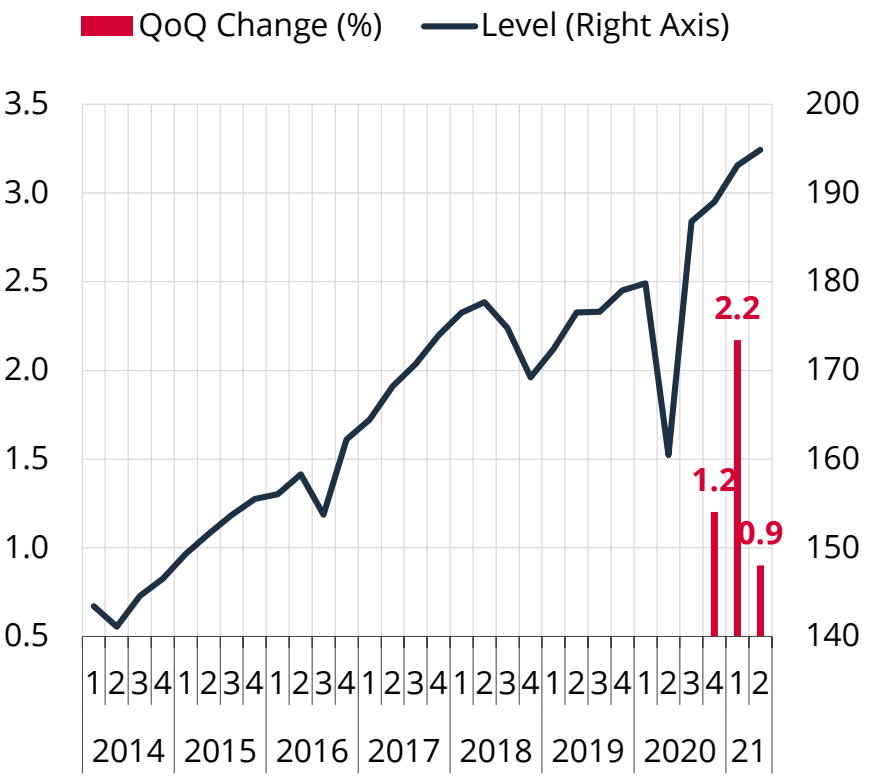
Last Observation: October 22, 2021

* Emerging Market Economies: Brazil, South Africa, Indonesia, Colombia, Mexico, Philippines, Malaysia, Chile and Russia.

** Emerging Market Economies: Brazil, Chile, Colombia, Mexico, Poland, Philippines, Malaysia, South Africa, Indonesia, Romania and Hungary.

Economic Activity

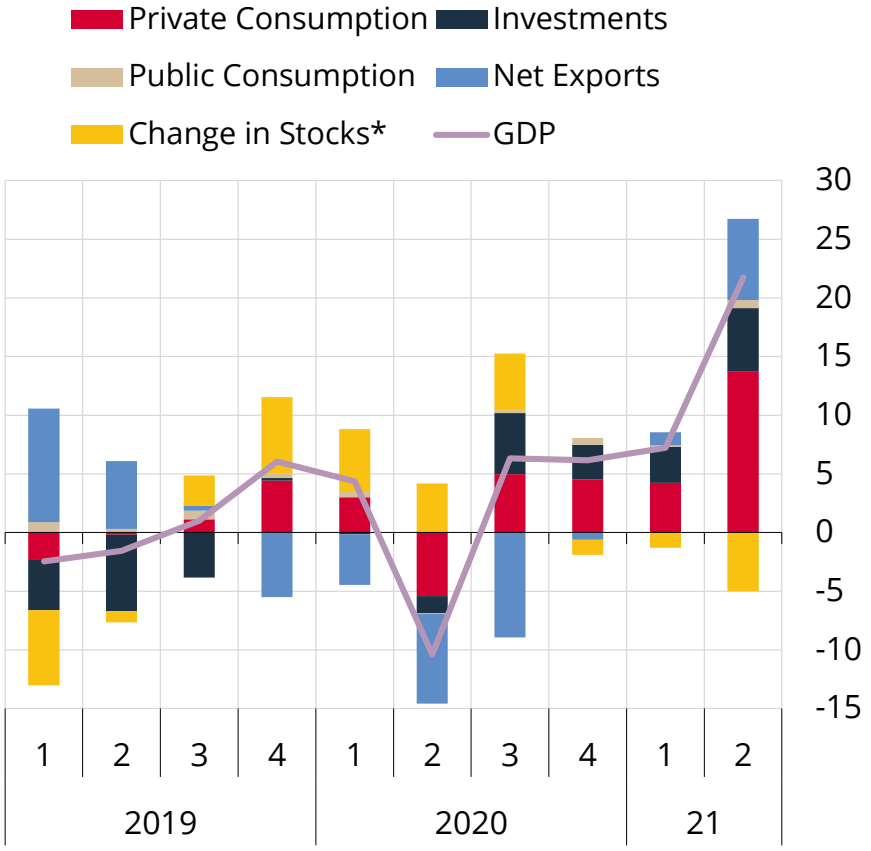
GDP (Seasonally and Calendar Adjusted, Chain-Linked Index, 2009=100)



Source: TURKSTAT

Last Observation: 2021Q2

Contribution to Annual GDP Growth From Expenditure Side (% Point)



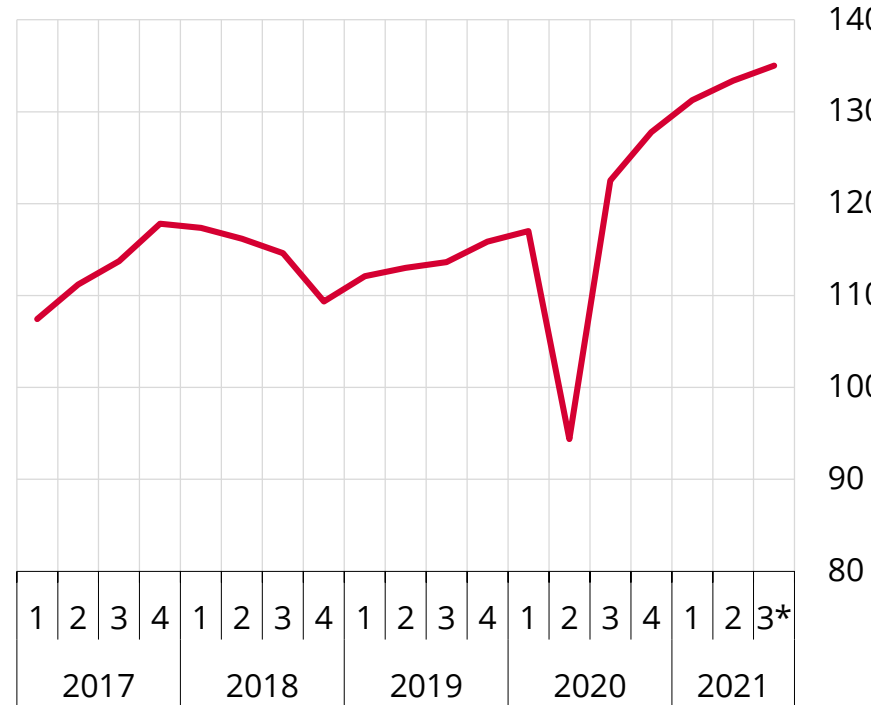
Source: CBRT, TURKSTAT

Last Observation: 2021Q2

* Includes change in stocks and statistical discrepancy due to chain-linked index.

Economic Activity

Industrial Production Index (Seasonally and Calendar Adjusted, 2015=100)



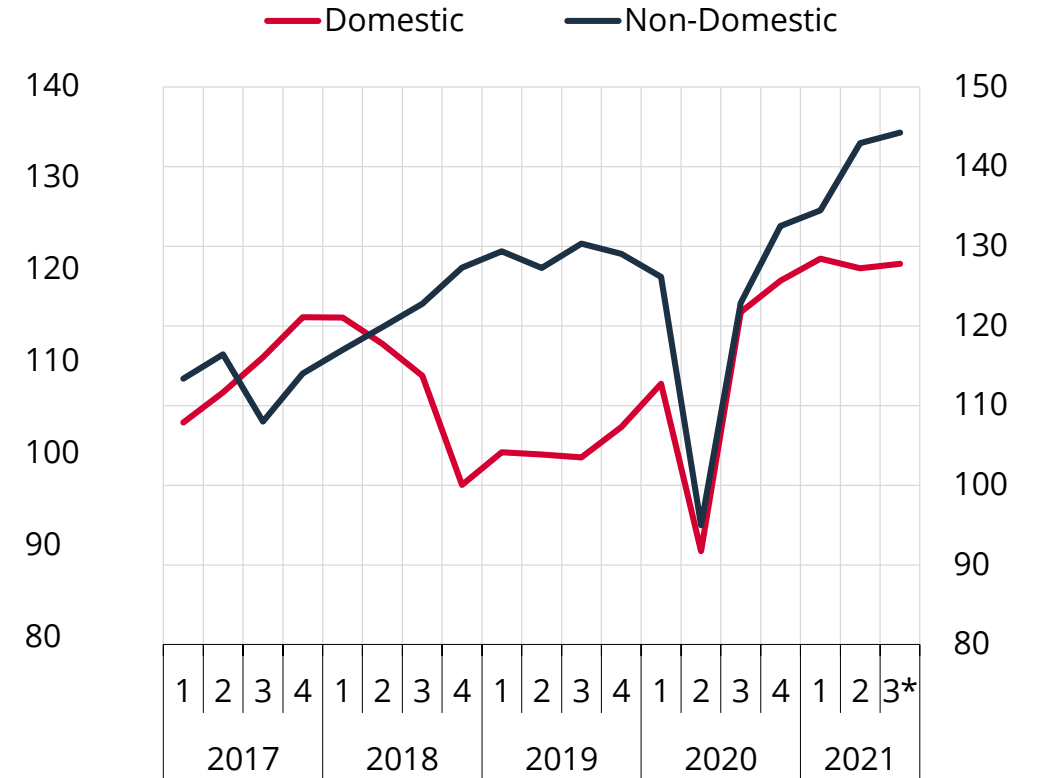
Source: TURKSTAT

Last Observation: August 2021

* Average of July and August.

** Domestic and non-domestic turnover indices are deflated by domestic and non-domestic PPI respectively.

Industrial Turnover Indices (Seasonally and Calendar Adjusted, Real**, 2015=100)



Source: CBRT, TURKSTAT

Last Observation: August 2021

Vaccination and Economic Normalization

Ratio of First-Dose and Second-Dose Vaccines to the Total Population (%)

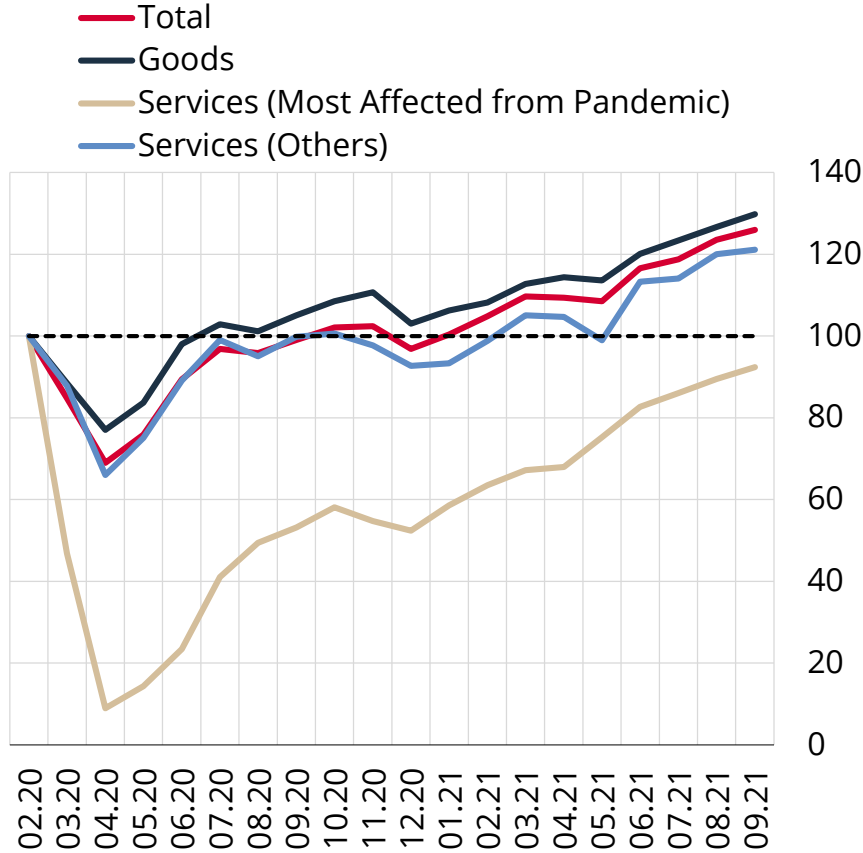
	First Dose (As of June, 1)	First Dose (Most Recent)	Second Dose
Spain	39.4	81.2	79.6
Italy	40.0	77.0	70.8
Japan	10.6	76.9	70.0
France	39.4	75.5	67.5
United Kingdom	58.0	72.8	66.8
Germany	43.6	68.5	65.6
Israel	62.0	70.8	65.0
USA	50.1	65.5	56.7
Turkey	19.7	64.9	56.6
Brazil	21.5	74.1	54.0
Poland	36.8	53.2	52.5
Mexico	17.0	53.7	41.1
Russia	11.5	36.2	32.8
Romania	22.7	36.7	30.7
Indonesia	6.0	40.9	24.6
India	12.2	51.5	21.9
South Africa	2.0	24.6	19.2

