TÜRKİYE CUMHURİYET
MERKEZ BANKASI

BRIEFING ON 2022-IV INFLATION REPORT

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Governor

October 27, 2022

Ankara

Outline

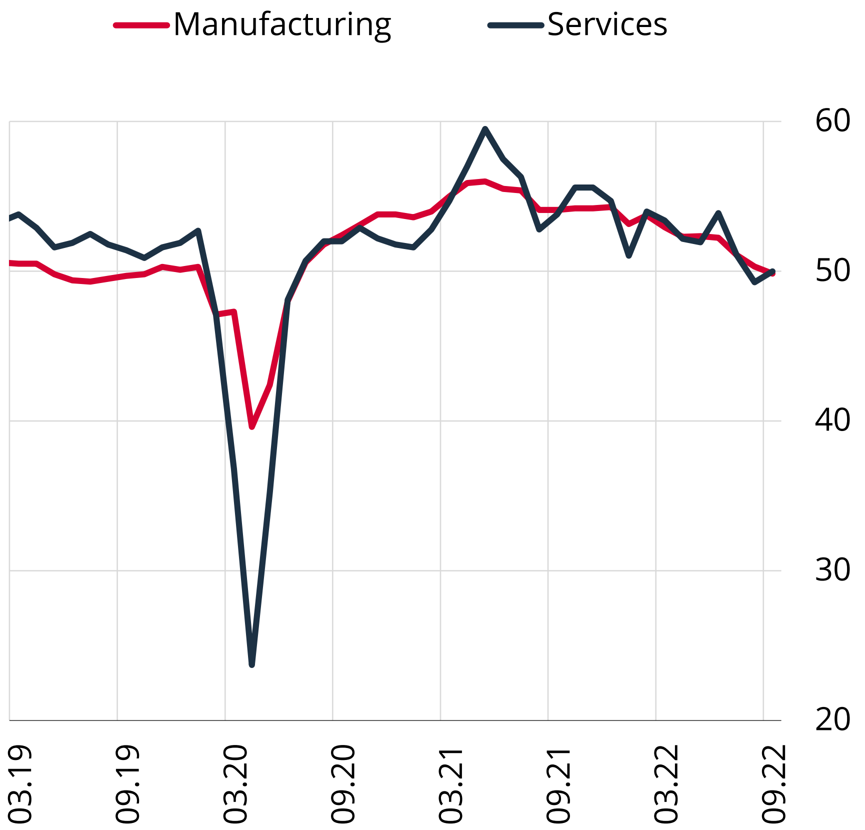
- Global Economic Outlook
- Macroeconomic Outlook
- Determinants of Inflation
- Monetary Policy
- Medium-Term Projections
- Overview

GLOBAL ECONOMIC OUTLOOK

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Global Growth

Global PMI Indicators



Source: S&P Global

Last Observation: September 2022

Growth Forecasts in Advanced and Emerging Economies* (%)

	2022 Forecast	2023 Forecast	
	October 2022	July 2022	October 2022
Euro Area	3.0	1.4	**0.0**
Germany	1.4	1.6	**-0.9**
USA	1.7	1.0	**0.2**
UK	4.1	0.5	**-0.3**
Italy	3.3	1.3	**-0.1**
Iraq	9.0	6.3	**5.1**
Spain	4.4	2.5	**1.2**
France	2.5	1.3	**0.3**
Netherlands	4.6	1.1	**0.7**
Israel	5.3	3.4	**3.2**
Russia	-4.6	-2.5	**-3.1**
UAE	5.3	5.0	**3.8**
Romania	5.6	3.3	**2.4**
Belgium	2.4	1.6	**0.8**
Poland	4.1	2.4	**1.1**
Egytp	6.0	4.4	**4.2**
Bulgaria	2.9	2.5	**1.6**
China	3.2	5.4	**4.8**

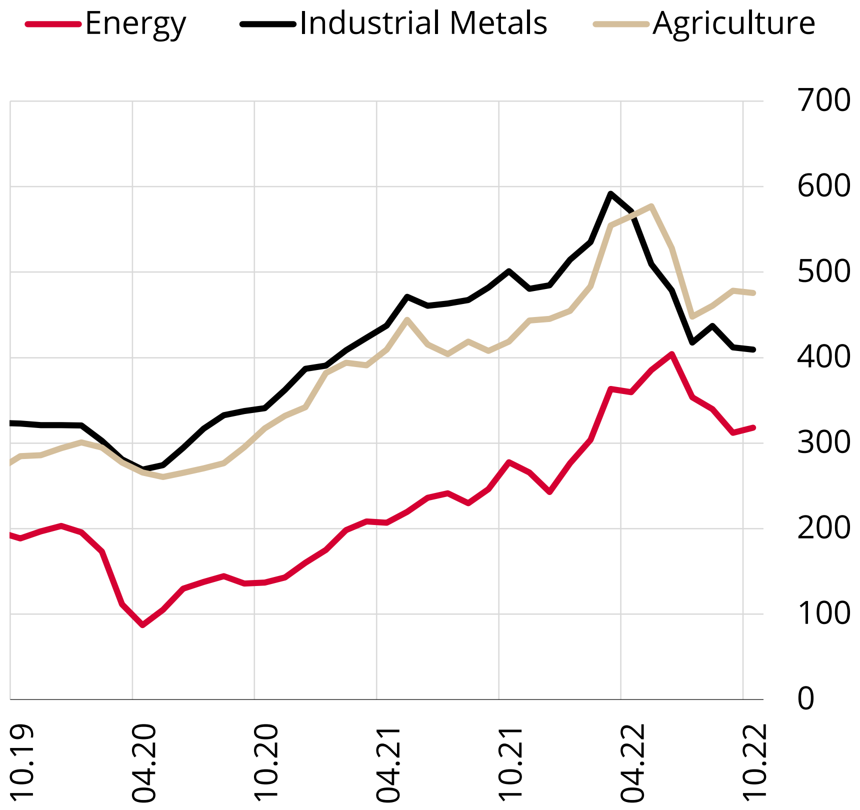
Source: Consensus Economics

Last Observation: October 2022

* Countries are listed according to Turkey's export share in 2021. Forecasts shown in red indicate a downward revision compared to the previous reporting period.

Commodity Prices and Supply Conditions

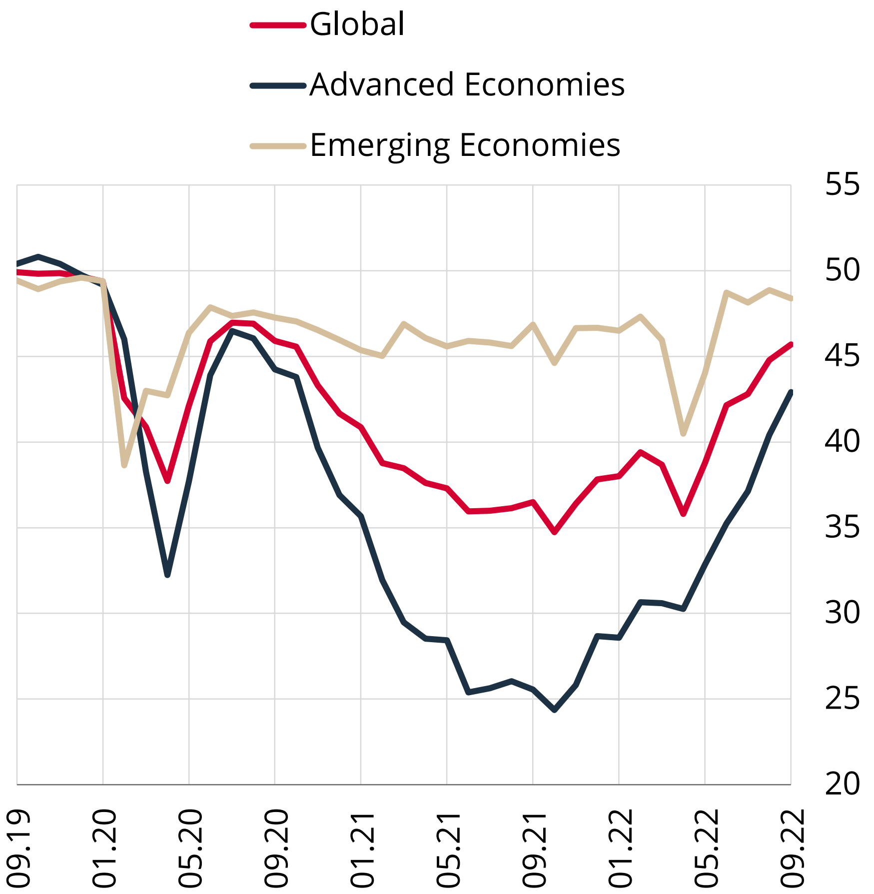
Commodity Indices



Source: Bloomberg

Last Observation: October 24, 2022

PMI Manufacturing Industry Delivery Times*



Source: S&P Global

Last Observation: September 2022

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

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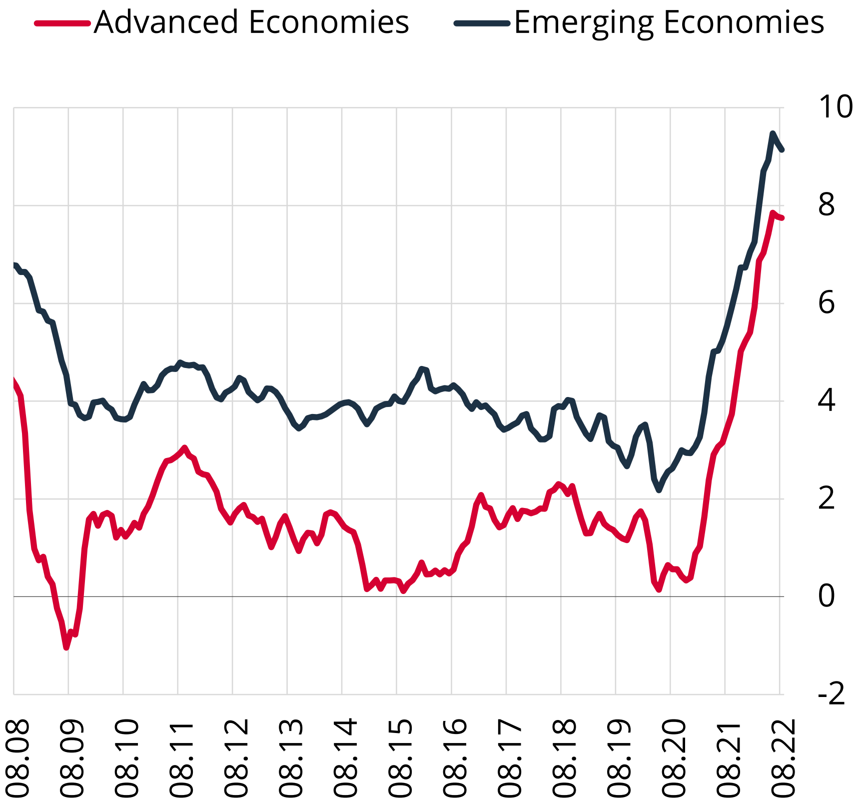
Global Inflation

Inflation Rates in Advanced and Emerging Economies* (%)



Source: Bloomberg, CBRT

Last Observation: August 2022

* Advanced Economies: Canada, Euro Area, Israel, Japan, Norway, South Korea, Sweden, Switzerland, UK and USA. Emerging Economies: Brazil, Czechia, Colombia, Hungary, Indonesia, Mexico, Philippines, Poland, Romania, South Africa and Thailand.

Year-End Inflation Forecasts in Advanced and Emerging Countries* (%)

	2022 Forecast	2023 Forecast	
	October 2022	July 2022	October 2022
Euro Area	8.3	3.7	**5.8**
Germany	8.1	3.6	**6.8**
USA	8.0	3.7	**3.9**
UK	8.9	5.6	**6.4**
Italy	7.6	3.1	**5.0**
France	5.4	3.1	**4.0**
Japan	2.2	1.3	**1.6**
Russia	12.9	6.5	**6.1**
South Africa	6.9	4.8	**5.5**
Romania	13.2	7.9	**9.1**
Poland	14.0	9.5	**11.6**
Egypt	12.5	10.5	**10.9**
China	2.2	2.3	2.3
India	6.7	5.0	5.0
Malaysia	3.4	2.8	**3.0**
Indonesia	4.7	3.8	**4.8**
Brazil	5.8	4.8	**4.9**
Chile	12.7	4.6	**4.9**
Hungary	13.8	8.4	**13.6**
South Korea	5.2	2.7	**3.2**
Mexico	8.4	4.3	**4.6**

Source: Consensus Economics

Last Observation: October 2022

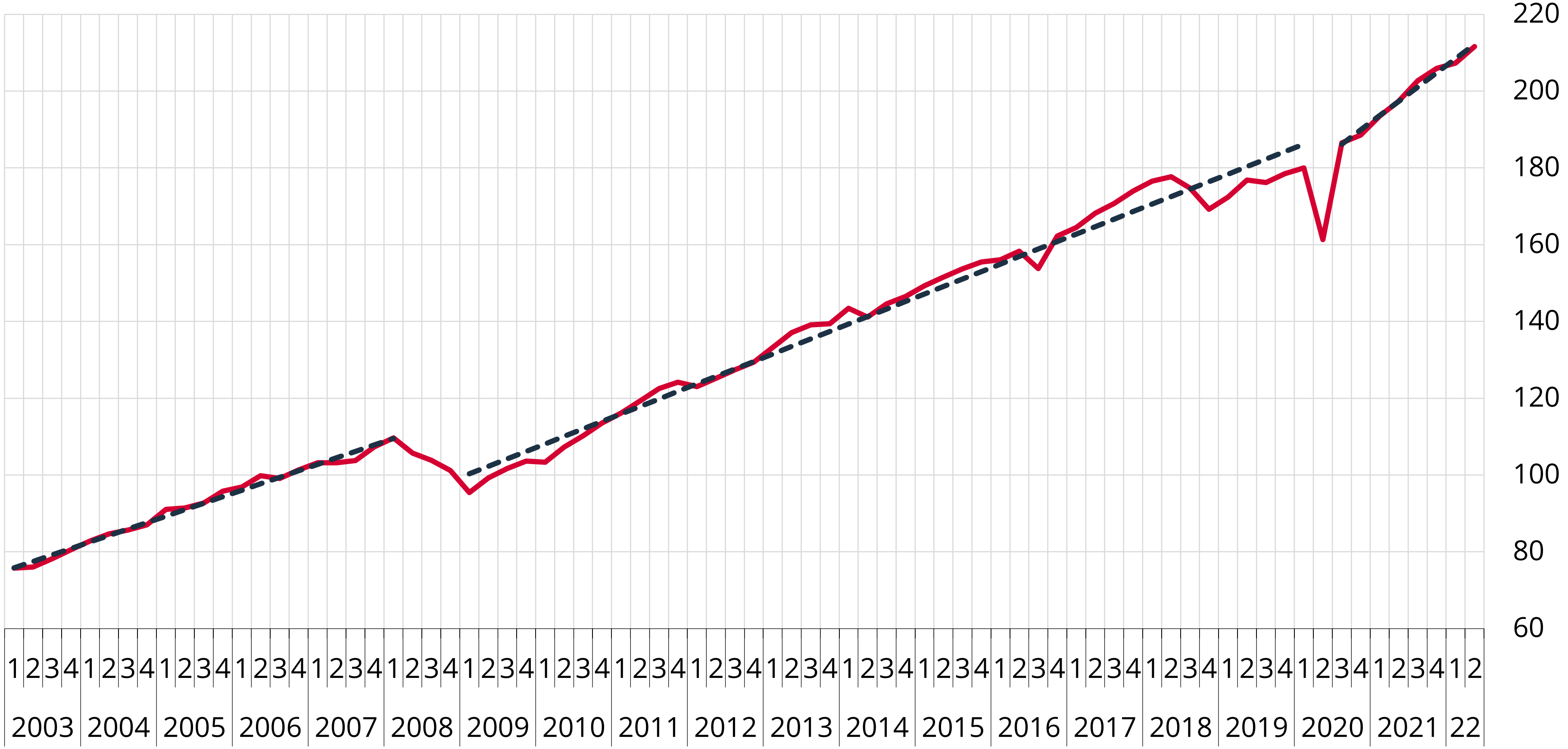
* Forecasts shown in red indicate an upward revision, and forecasts shown in green indicate a downward revision compared to the previous reporting period.

TÜRKİYE CUMHURİYET MERKEZ BANKASI

MACROECONOMIC OUTLOOK

Domestic Economic Activity

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



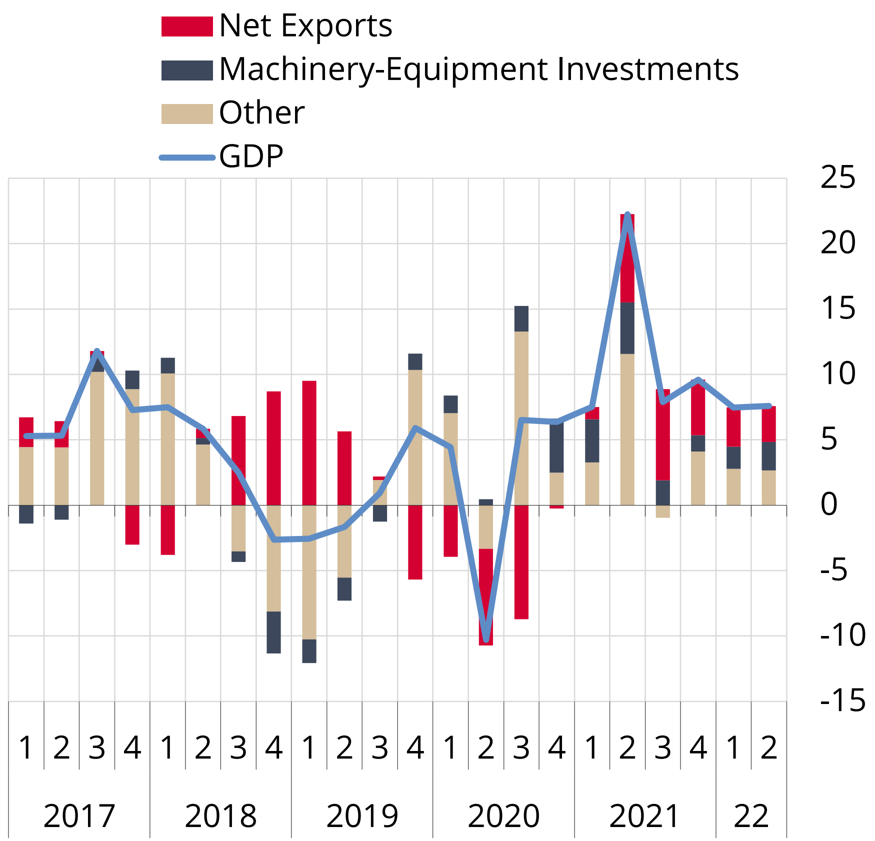
Source: TURKSTAT

Last Observation: 2022Q2

* Dashed lines show the GDP trend in the respective periods.

Domestic Economic Activity

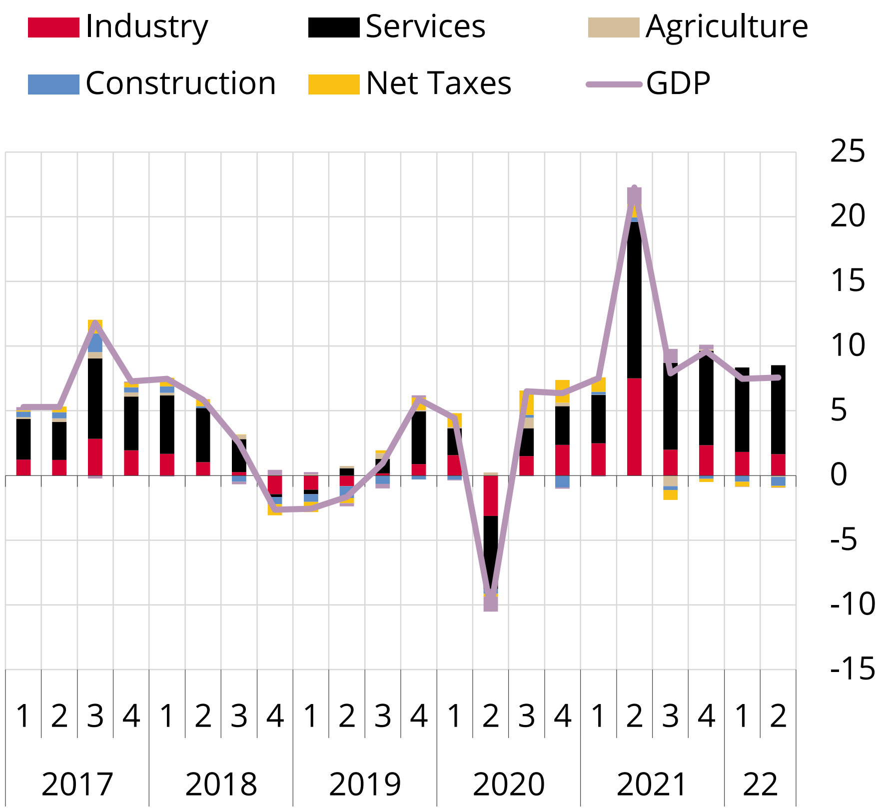
Contributions to GDP Growth from the Expenditures Side (% Point)



Source: CBRT, TURKSTAT

Last Observation: 2022Q2

Contributions to GDP Growth from the Production Side (% Point)

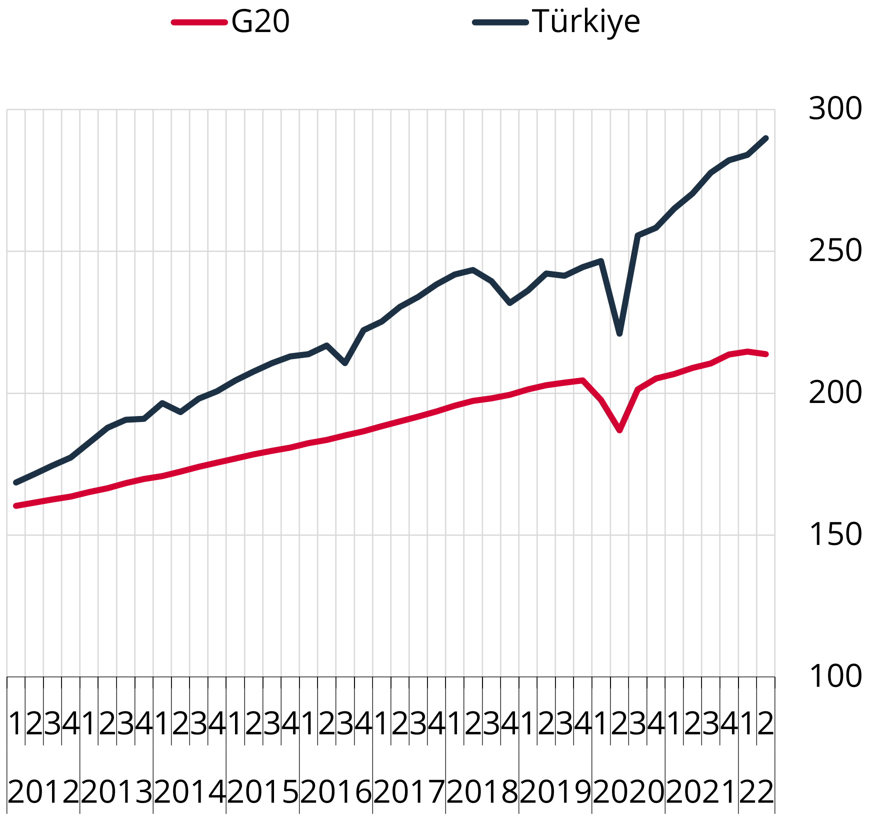


Source: CBRT, TURKSTAT

Last Observation: 2022Q2

Long-Term Growth

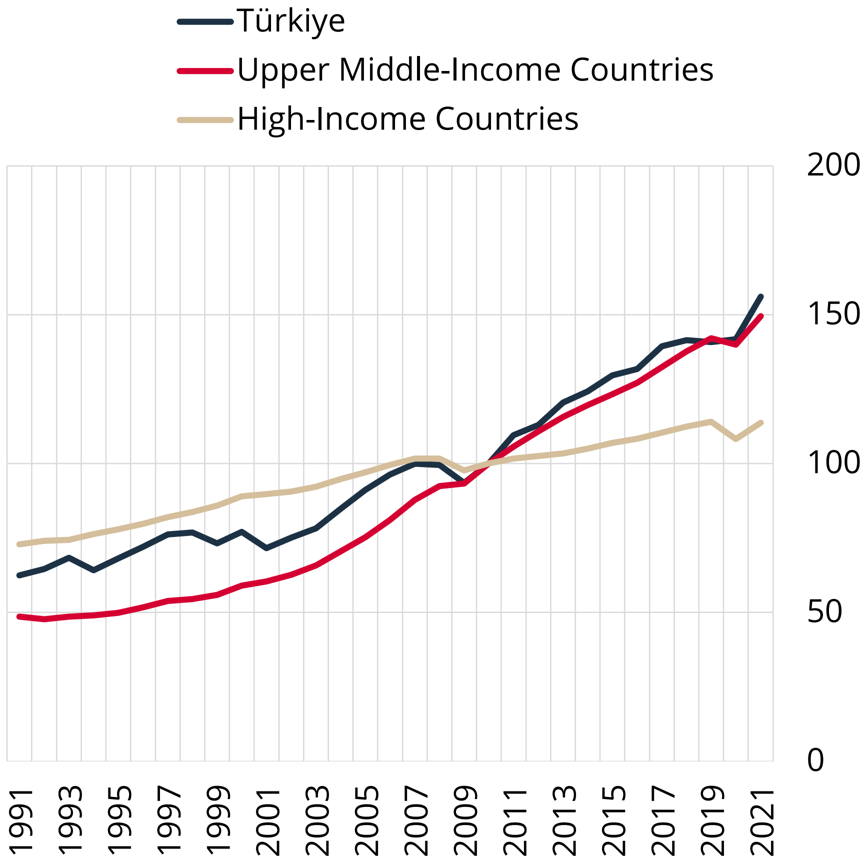
GDP in Türkiye and G20 Countries (Seasonally Adjusted, 2000=100)