Source: Our World in Data

Last Observation: October 24, 2021

Opening-Up and Economic Normalization

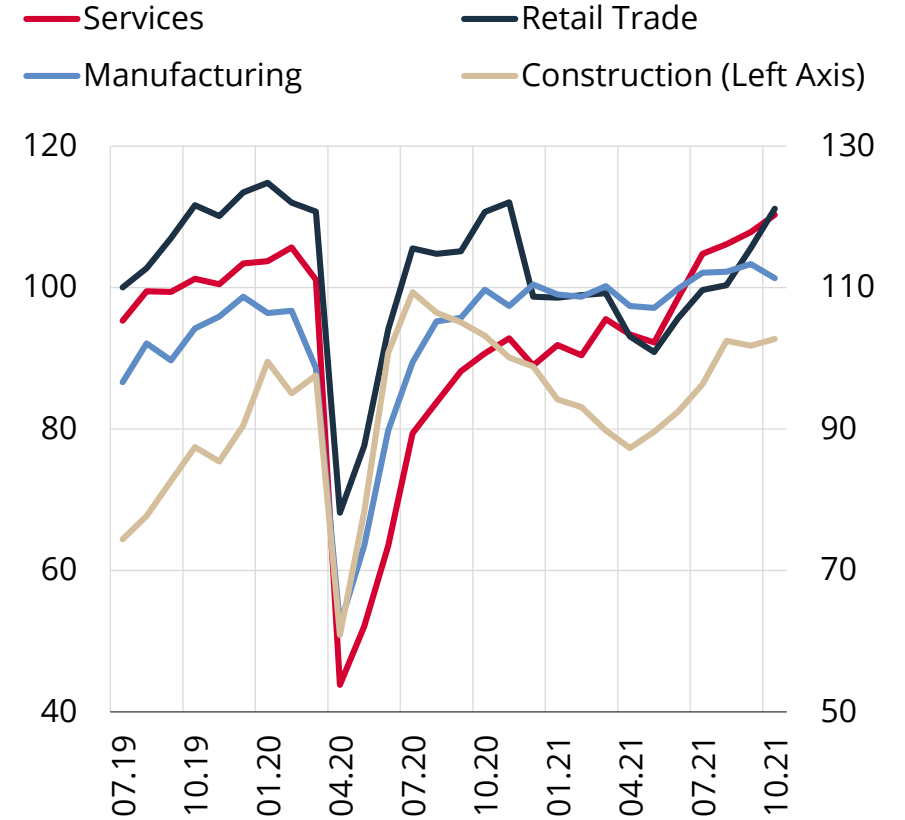
Card Expenditures (Seasonally and Calendar Adjusted, Real, February 2020=100)



Source: CBRT

Last Observation: September 2021

Sectoral Confidence Indices (Seasonally Adjusted)

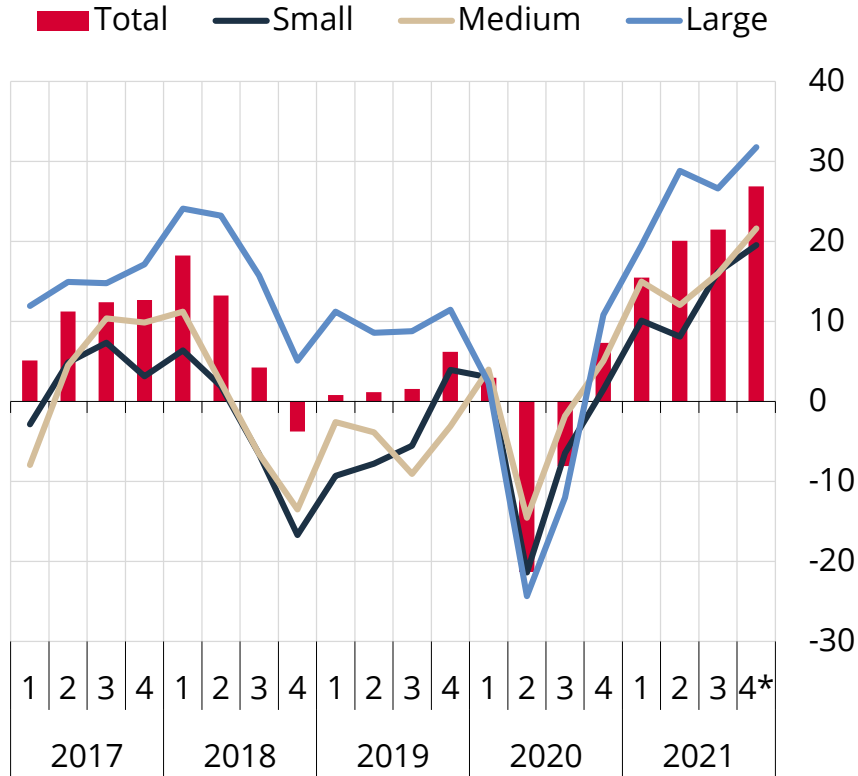


Source: CBRT, TURKSTAT

Last Observation: October 2021

Investment Tendency

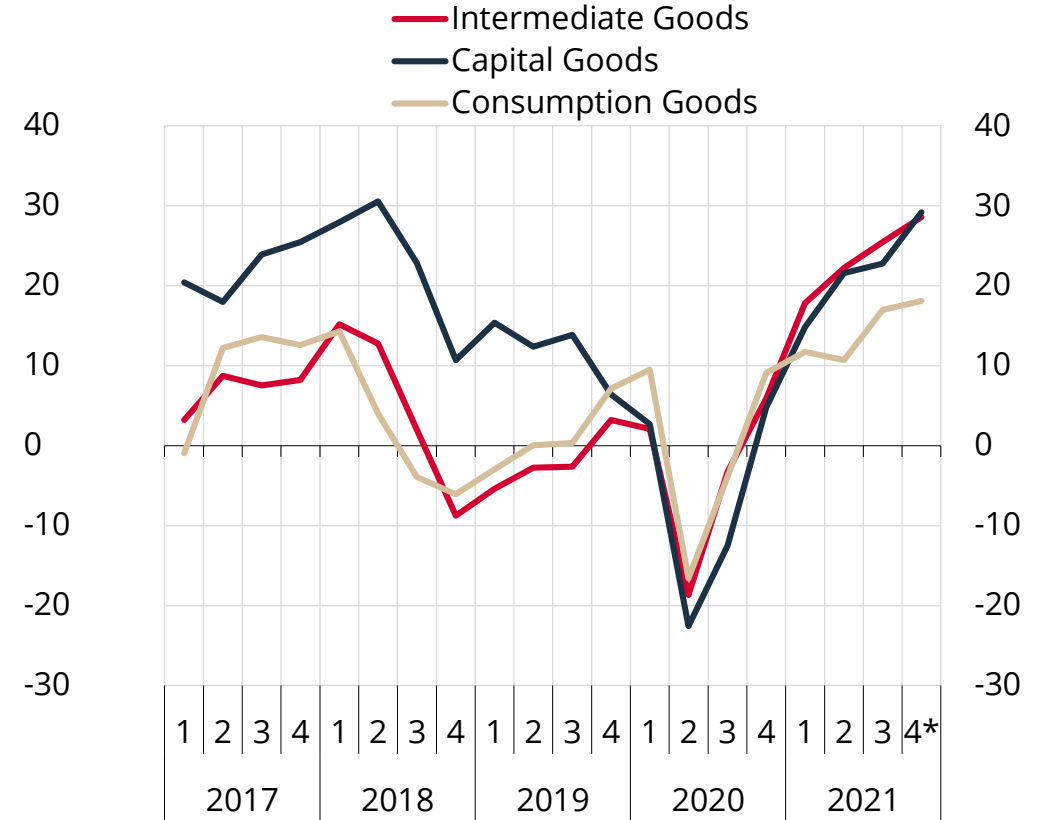
Expectations for Fixed Investment Expenditure by Firm Scales (Seasonally Adjusted, Up-Down, %)



Source: CBRT

* October data.

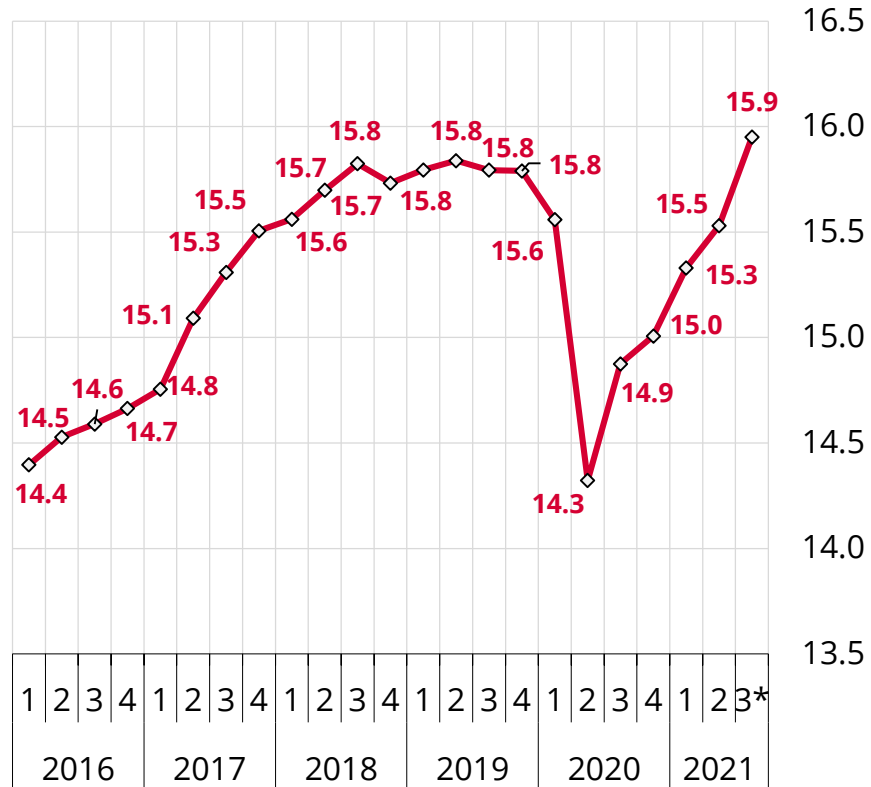
Expectations for Fixed Investment Expenditure by Sectors (Seasonally Adjusted, Up-Down, %)



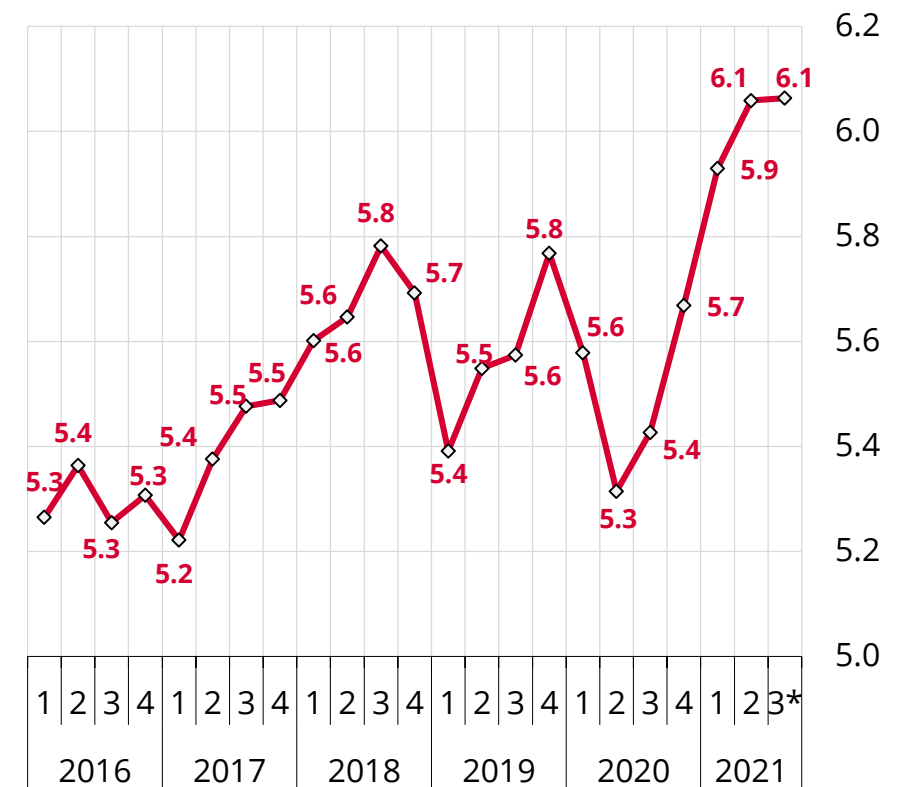
Last Observation: October 2021

Employment

Services Employment (Seasonally Adjusted, Million People)