Source: Bloomberg, CBRT, S&P Global

Last Observation: 2022Q2

Per Capita GDP Indices* (2010=100)



Source: World Bank

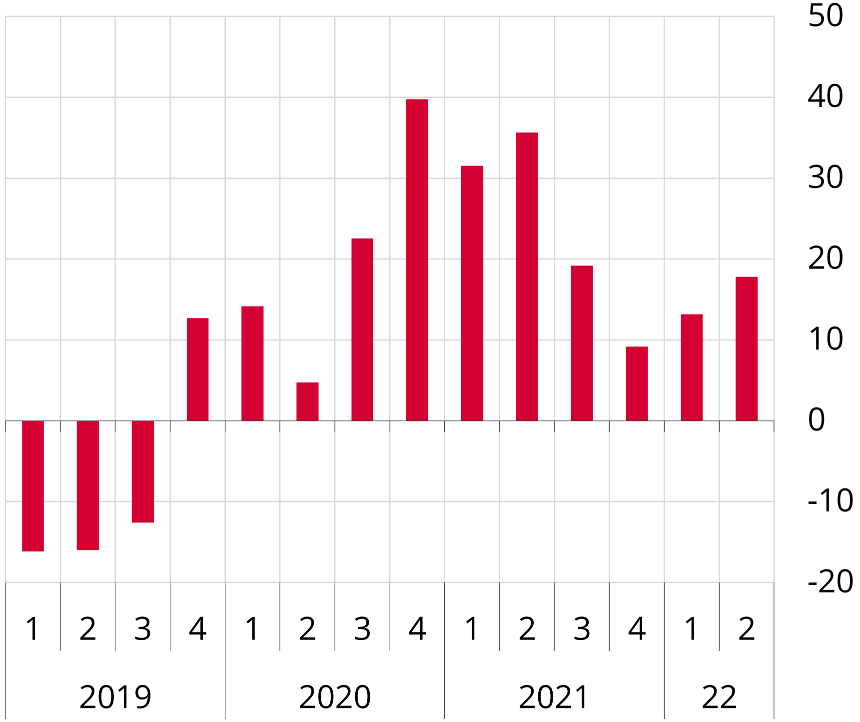
Last Observation: 2021

* Purchasing power parity adjusted (Constant 2017, USD).

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Machinery-Equipment Investments and Net Exports

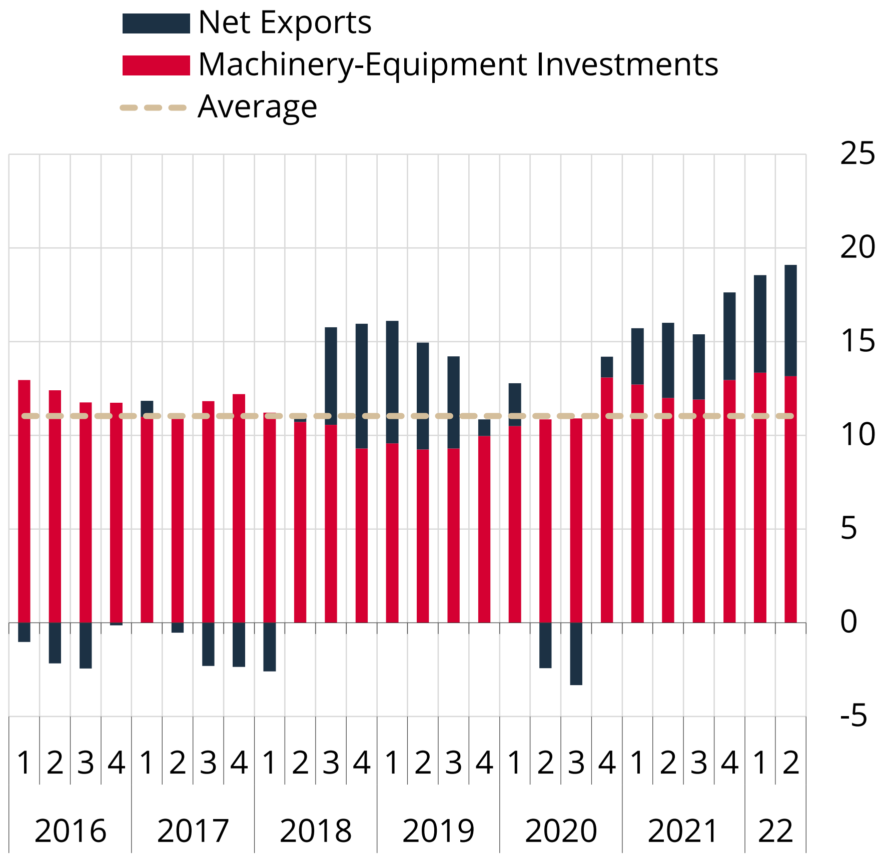
Machinery-Equipment Investments (Annual Change, %)



Source: TURKSTAT

Last Observation: 2022Q2

Share of Machinery-Equipment Investments and Net Exports in GDP* (%)



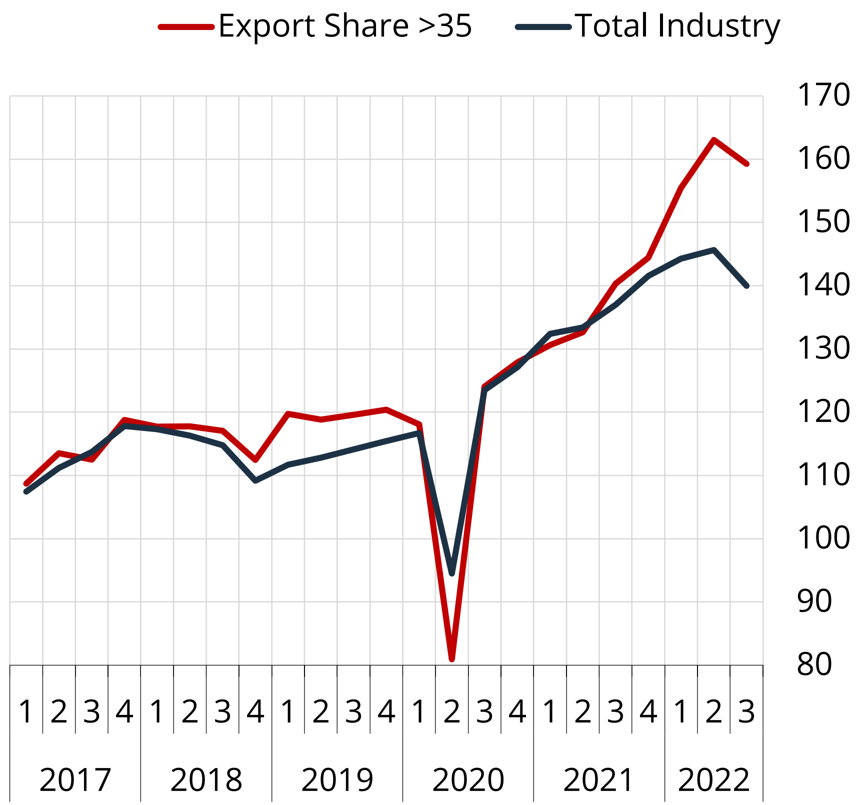
Source: CBRT, TURKSTAT

Last Observation: 2022Q2

* Dashed line represents the average of the share of machinery-equipment investments and net exports in GDP during 2009Q1-2022Q2.

Industrial Production Index and Capacity Utilization Rate

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

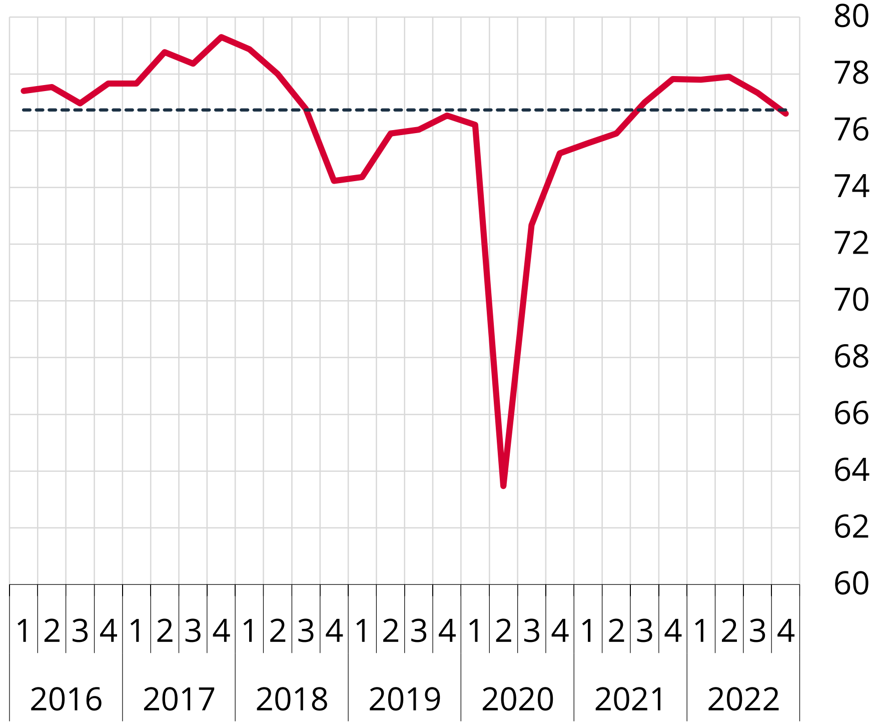


Source: CBRT, TURKSTAT

Last Observation: August 2022

* Sectors are classified according to the percentage share of export turnover in total turnover according to the 2009-2020 average. The third quarter data is average of July and August.

Manufacturing Industry Capacity Utilization Rate* (Seasonally Adjusted, %)



Source: CBRT

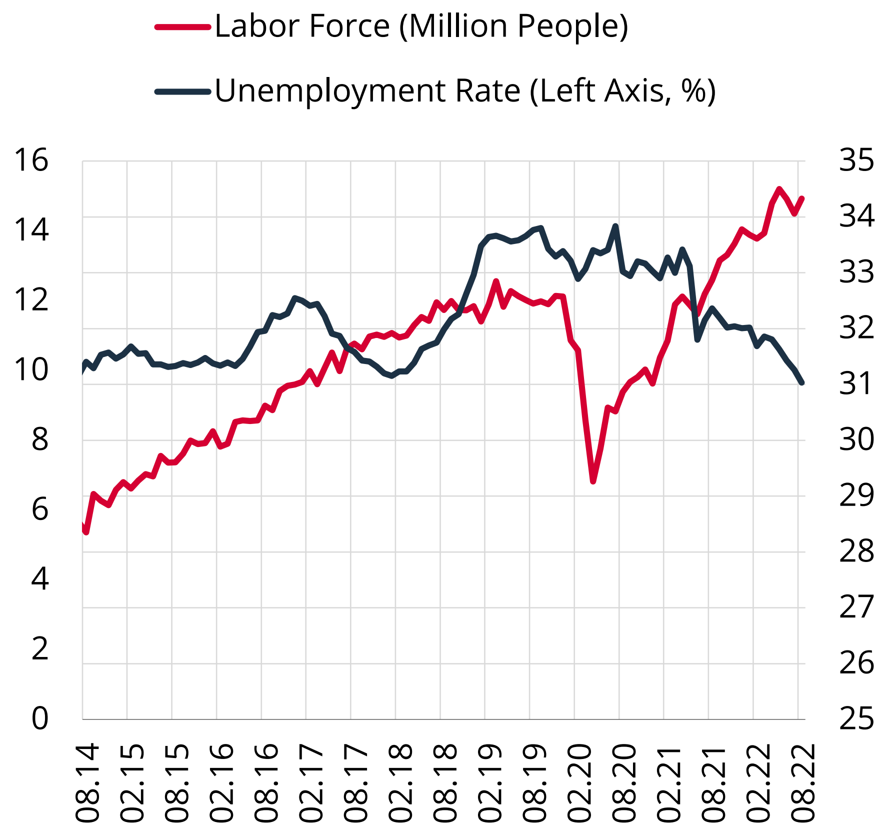
Last Observation: October 2022

* The fourth quarter data is as of October. The dashed line represents the 2011-2019 average.