Manufacturing Employment (Seasonally Adjusted, Million People)



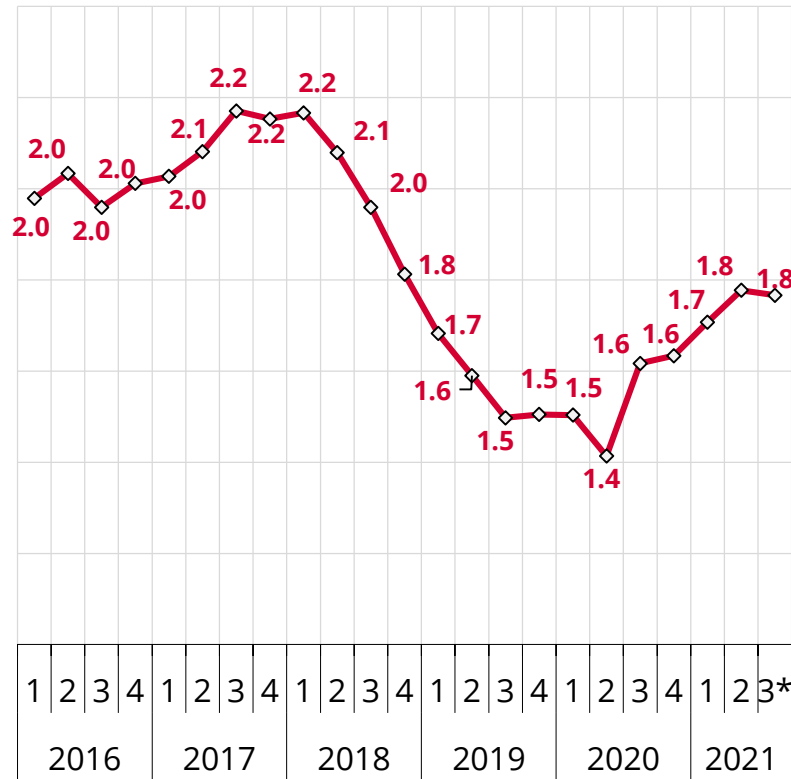
Source: TURKSTAT

Last Observation: August 2021

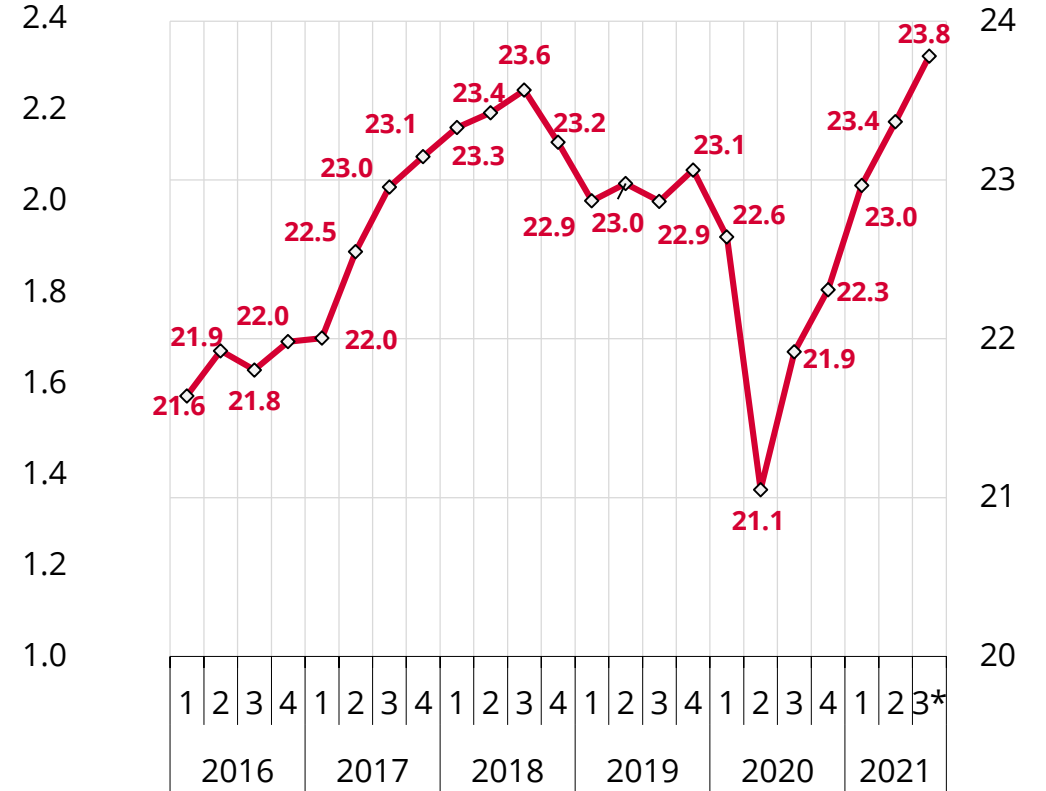
* Average of July and August.

Employment

Construction Employment (Seasonally Adjusted, Million People)



Nonfarm Employment (Seasonally Adjusted, Million People)



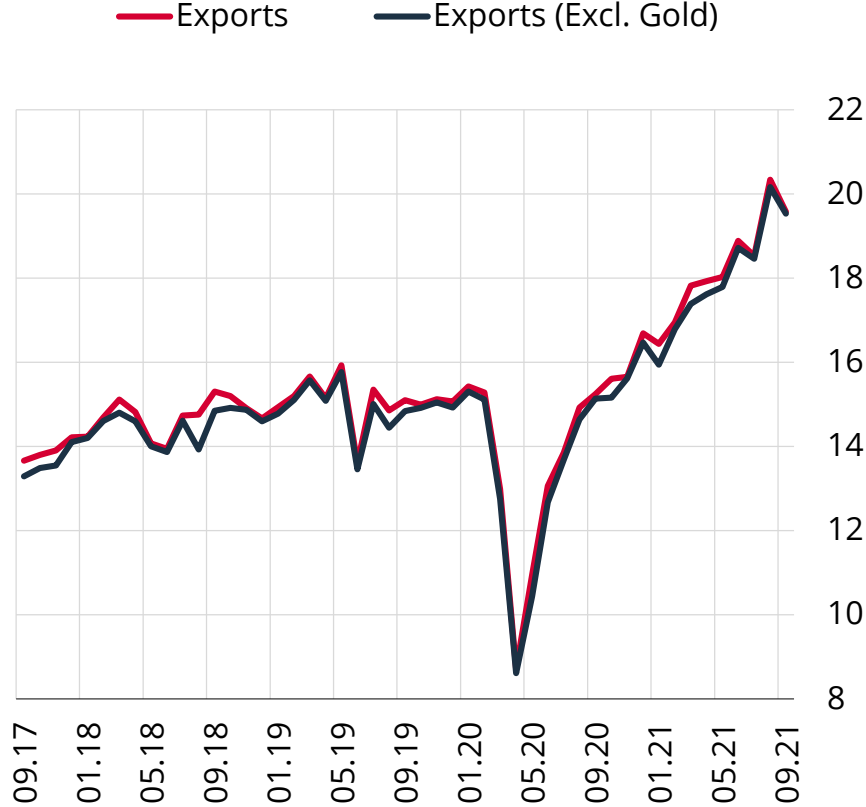
Source: TURKSTAT

Last Observation: August 2021

* Average of July and August.

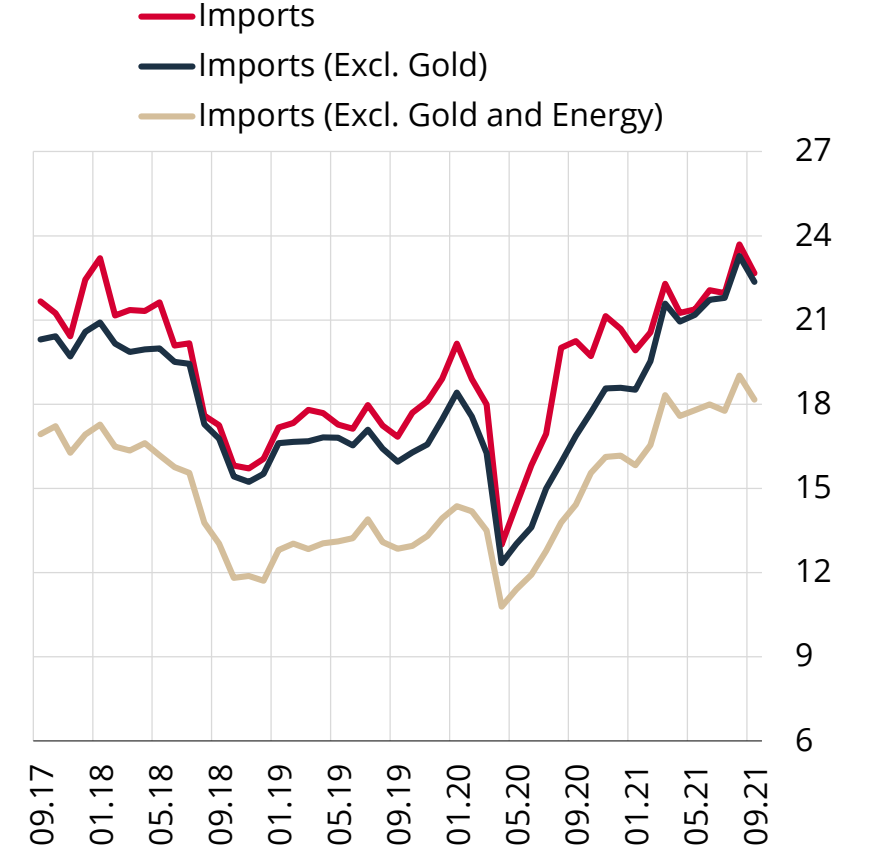
External Balance

Exports (Seasonally and Calendar Adjusted, Billion USD)



Source: CBRT, TURKSTAT

Imports (Seasonally and Calendar Adjusted, Billion USD)



Last Observation: September 2021

Foreign Trade

Foreign Trade Balance by Region (Billion USD)

	2017	2018	2019	2020	2021*	FTV*
EU 27	-14.7	0.0	8.3	-3.7	-0.2	172.7
Other Europe	-0.4	5.7	6.5	1.7	6.9	33.6
CIS	-15.6	-17.2	-15.6	-9.2	-15.7	51.5
Asia	-45.7	-40.6	-33.9	-36.3	-46.9	80.1
Middle East and Africa	23.4	21.7	30.5	19.8	31.2	79.6
North America	-4.2	-4.6	-3.5	-1.4	1.6	28.3

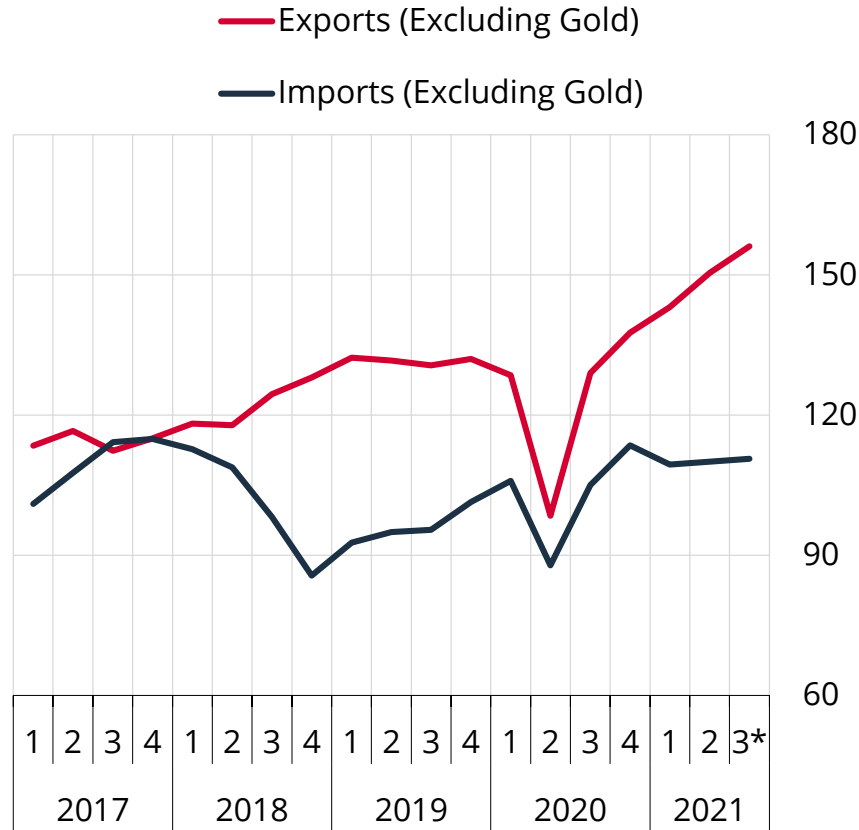
Source: TURKSTAT

Last Observation: September 2021

* 12-month cumulative values as of September 2021. FTV refers to foreign trade volume.