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Labor Market

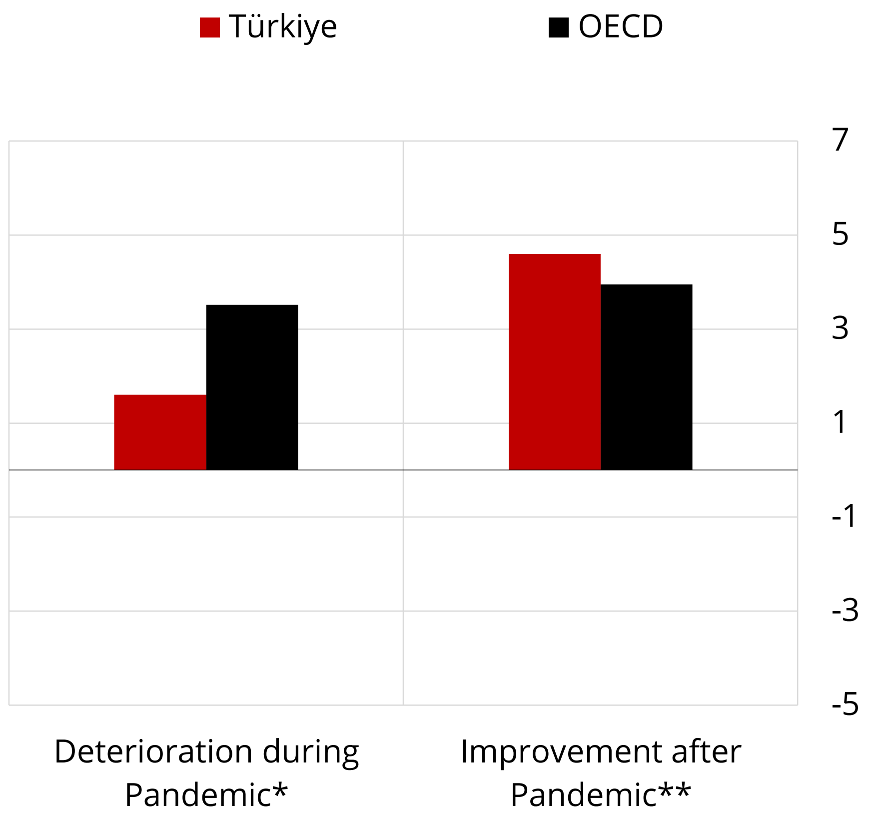
Labor Force and Unemployment Rate (Seasonally Adjusted)



Source: TURKSTAT

Last Observation: August 2022

Changes in Unemployment Rate (% Point)



Source: OECD, TURKSTAT

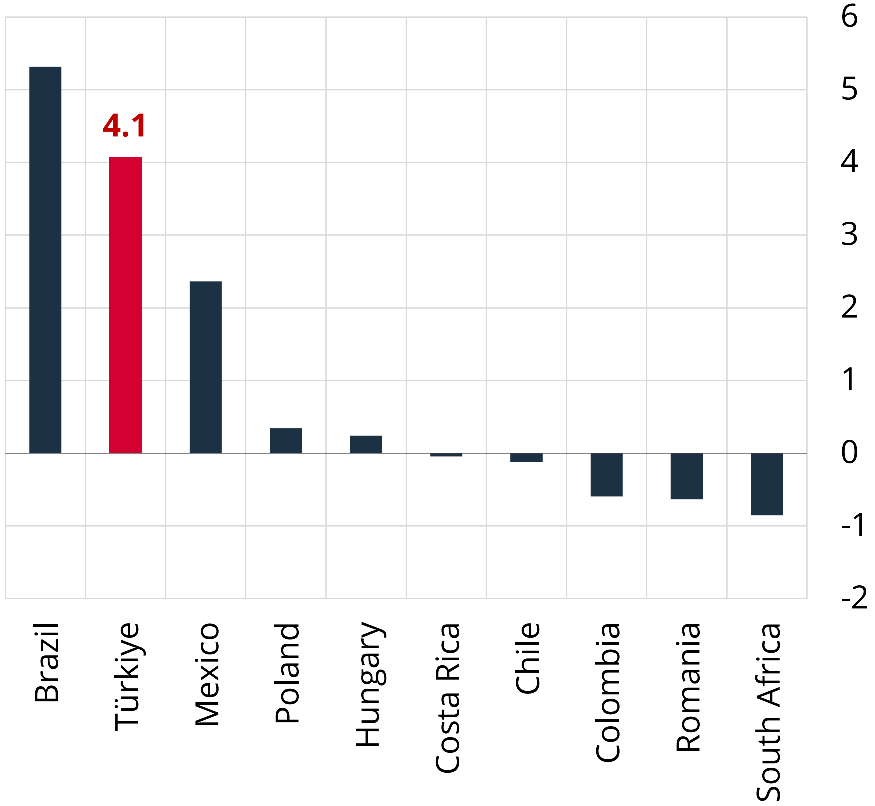
Last Observation: August 2022

* Difference between the highest level of unemployment during the pandemic period and February 2020, when the pandemic started.

** Difference between August 2022 and the highest unemployment rate.

Labor Market

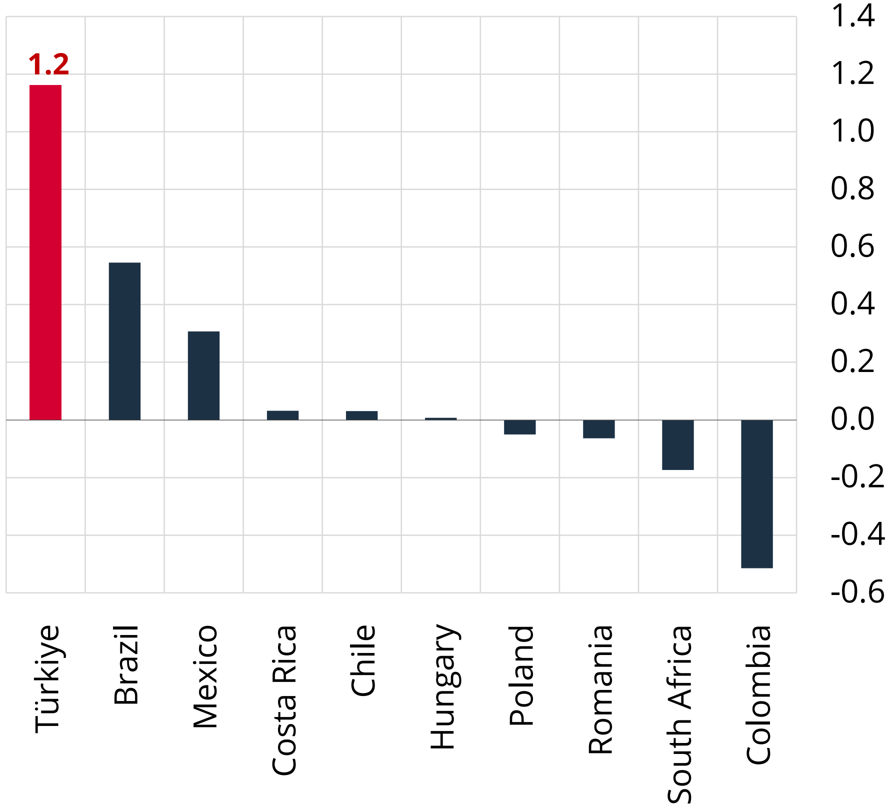
Change in Employment* (2020Q1-2022Q2, Million People)



Source: ILO, TURKSTAT
Last Observation: 2022Q2

* Comparisons are based on unadjusted data.

Change in Industrial Employment* (2020Q1-2022Q2, Million People)

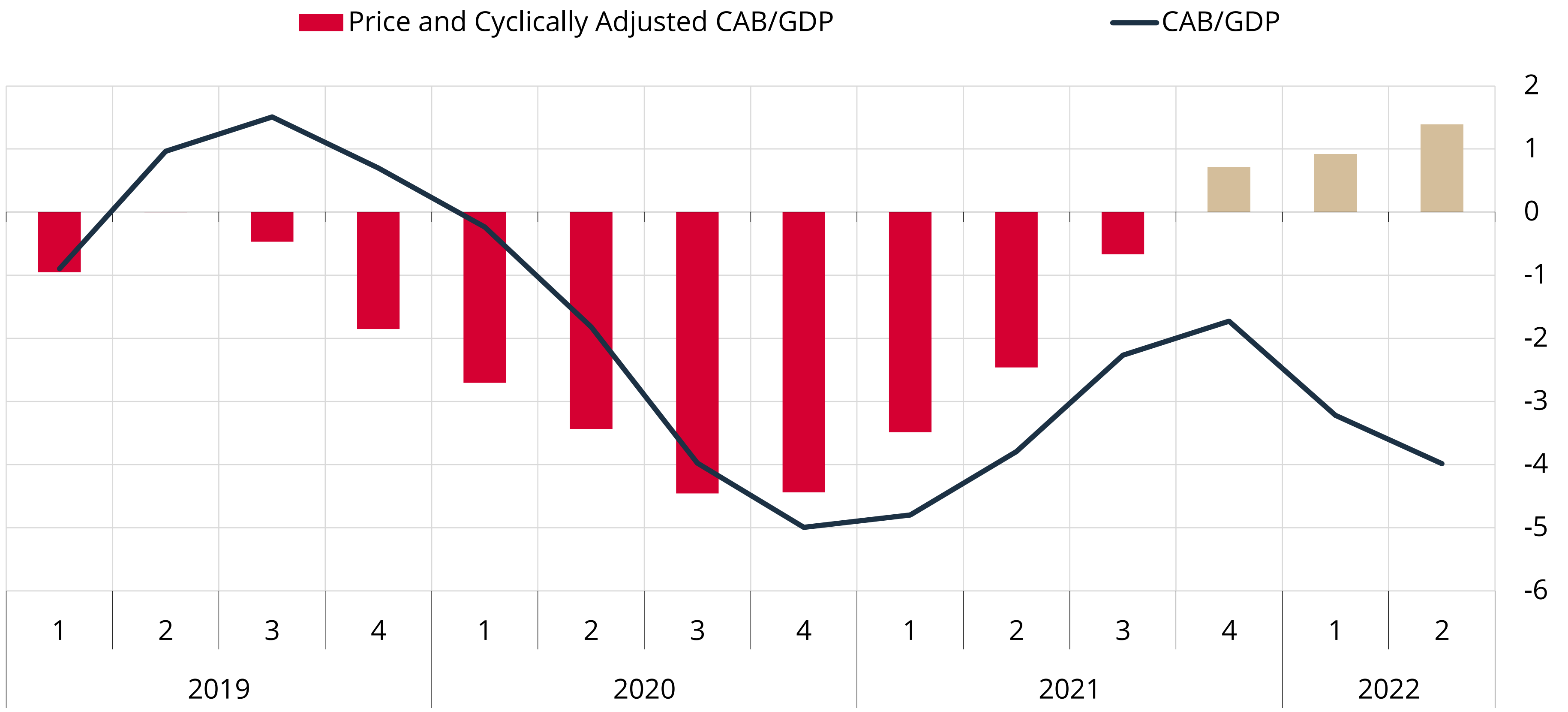


Source: ILO, TURKSTAT
Last Observation: 2022Q2

* Comparisons are based on unadjusted data.

Structural Change

Current Account Balance* (12-Month Cumulative, %)



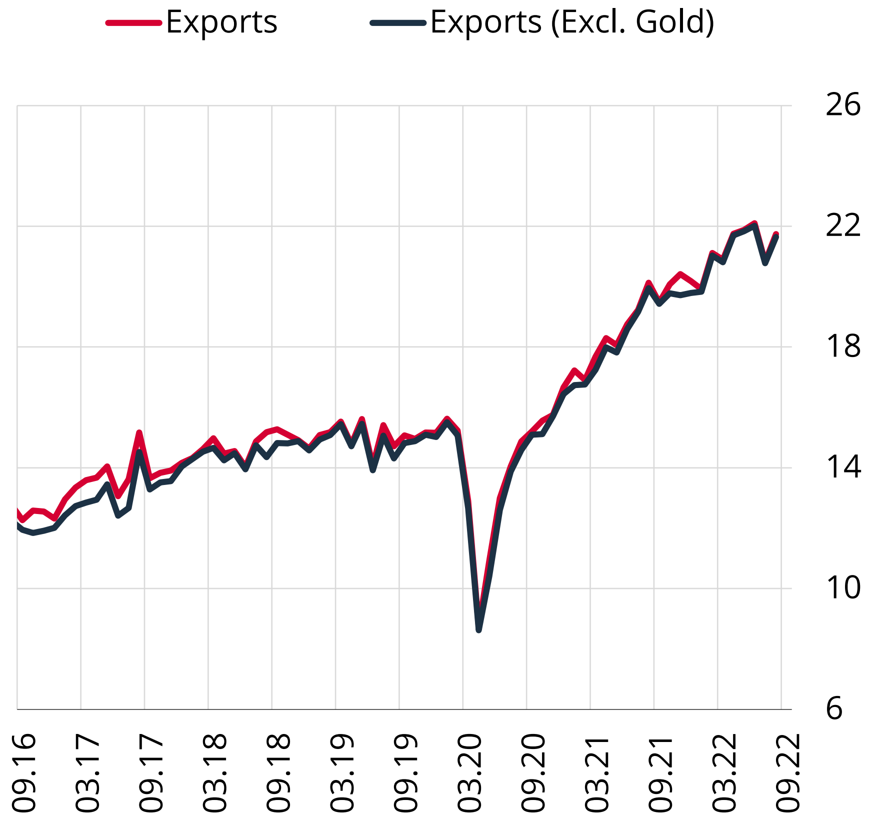
Source: CBRT, TURKSTAT

Last Observation: 2022Q2

* CAB: Current Account Balance.

External Balance

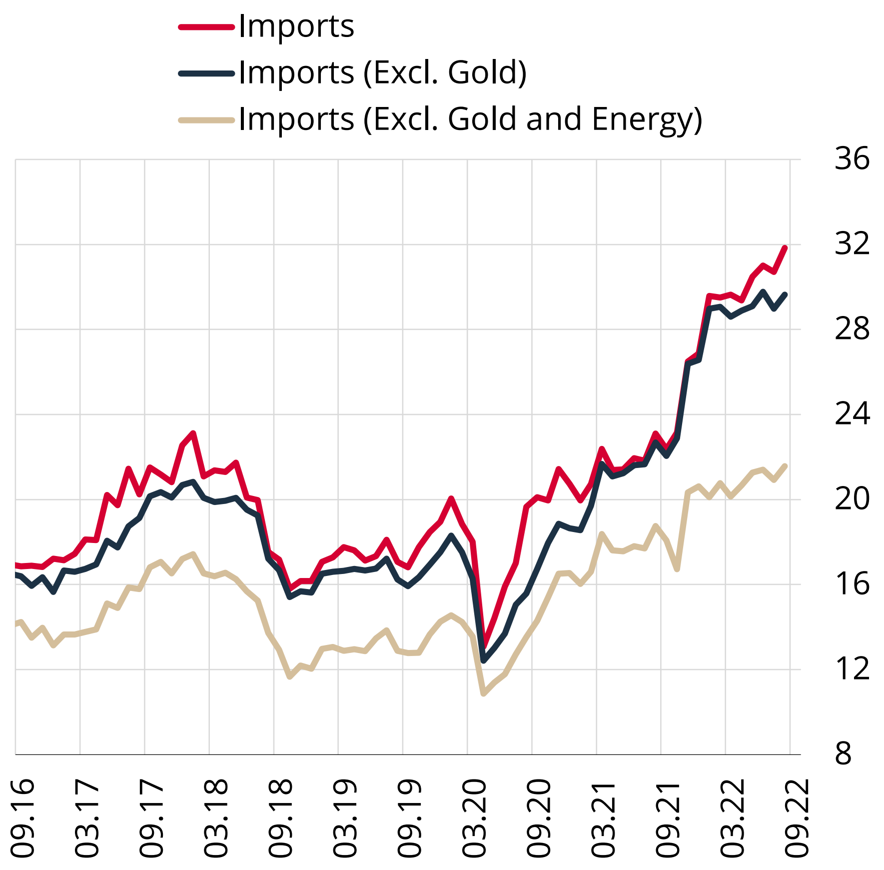
Exports* (Seasonally and Calendar Adjusted, Billion USD)



Source: CBRT, Ministry of Trade, TURKSTAT Last Observation: September 2022

* Provisional data for September.

Imports* (Seasonally and Calendar Adjusted, Billion USD)



Source: CBRT, Ministry of Trade, TURKSTAT Last Observation: September 2022

* Provisional data for September.

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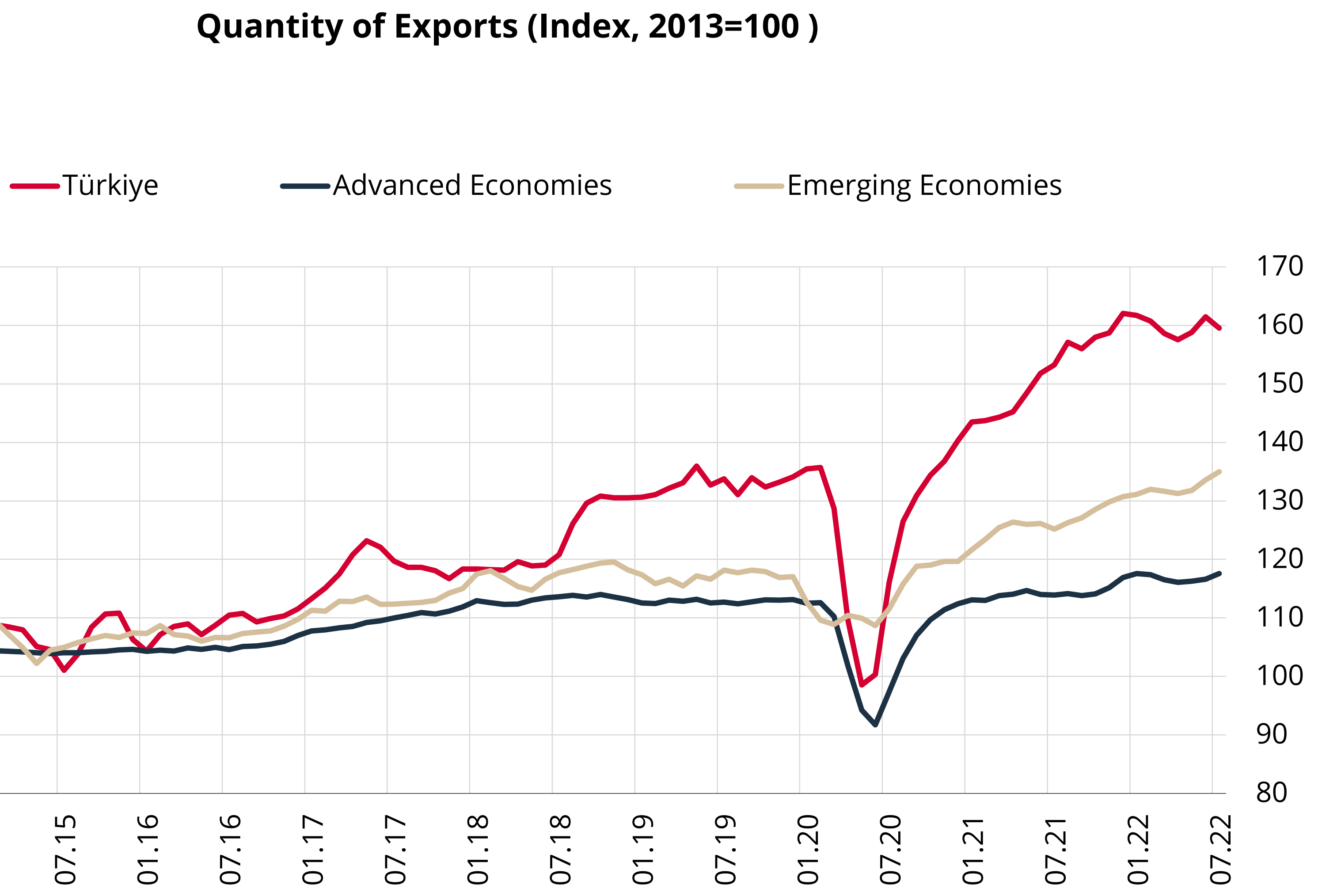
Quantity of Exports

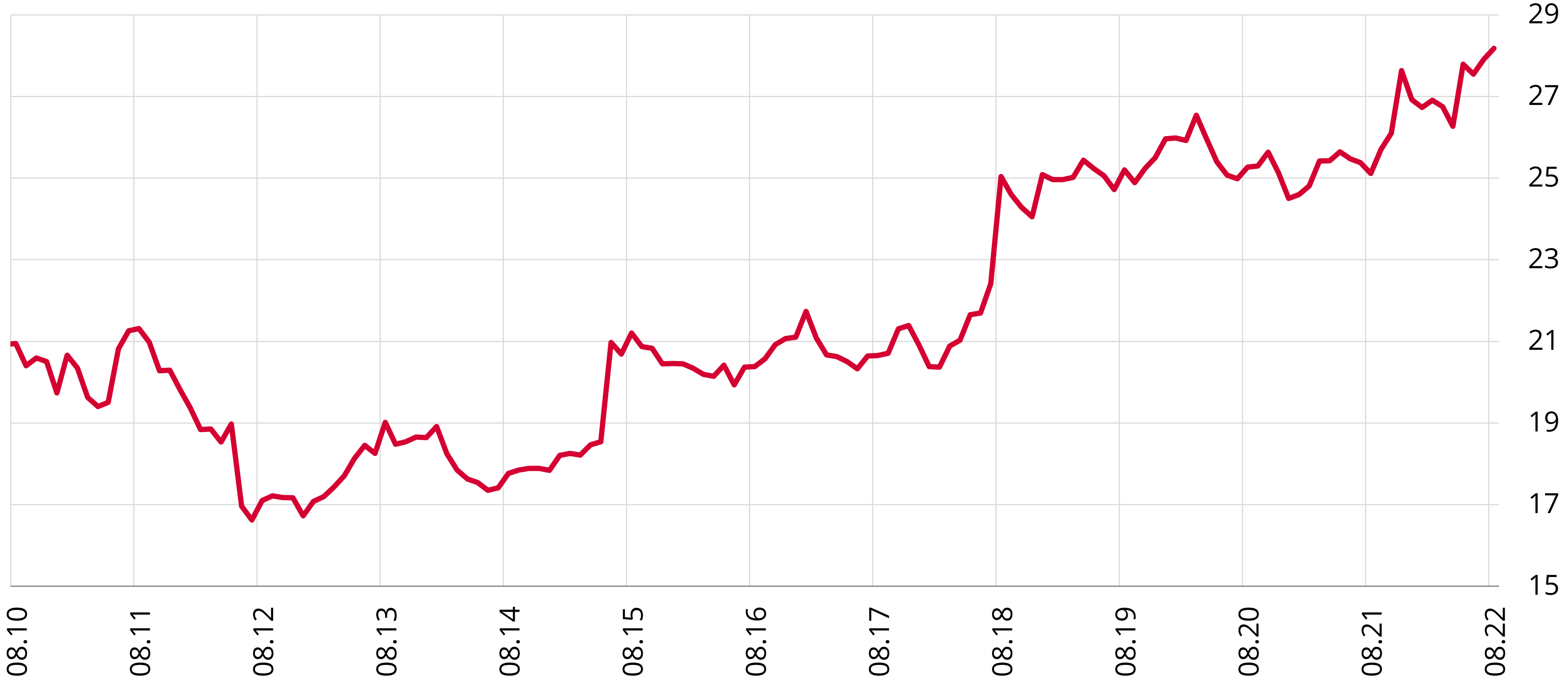


Source: CBRT, CPB

Last Observation: July 2022

Investment and Export Loans

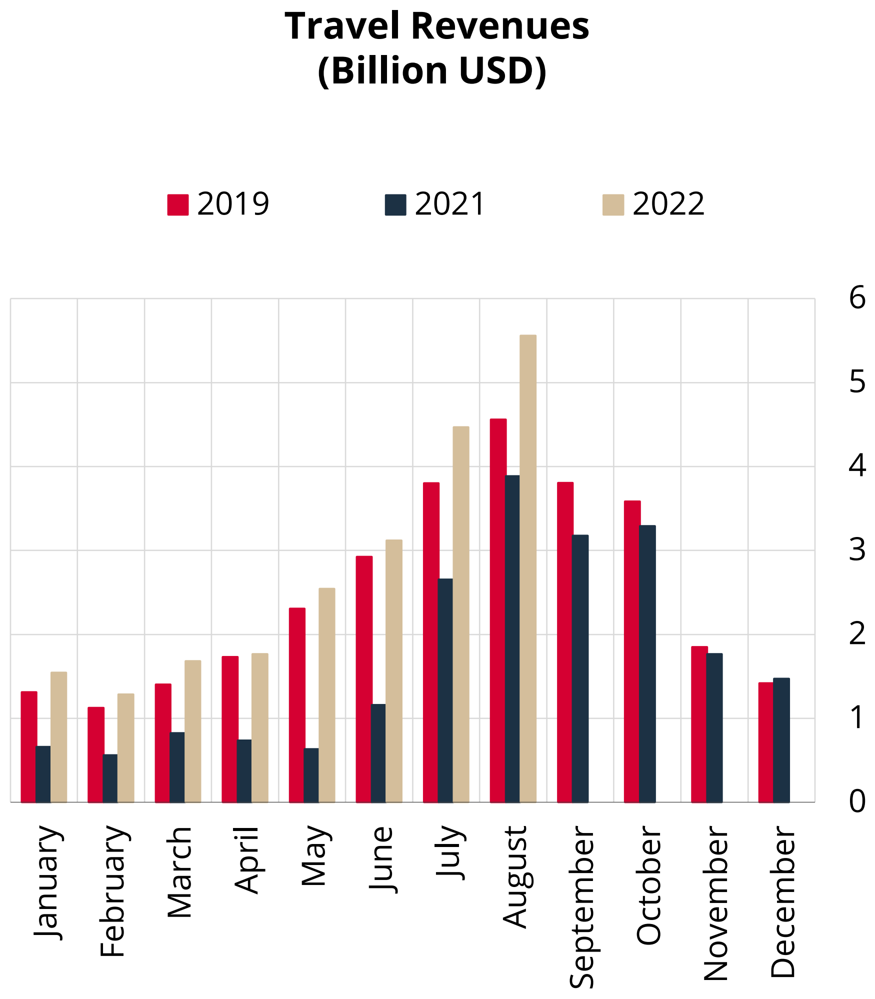
Ratio of Investment and Export Loans to Commercial Loans (%)