External Balance

Foreign Trade Volume Indices (Seasonally Adjusted, 2015=100)

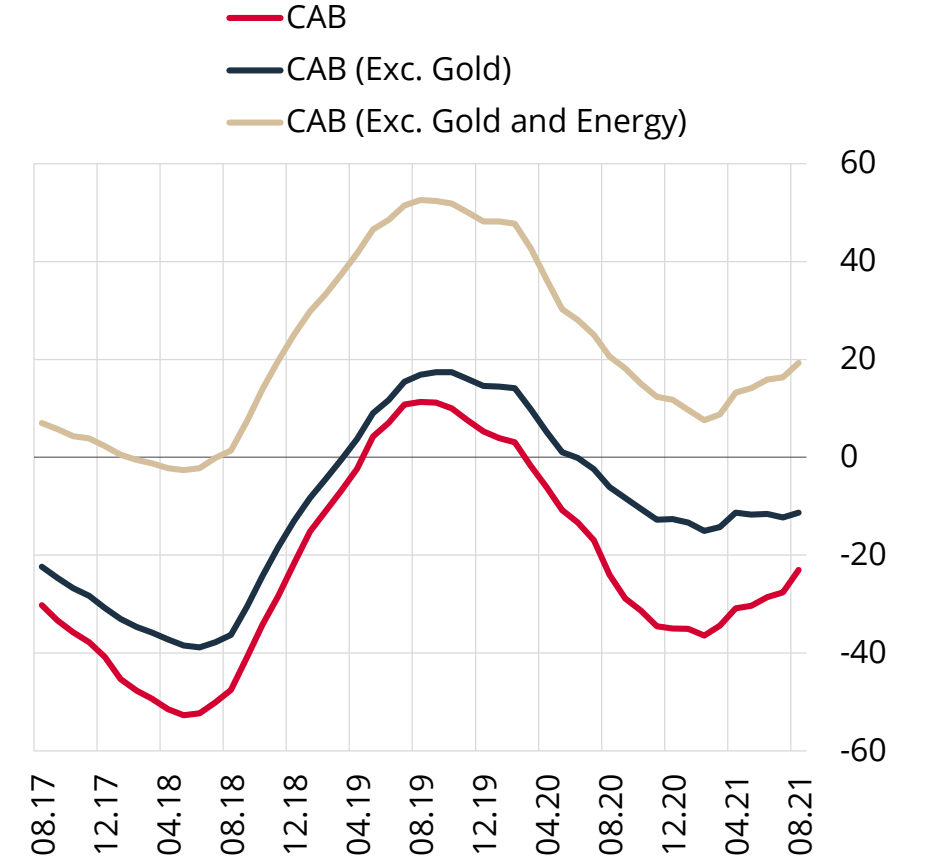


Source: CBRT, TURKSTAT

Last Observation: August 2021

* Average of July and August.

Current Account Balance (12 Month Cumulative, Billion USD)

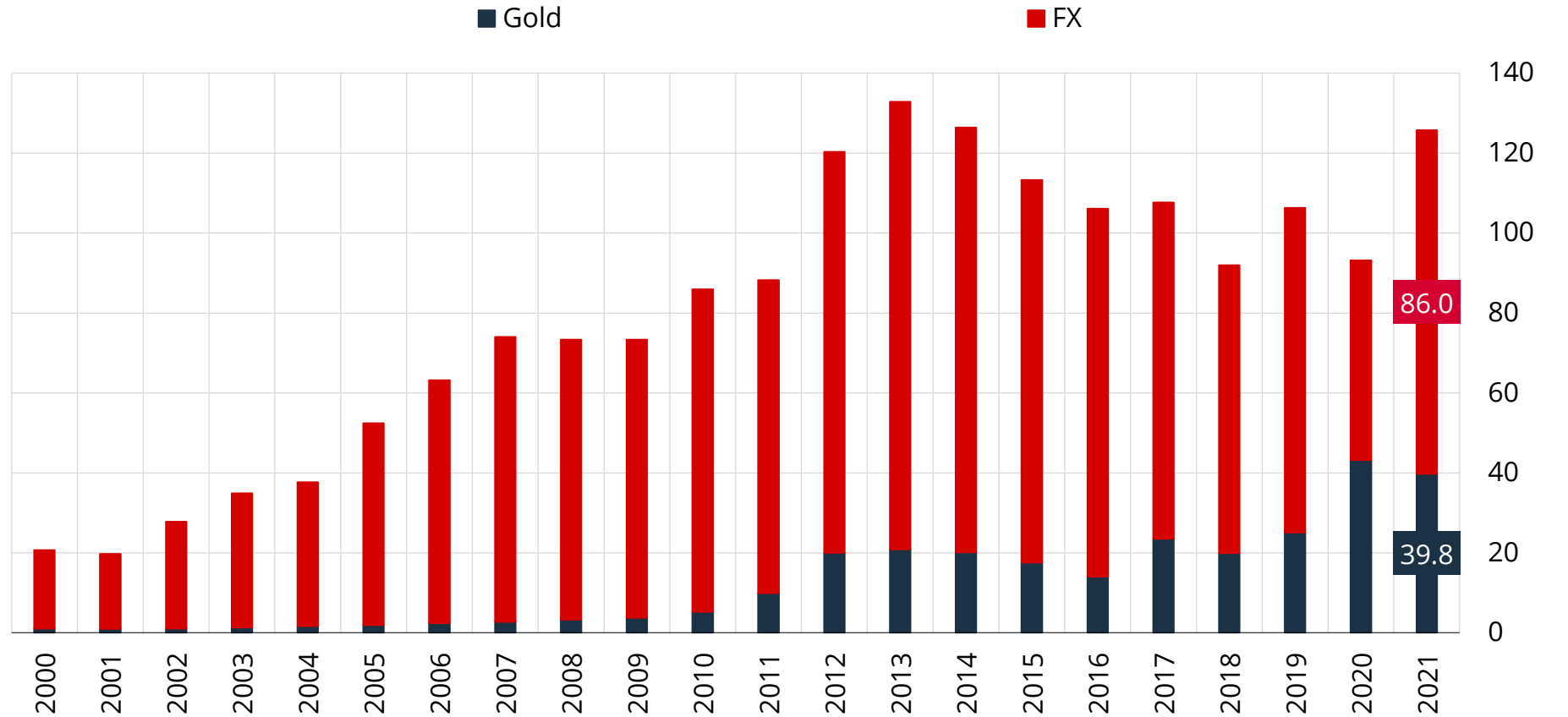


Source: CBRT

Last Observation: August 2021

Reserves

CBRT Reserves (Billion USD)

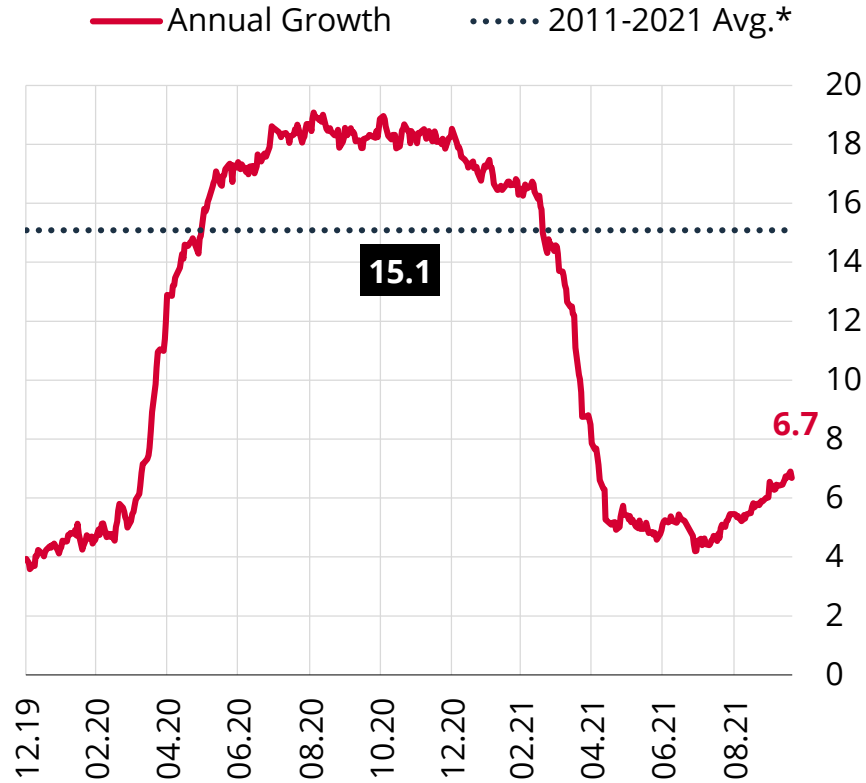


Source: CBRT

Last Observation: October 15, 2021

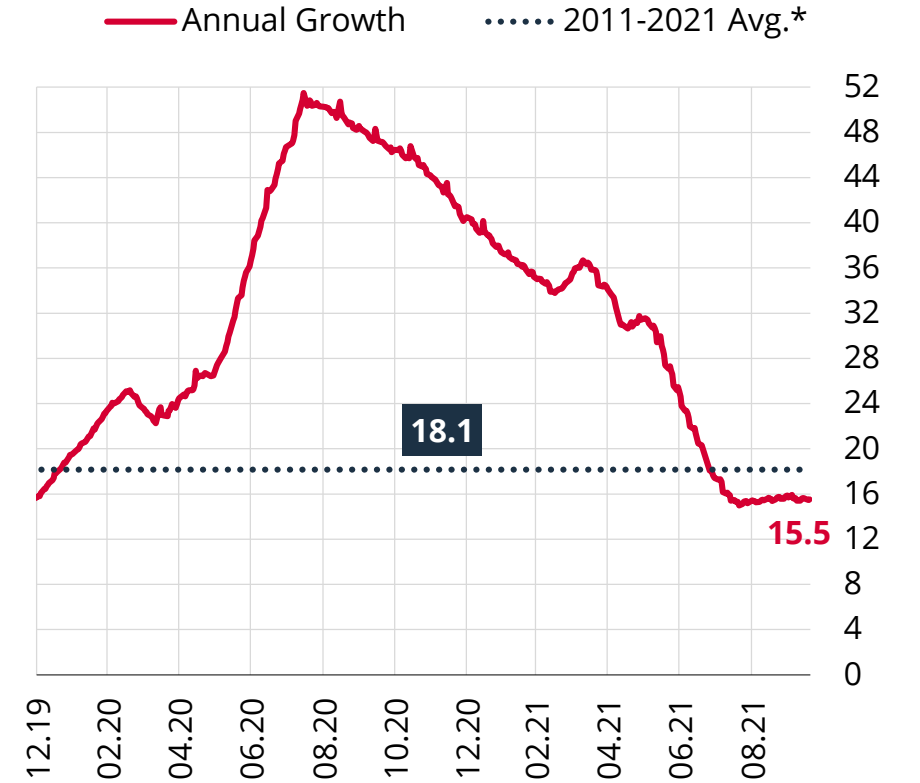
Credit Developments

Commercial Loan Growth (Adjusted for Exchange Rate, %)



Source: CBRT

Consumer Loan Growth (%)

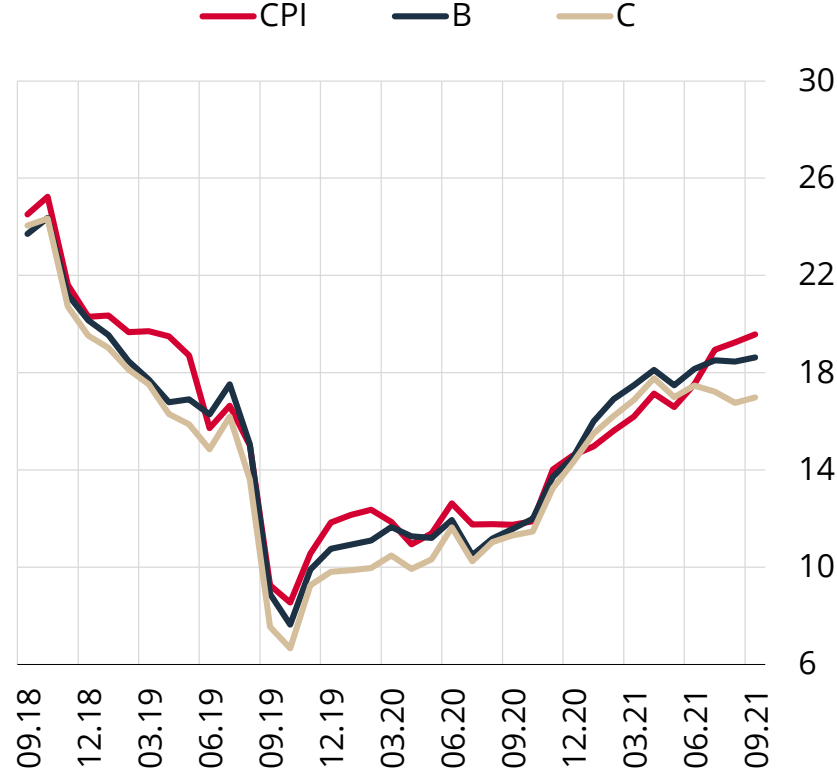


Last Observation: October 19, 2021

* Calculated by taking the average of annual changes between January 7, 2011 and October 15, 2021.