Source: BRSA, CBRT

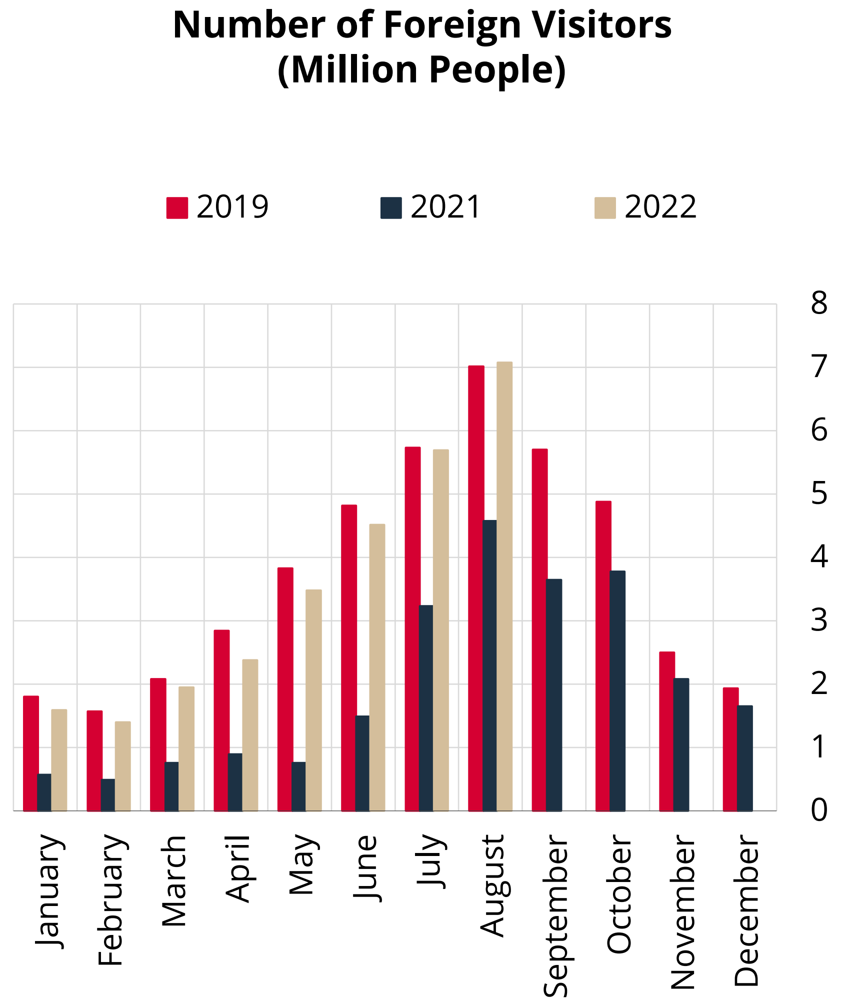
Last Observation : August 2022

Travel Revenues and Number of Foreign Visitors



Source: CBRT, TURKSTAT

Last Observation: August 2022



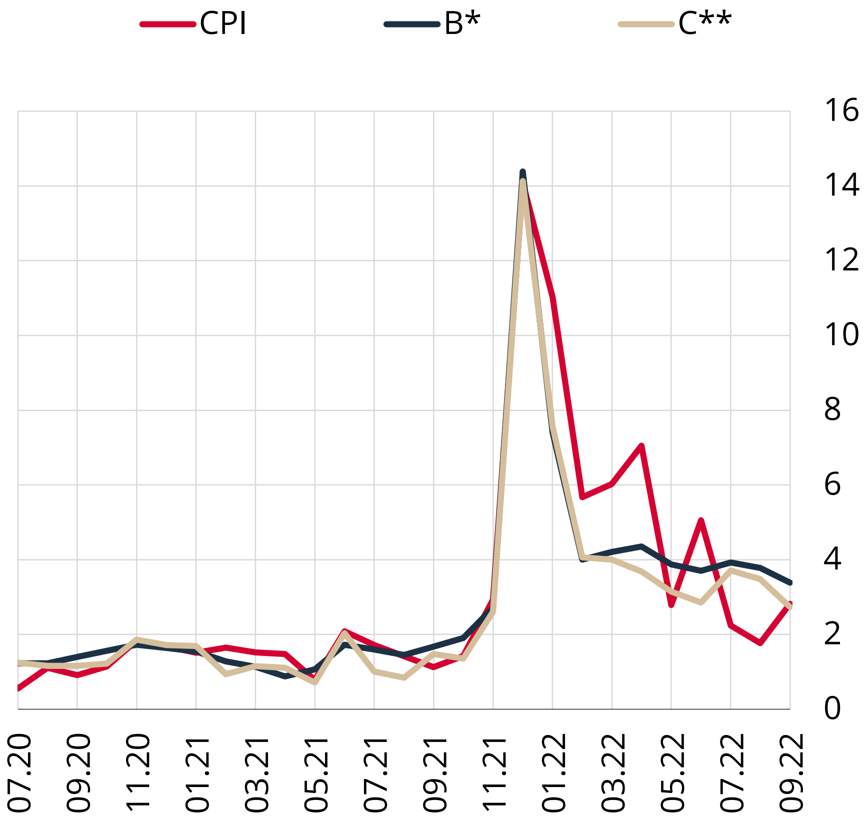
Source: CBRT, TURKSTAT

Last Observation: August 2022

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Inflation

CPI, B* Index and C** Index (Seasonally Adjusted, Monthly % Change)



Source: CBRT, TURKSTAT

Last Observation: September 2022

* CPI excluding unprocessed food, energy, alcohol-tobacco and gold.

** CPI excluding food, non-alcoholic beverages, energy, alcohol-tobacco and gold.

Contributions to Annual Inflation and Shares of Contributions in Annual Inflation (% Points)

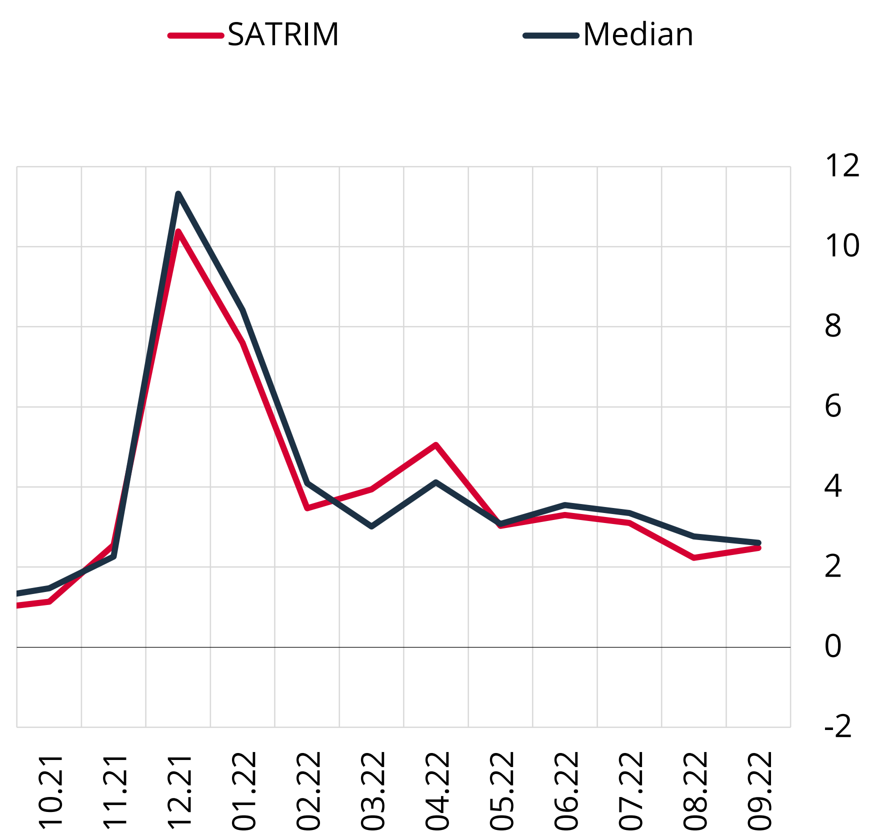
	Contributions to Annual Inflation	Shares of Contributions in Annual Inflation
(I) Food-Alcohol-Tobacco	27.2	32.6
(II) Energy	16.7	20.0
(III) Core Goods	22.4	26.8
I+II+IIII	**66.2**	**79.4**
Services	16.4	19.6
Gold	0.9	1.0
Total	**83.5**	**100**

Source: CBRT, TURKSTAT

Last Observation: September 2022

Alternative Trend Indicators

Core Inflation Indicators SATRIM and Median*
(Seasonally Adjusted, Monthly Change)

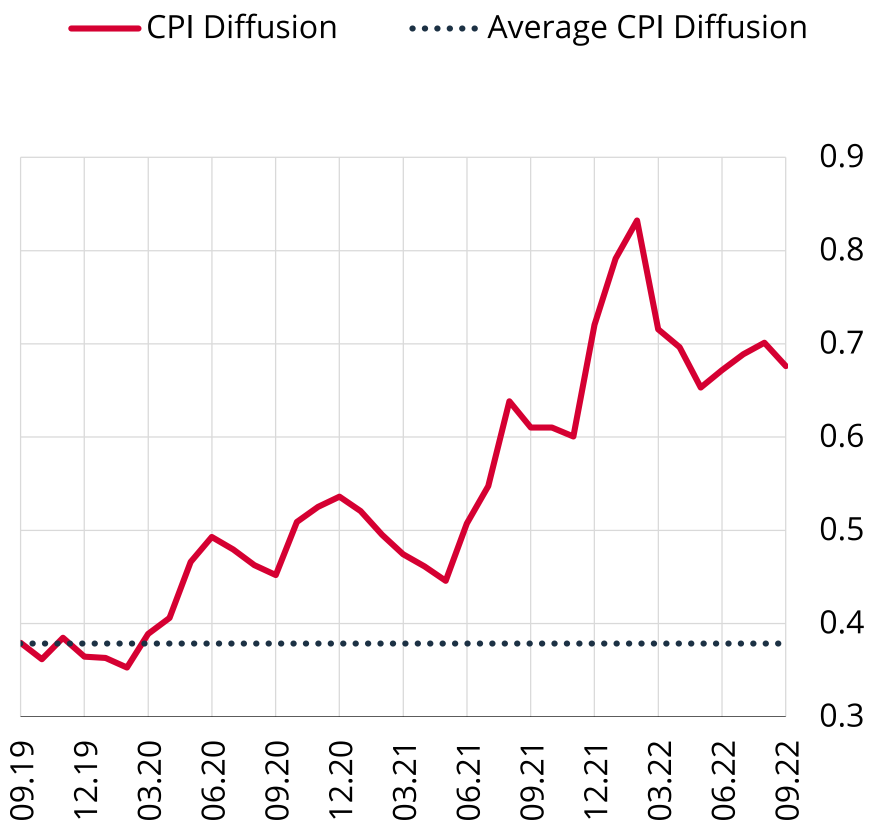


Source: CBRT

Last Observation: September 2022

* SATRIM: Seasonally adjusted trimmed mean inflation. Median: Median monthly inflation of seasonally adjusted 5-digit sub-price indices.

Diffusion Index for CPI*
(Seasonally Adjusted, 3-Month Average)



Source: CBRT

Last Observation: September 2022

* CPI diffusion is calculated as the ratio of the difference between the number of items with an increasing price and the number of items with a decreasing price to the total number of items. Average CPI diffusion is the 2005-2022 average.

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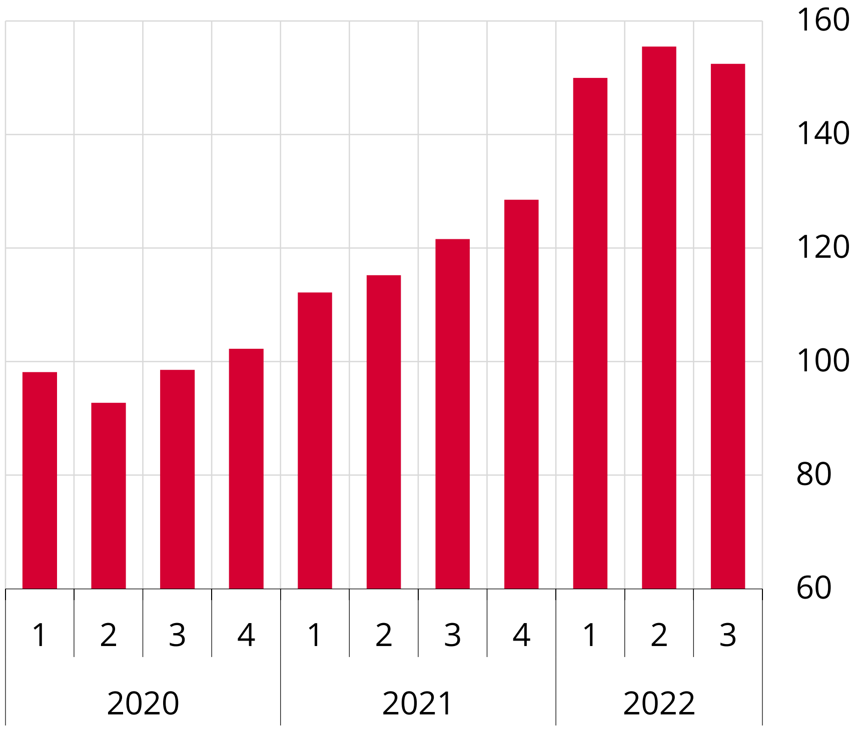
DETERMINANTS OF INFLATION