Consumer Inflation

CPI, B Index* and C Index**
(Annual % Change)



Source: TURKSTAT

Last Observation: September 2021

Contribution to Annual Consumer Inflation
(% Points)

	Mar. 21	Apr. 21	May. 21	Jun. 21	Jul. 21	Aug. 21	Sep. 21
CPI	16.19	17.14	16.59	17.53	18.95	19.25	19.58
Core Goods (Including Gold)	6.5	6.7	6.2	6.6	6.3	5.7	5.5
Food and Non-Alcoholic Beverages	4.4	4.4	4.4	5.0	6.1	7.1	7.0
Alcoholic Beverages and Tobacco	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Energy	1.5	2.1	2.0	2.0	2.6	2.5	2.8
Services	3.7	3.8	3.9	3.9	3.9	3.9	4.2

Source: CBRT, TURKSTAT

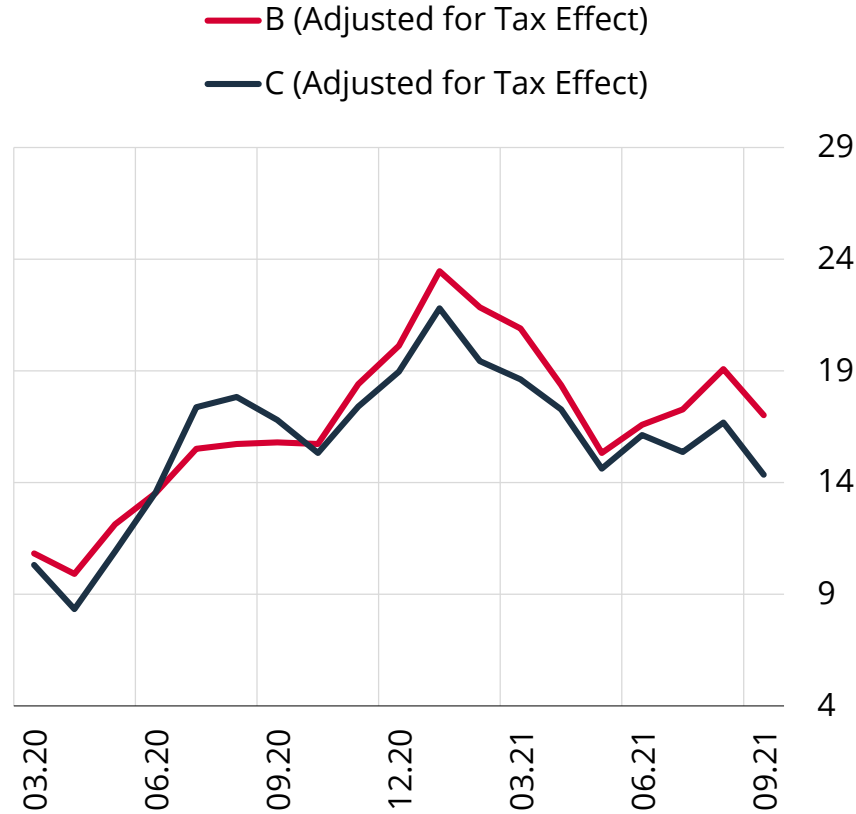
Last Observation: September 2021

* 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.

Consumer Inflation

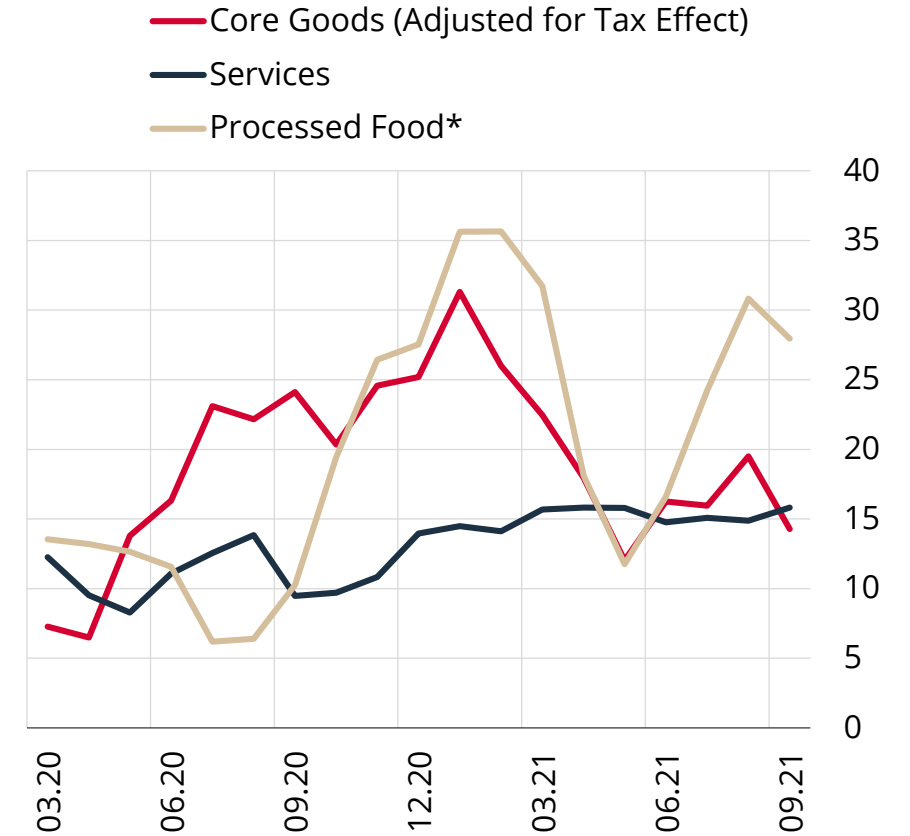
B and C Indices (Seasonally Adjusted, Annualized 3-Month Average % Change)



Source: CBRT, TURKSTAT

* There is no seasonality in the processed food group.

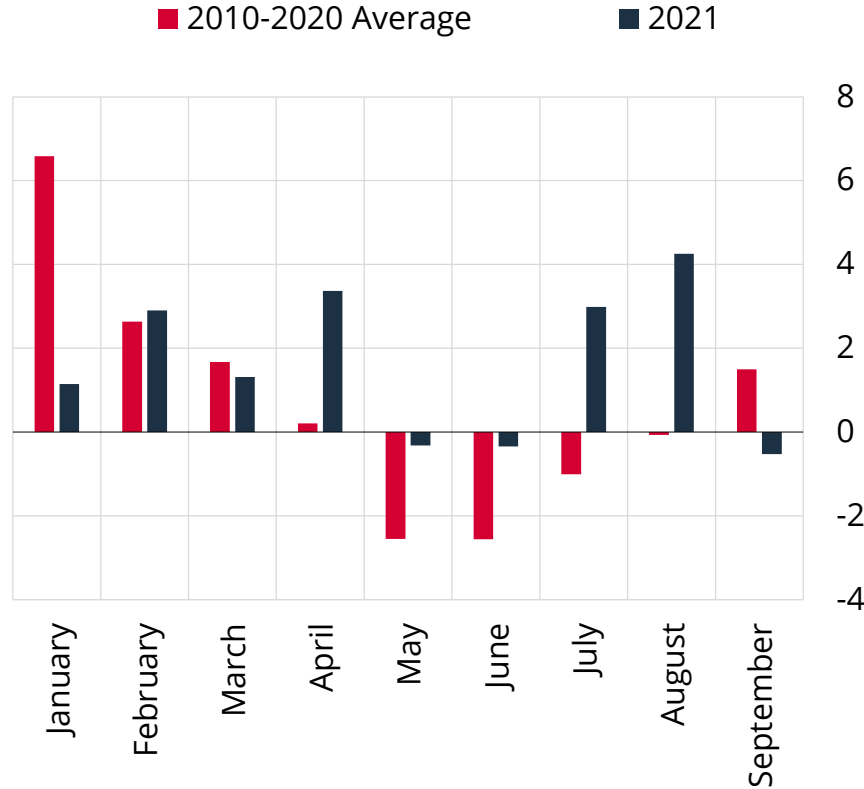
Subgroups of B Index (Seasonally Adjusted, Annualized 3-Month Average % Change)



Last Observation: September 2021

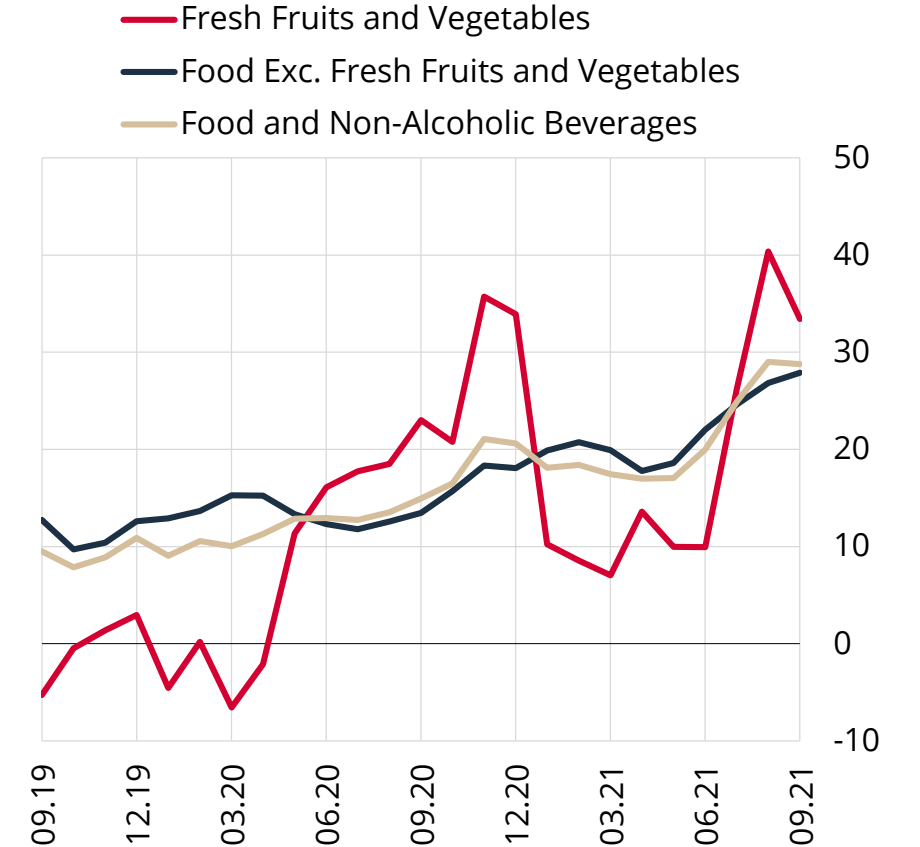
Food Inflation

Unprocessed Food Prices (Monthly % Change)



Source: TURKSTAT

Food Prices (Annual % Change)