Import Costs

Import Unit Value Index* (2019Q4=100, USD)

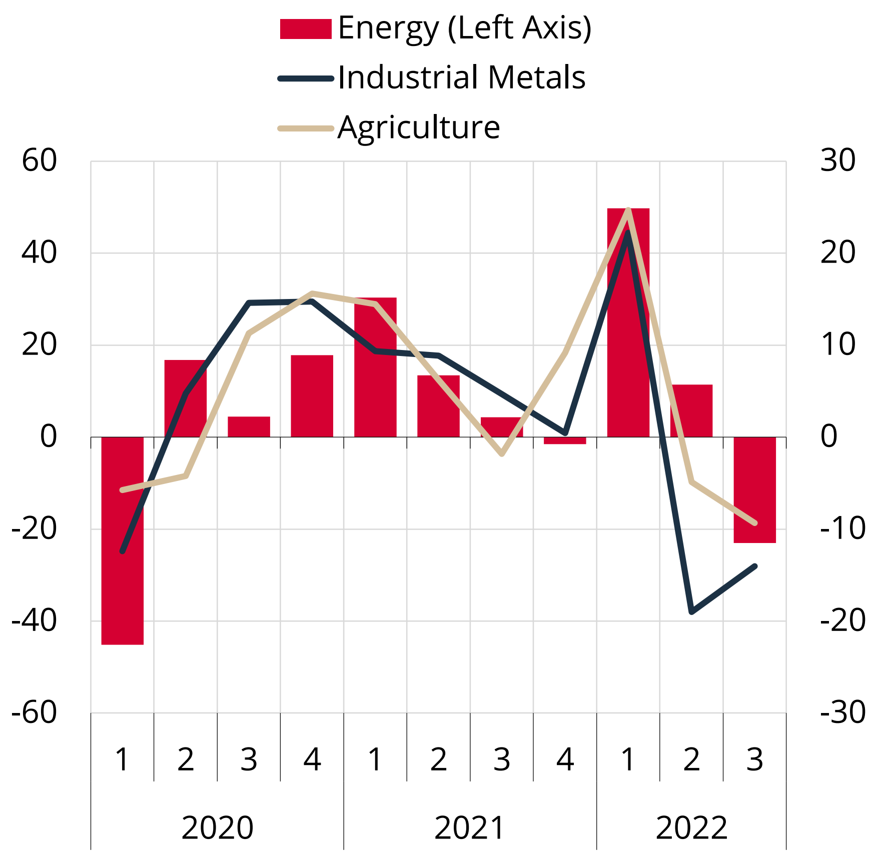


Source: TURKSTAT

Last Observation: August 2022

* The third quarter data is as of August.

Commodity Price Indices (Quarterly % Change)



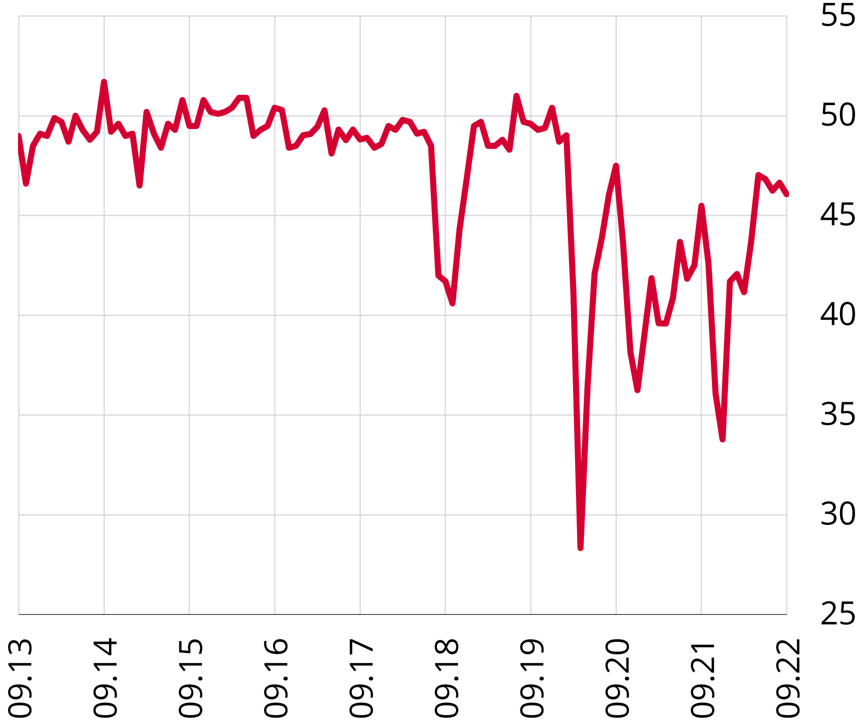
Source: Goldman Sachs

Last Observation: September 2022

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Supply Constraints

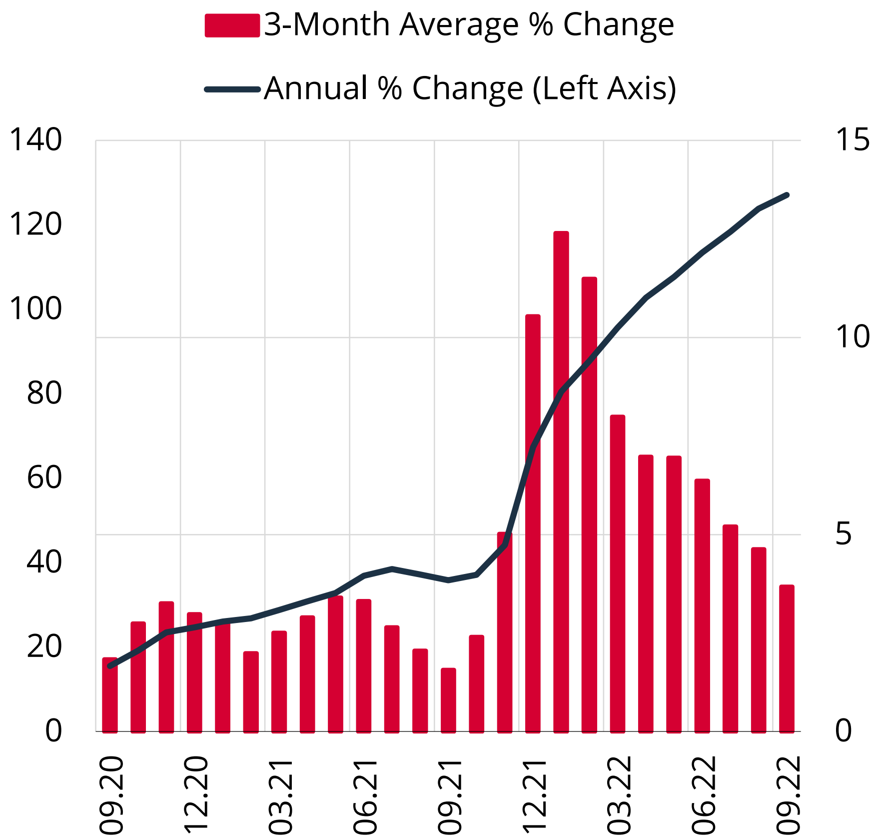
PMI Manufacturing Industry Delivery Times* (Seasonally Adjusted)



Source: S&P Global

Last Observation: September 2022

Manufacturing Prices excl. Petroleum and Base Metals



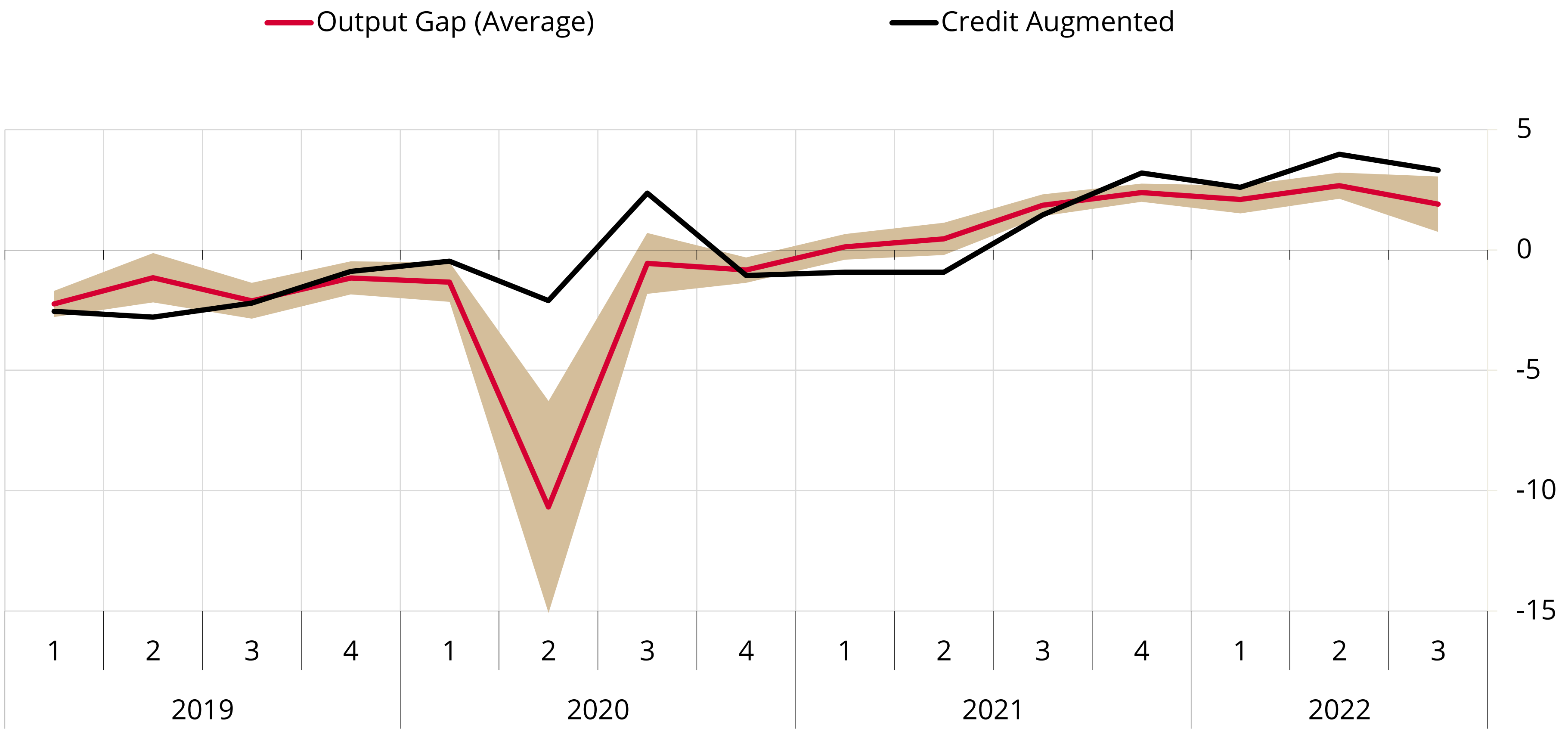
Source: CBRT, TURKSTAT

Last Observation: September 2022

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

Demand Conditions

Output Gap Indicators* (%)