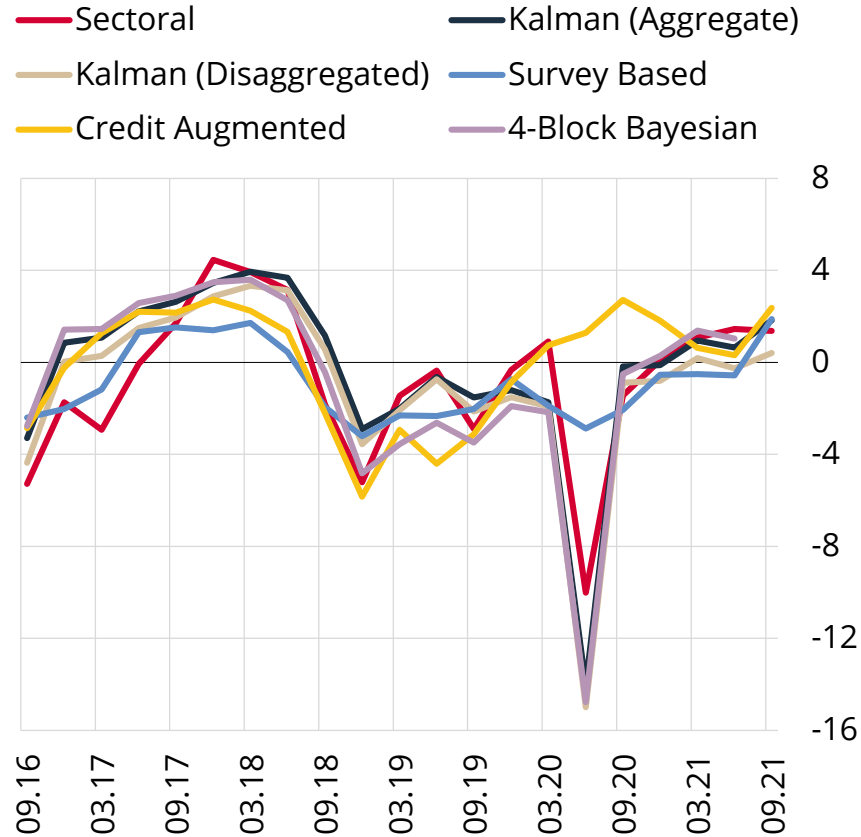


Last Observation: September 2021

THE DETERMINANTS OF INFLATION

Output Gap

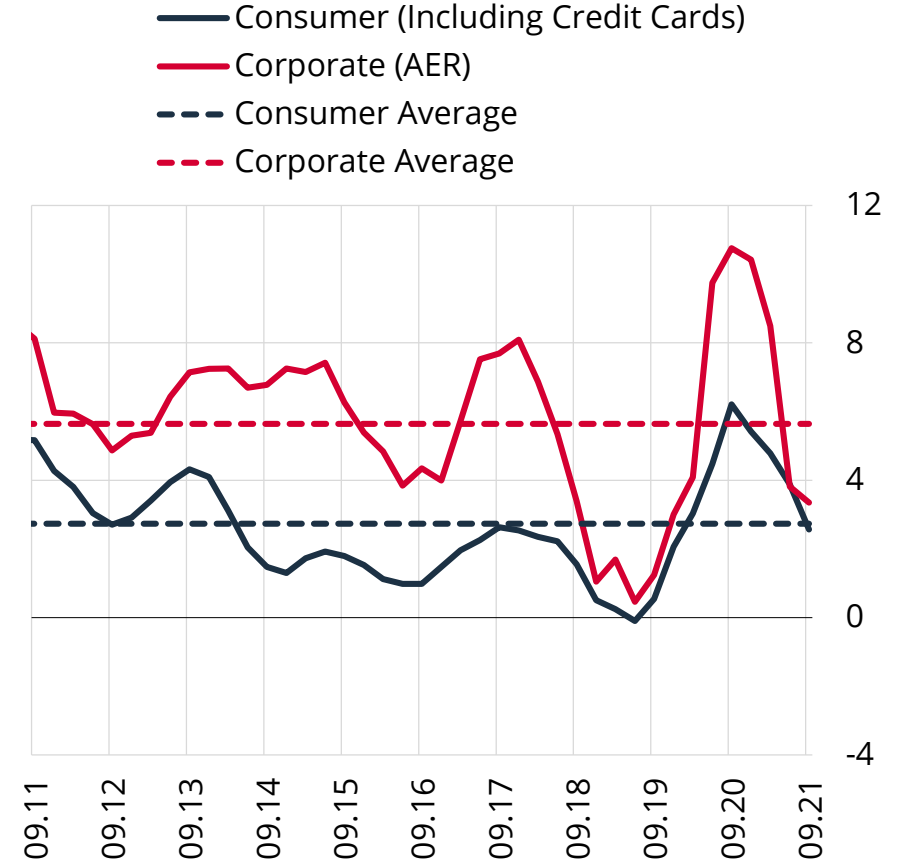
Output Gap Indicators (%)



Source: CBRT

Last Observation: 2021Q3

Net Loan Utilization* (%)



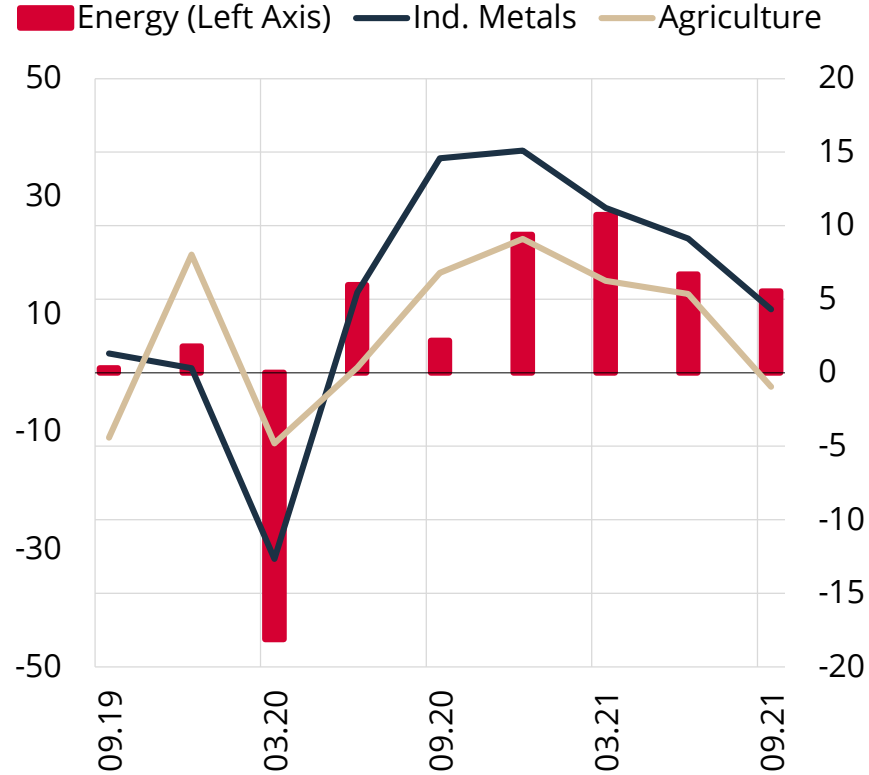
Source: CBRT

Last Observation: 2021Q3

* Net loan utilization is calculated as the ratio of the annual change in the nominal loan stock to the annual GDP of 4 quarters before. The historical average covers the period 2006Q1 - 2021Q2.

Import Costs

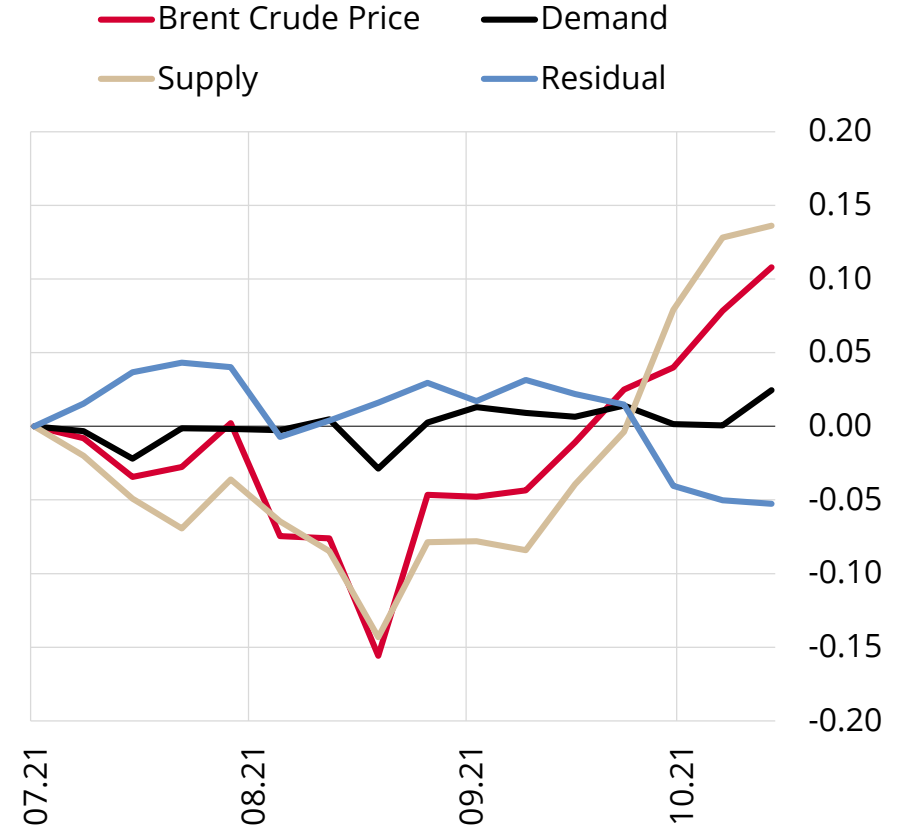
Commodity Price Indices (Quarterly % Change)



Source: World Bank

Last Observation: September 2021

Brent Crude Price Decomposition (July 2, 2021=0)

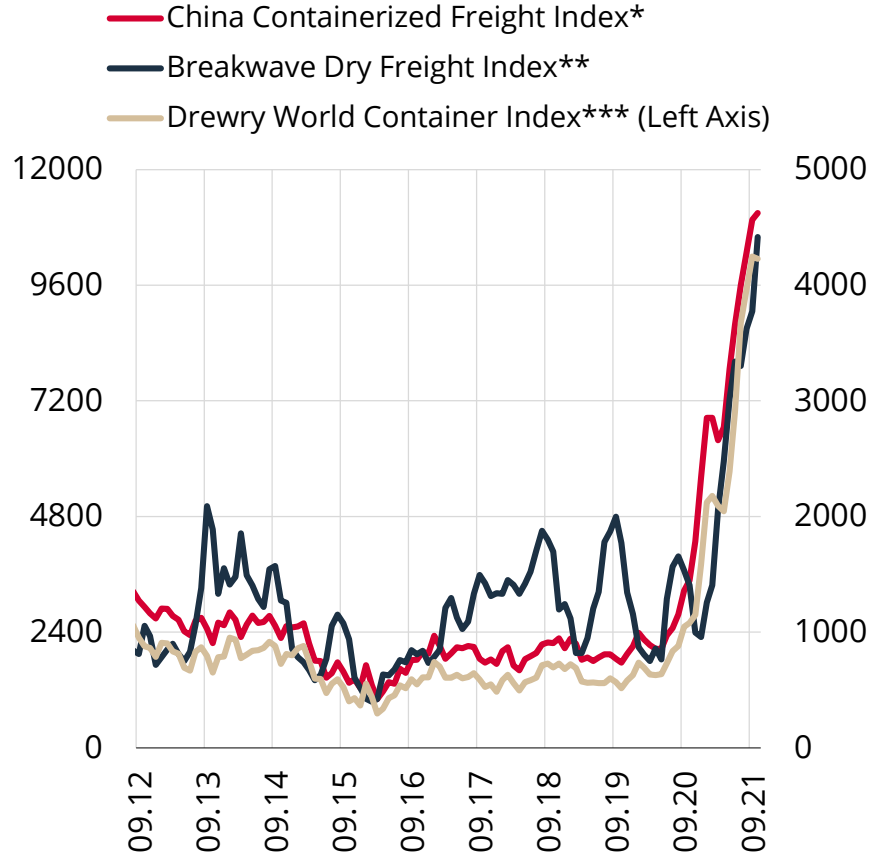


Source: New York FED

Last Observation: October 15, 2021

Supply Constraints

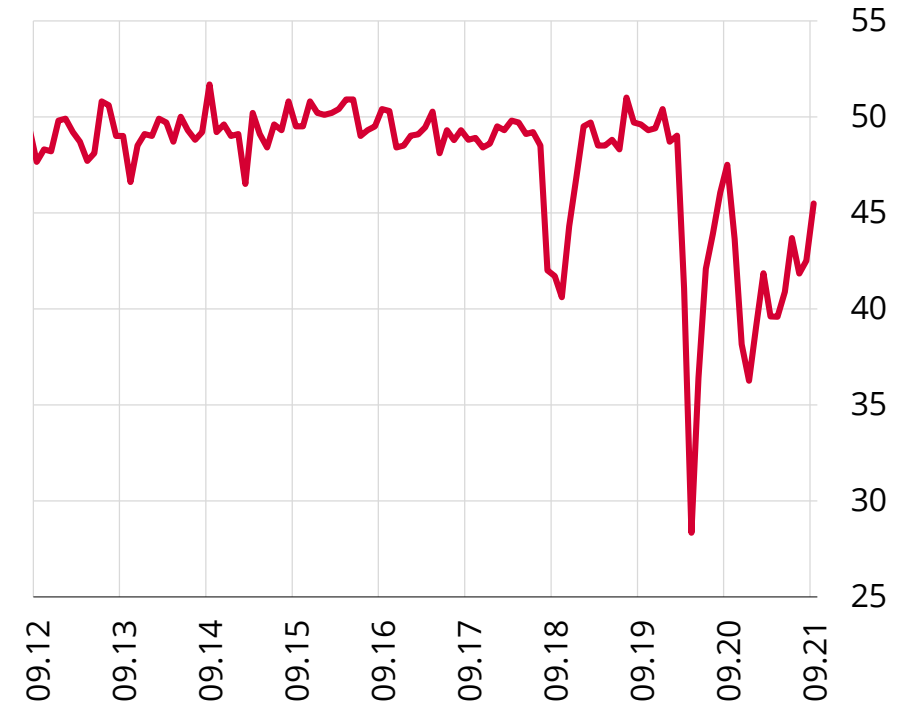
International Transportation Costs (USD)



Source: Bloomberg

Last Observation: October 2021

PMI Suppliers' Delivery Times**** (Manufacturing, Seasonally Adjusted)



Source: IHS Markit

Last Observation: September 2021

* It is derived from the weighted average of spot and contract freight costs by volume for transportation from Chinese container ports.

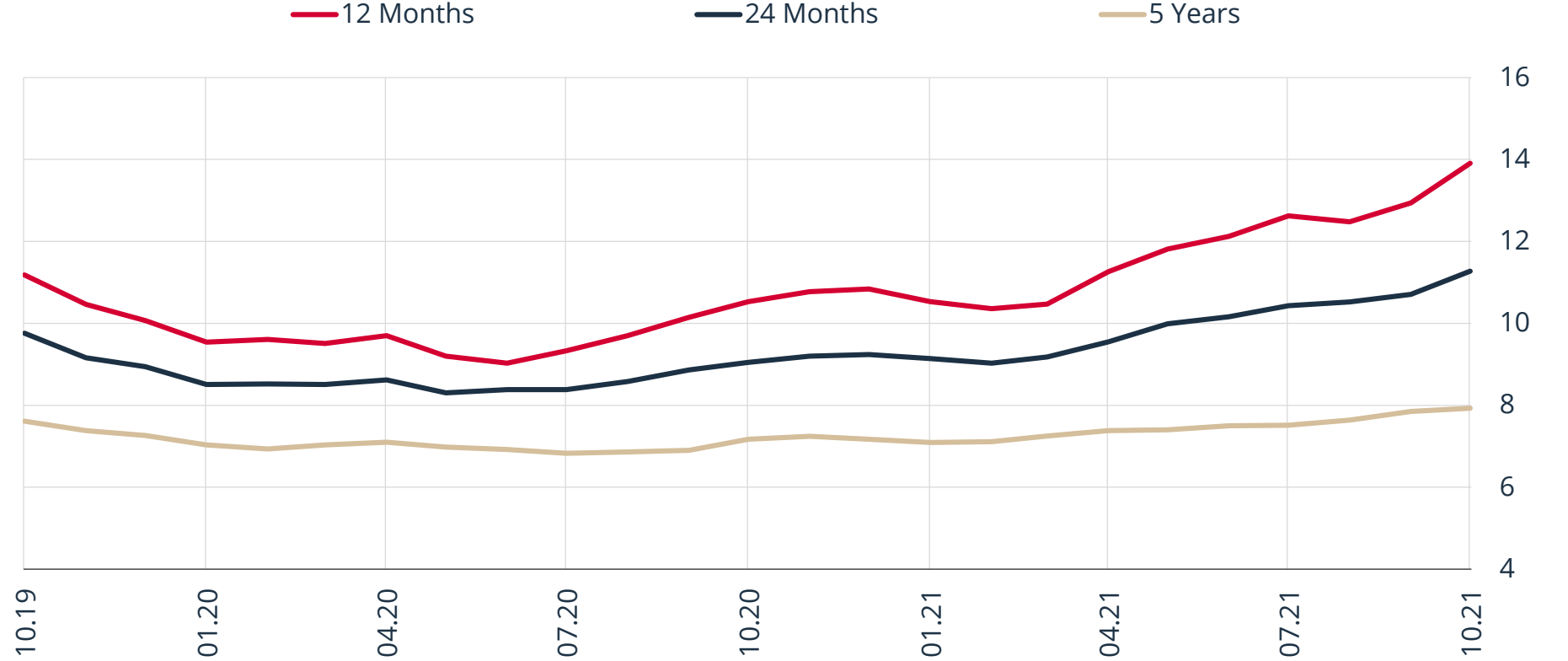
** It is obtained from the weighted average of the Capesize, Panamax and Supramax dry cargo freight forward contracts by volume-contract size.

*** Freight cost of 40 ft container weighted by trade volume on 8 shipping routes.

**** The lower values of the series indicate a longer delivery time.

Inflation Expectations

Consumer Inflation Expectations* (%)



Source: CBRT

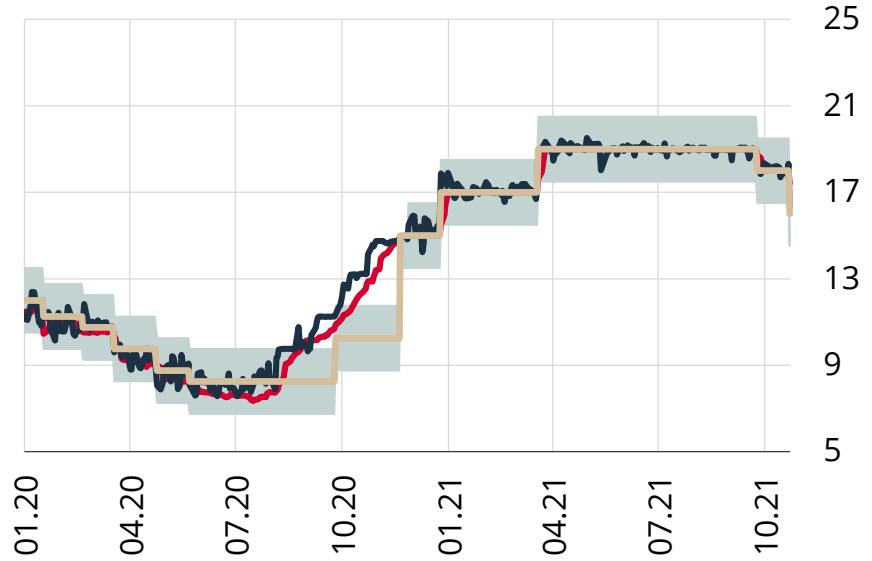
Last Observation: October 2021

* Data from the CBRT Survey of Market Participants responded by the representatives of the real and financial sectors and professionals.

Monetary Policy

CBRT Policy Rate and Short Term Interest Rates (%)

- Interest Rate Corridor
- CBRT Average Funding Rate
- Average Interest Rate at BIST Excluding the CBRT
- 1 Week Repo Rate

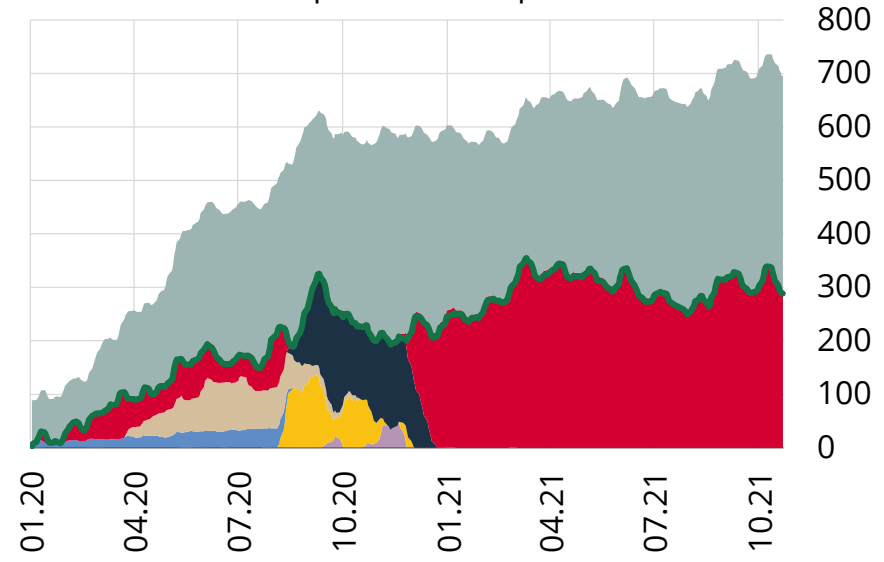


Source: BIST, CBRT

Last Observation: October 22, 2021

CBRT Open Market and Swap Operations (1-Week Moving Average, Billion TL)

- Swap Funding
- One Week Repo
- Traditional Repo
- 3-Month Repo (Targeted Liquidity)
- PD Repo
- Overnight Lending
- Late Liquidity Window
- Net Open Market Operations



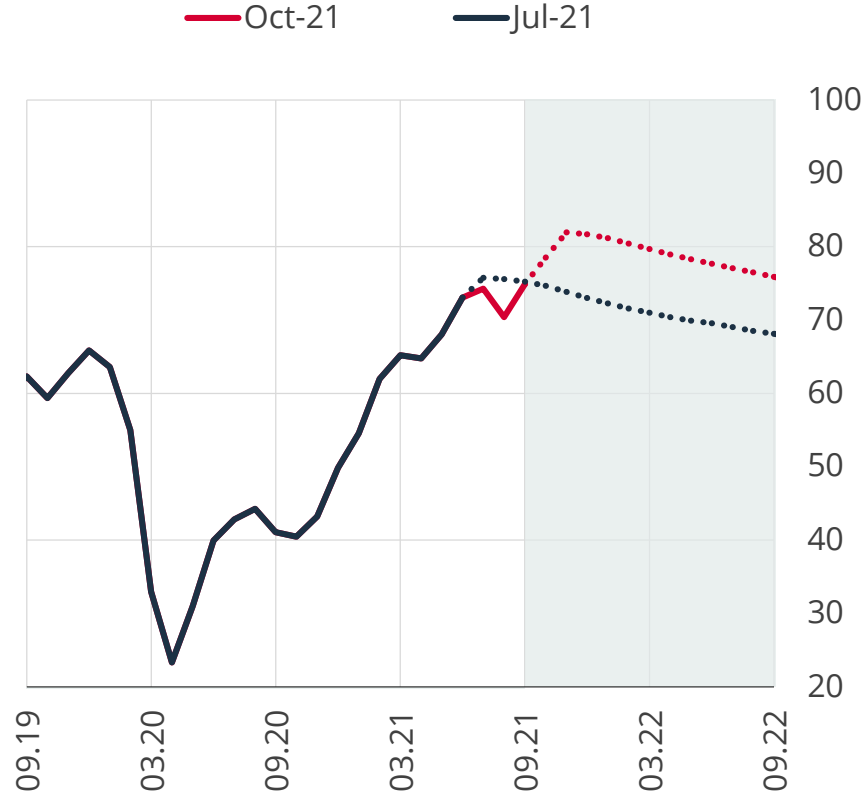
Source: CBRT

Last Observation: October 22, 2021

MEDIUM TERM PROJECTIONS

Assumptions for External Variables

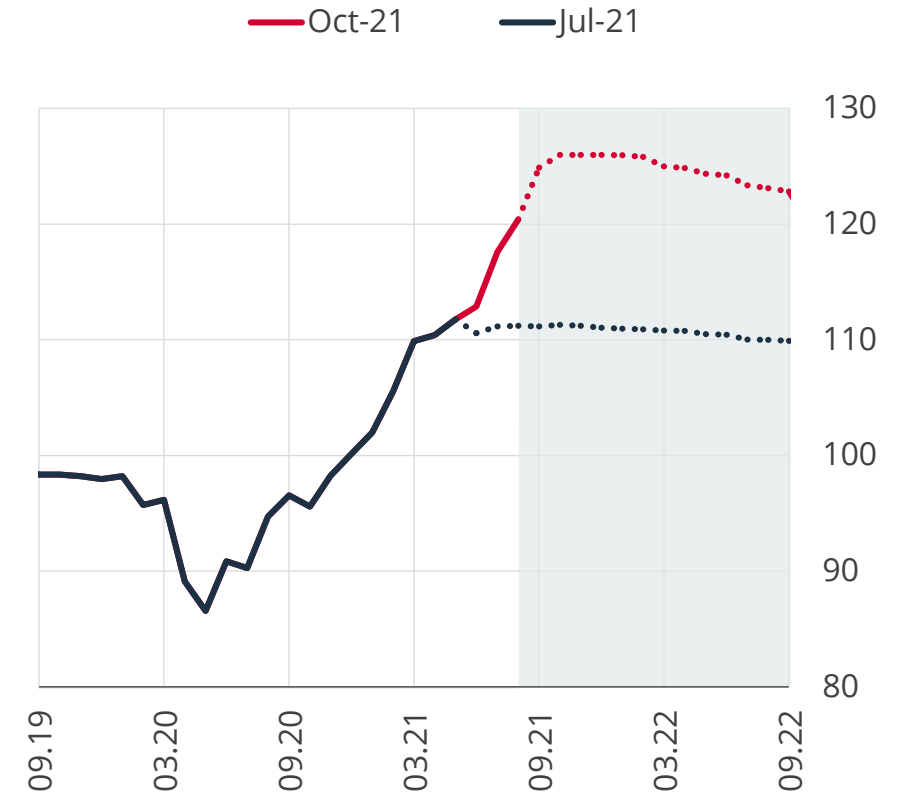
Revisions to Oil Price Assumptions* (USD/Barrel)



Source: Bloomberg, CBRT

Last Observation: September 2021

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



Source: CBRT, TURKSTAT

Last Observation: August 2021

* Shaded area shows the forecast period. Oil and import price assumptions are derived from the future price curves in international markets.

Revisions to Assumptions

		July IR	October IR
Output Gap (%)	2021Q2	0.8	1.8
	2021Q3	-0.1	2.5
Food Prices (Year-end % Change)	2021	15.0	23.4
	2022	10.1	13.9
Import Prices (USD, Average Annual % Change)	2021	16.3	23.1
	2022	0.2	6.0
Oil Prices (Average, USD)	2021	69.6	70.8
	2022	69.4	77.5
Export-Weighted Global Production Index (Average Annual % Change)	2021	4.8	4.8
	2022	4.5	4.5

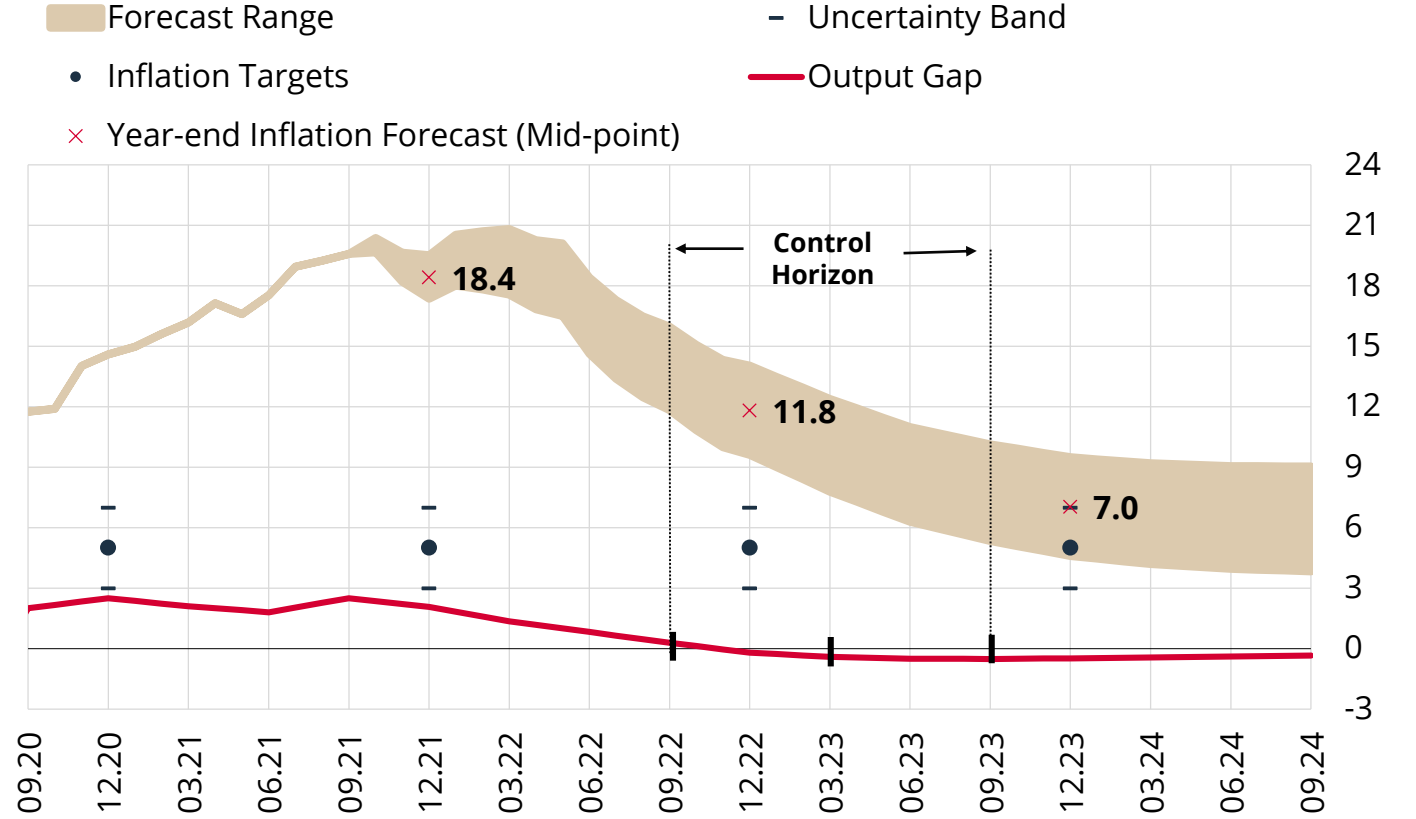
Inflation Outlook

Accordingly, inflation is expected to be

- Between 17.3% and 19.5% (with a mid-point of 18.4%) at end-2021;
- Between 9.6% and 14,0% (with a mid-point of 11.8%) at end-2022;
- Between 4.6% and 9.4% (with a mid-point of 7.0%) at end-2023

with 70% probability.

Inflation and Output Gap Forecasts* (%)



Source: CBRT, TURKSTAT

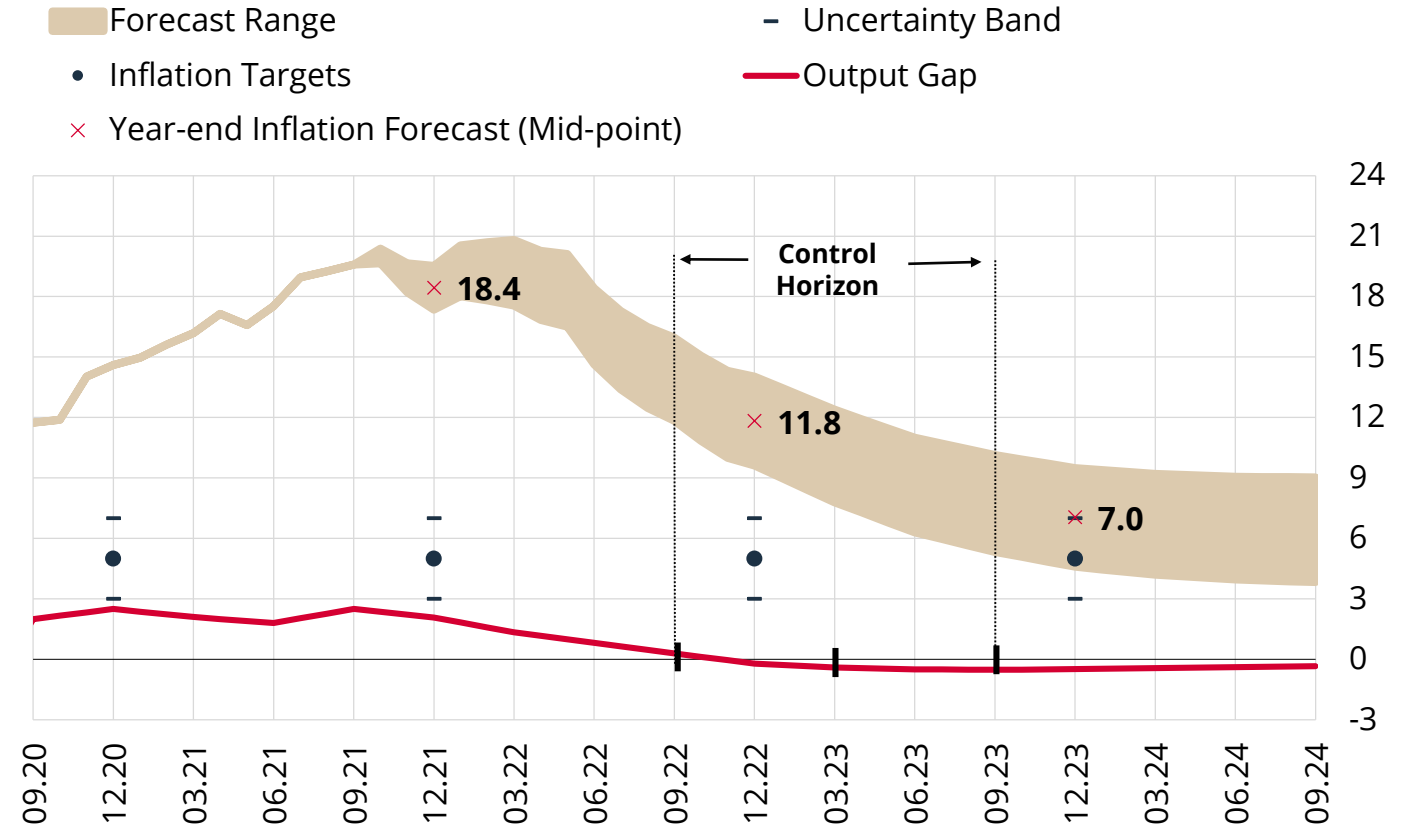
* Shaded region indicates the 70 percent confidence interval for the forecast.

Inflation Outlook

Accounting of the revision in 2021 year-end inflation forecasts relative to previous Report:

- +1.5 points from TL denominated import price,
- +0.4 points from output gap,
- +2.1 points from revision in food inflation,
- +0.3 points from administered prices.

Inflation and Output Gap Forecasts* (%)



Source: CBRT, TURKSTAT

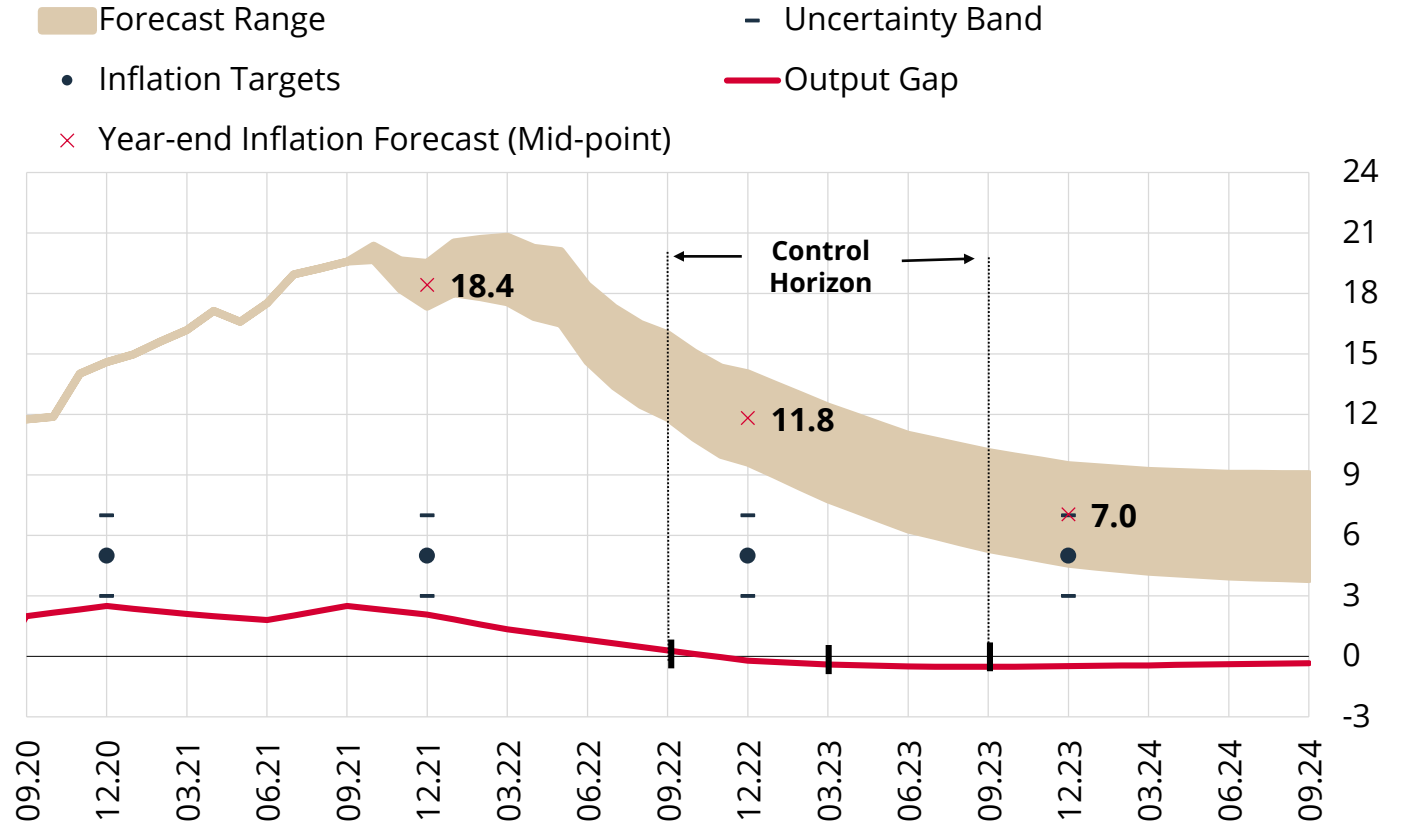
* Shaded region indicates the 70 percent confidence interval for the forecast.

Inflation Outlook

Accounting of the revision in 2022 year-end inflation forecasts relative to previous Report:

- +0,8 points from output gap,
- +1.0 points from revision in food inflation,
- +2.2 points from the rise in underlying trend of inflation due to revision in initial conditions.

Inflation and Output Gap Forecasts* (%)



Source: CBRT, TURKSTAT

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

Overview

- While the effects of high global inflation on inflation expectations and international financial markets are closely monitored, central banks in advanced economies assess that the rise in inflation would be mostly temporary along with normalization in demand composition, easing of supply constraints and waning base effects.
- Leading indicators show that domestic economic activity remains strong, with the help of robust external demand.
- The spread of domestic vaccination throughout the society facilitates the recovery in services, tourism and related sectors, which have been adversely affected by the pandemic, and leads to a more balanced composition in economic activity.
- The improvement in annualized current account is expected to continue in the rest of the year due to the strong upward trend in exports, and the strengthening of this trend is important for the price stability objective.
- Recent increase in inflation has been driven by supply side factors such as rise in food and import prices, especially in energy, and supply constraints, increase in administered prices and demand developments due to the reopening. It is assessed that these effects are due to transitory factors.
- The Committee assessed that, till the end of the year, supply-side transitory factors leave limited room for the downward adjustment to the policy rate.



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