Source: CBRT

Last Observation: 2022Q3

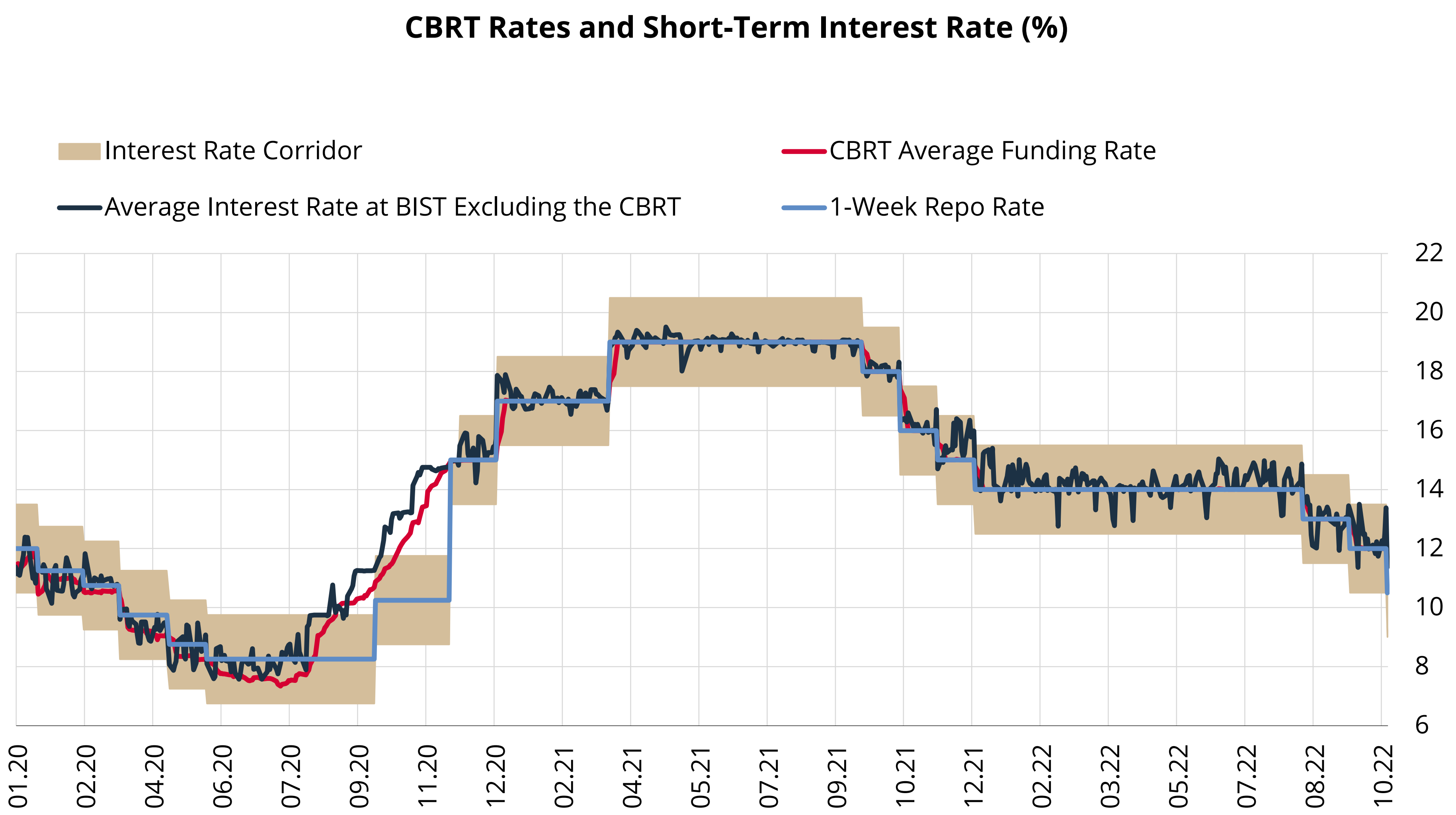
* The shaded area denotes the average of the output gap indicators calculated by 6 different methods with the 95% confidence interval.

TÜRKİYE CUMHURİYET MERKEZ BANKASI

MONETARY POLICY

TÜRKİYE CUMHURİYET MERKEZ BANKASI

CBRT Rates and Short-Term Interest Rate



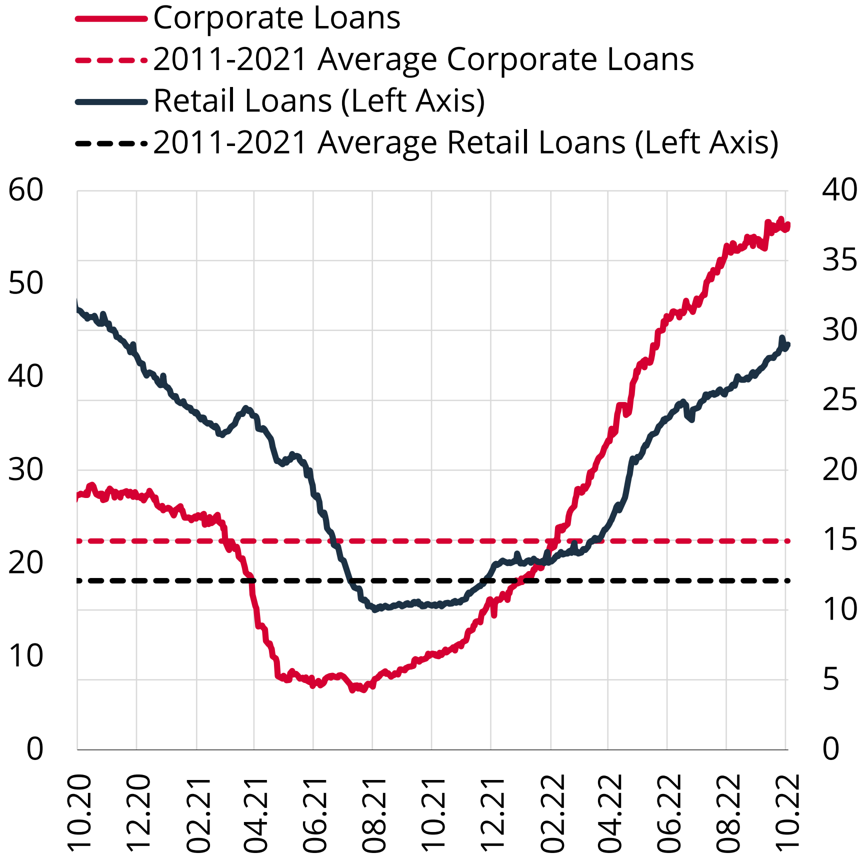
Source: BIST, CBRT

Last Observation: October 21, 2022

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Macroprudential Measures

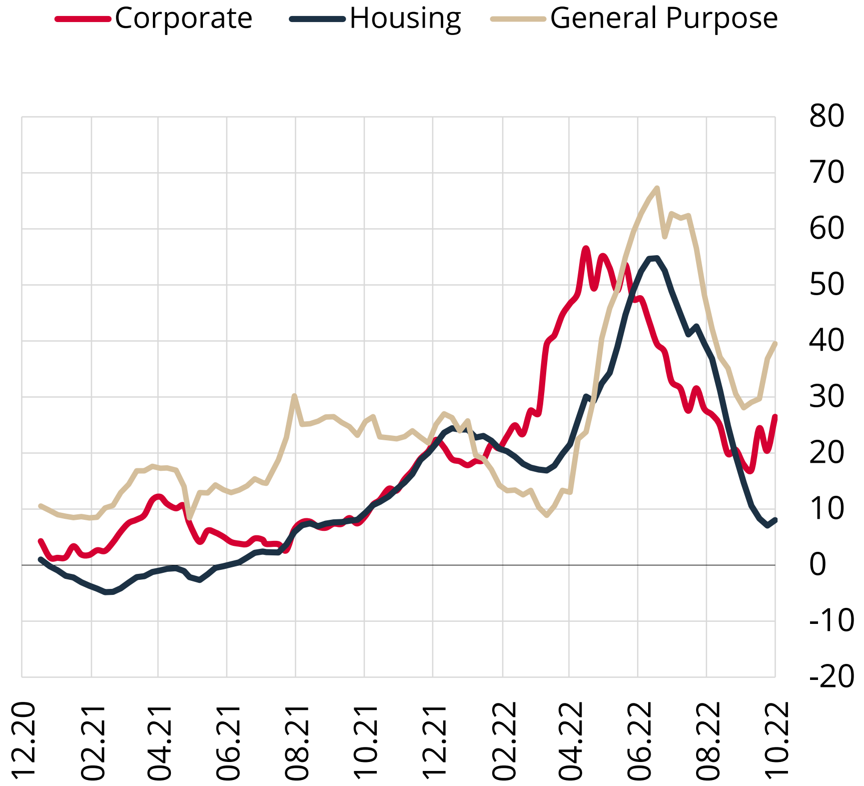
Loan Growth (Annual, FX-Adjusted, %)



Source: CBRT

Last Observation: October 20, 2022

Growth Rates by Loan Type (Annualized 13-Week, FX-Adjusted, %)



Source: CBRT

Last Observation: October 14, 2022

Credits

Credit Developments (FX-Adjusted , Billion TL)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct*	Jan-Oct
Total Credits (2022)	**57**	**135**	**211**	**187**	**171**	**188**	**84**	**149**	**165**	**46**	**1,392**
Total Credits (2021)	**1**	**28**	**64**	**2**	**8**	**48**	**3**	**29**	**77**	**29**	**289**
Total Corporate(2022)	**52**	**121**	**180**	**156**	**100**	**128**	**59**	**102**	**123**	**34**	**1,055**
Total Corporate (2021)	**-1**	**20**	**46**	**0**	**5**	**26**	**-9**	**7**	**60**	**22**	**177**
TL Corporate (2022)	53	108	177	161	151	170	79	153	163	68	**1,282**
TL Corporate (2021)	-10	18	31	4	3	29	-10	38	34	24	**161**
Large Firms (2022)	43	84	66	74	89	92	47	81	81	38	**695**
Large Firms (2021)	-6	10	20	4	4	16	-6	24	17	15	**98**
SMEs (2022)	10	25	111	87	62	78	31	71	82	30	**588**
SMEs (2021)	-4	8	11	0	-1	13	-4	14	16	9	**62**

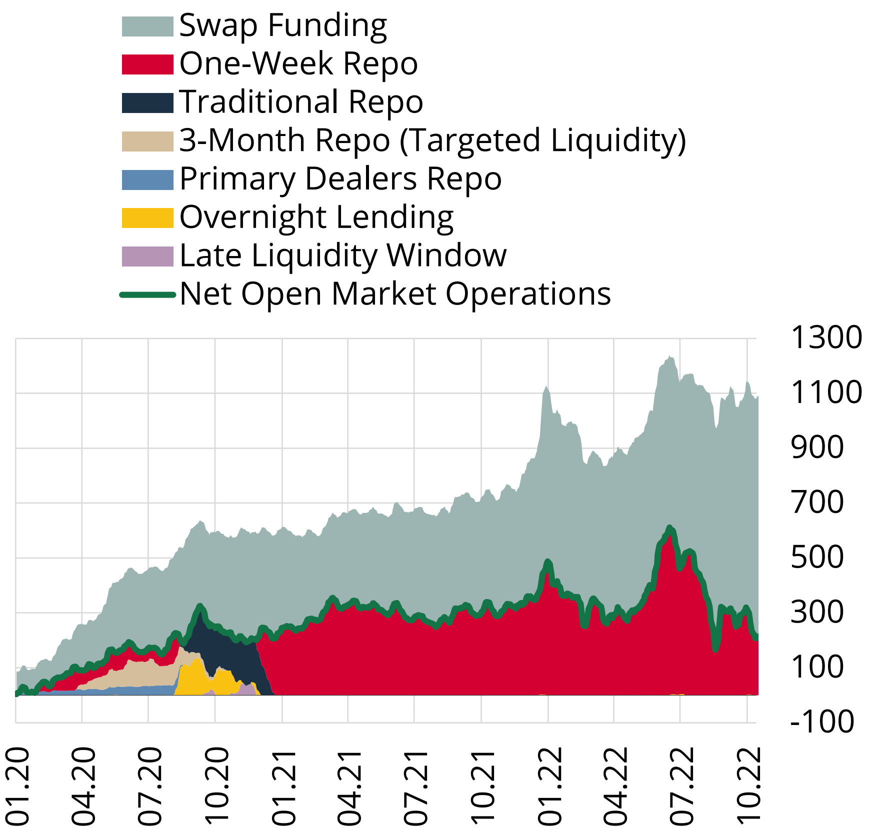
Source: CBRT

Last Observation: October 19, 2022

* Denotes the change between September 30-October 19, 2022.

Open Market Operations and Bond Rates

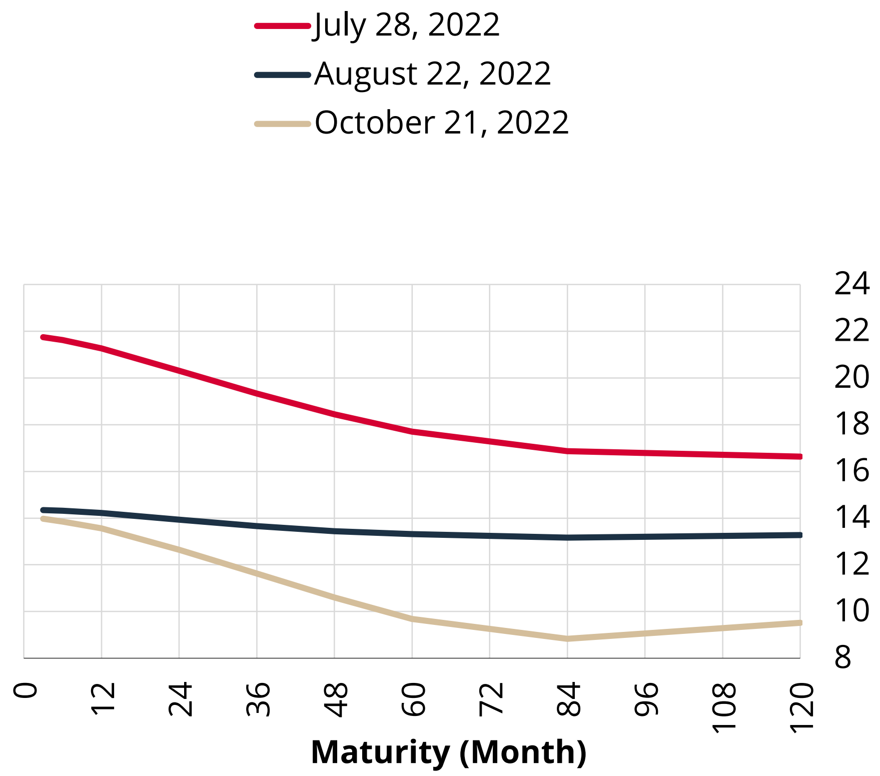
CBRT Open Market Operations and Swap Transactions (1-Week Moving Average, Billion TL)



Source: CBRT

Last Observation: October 21, 2022

Yield Curve (%)

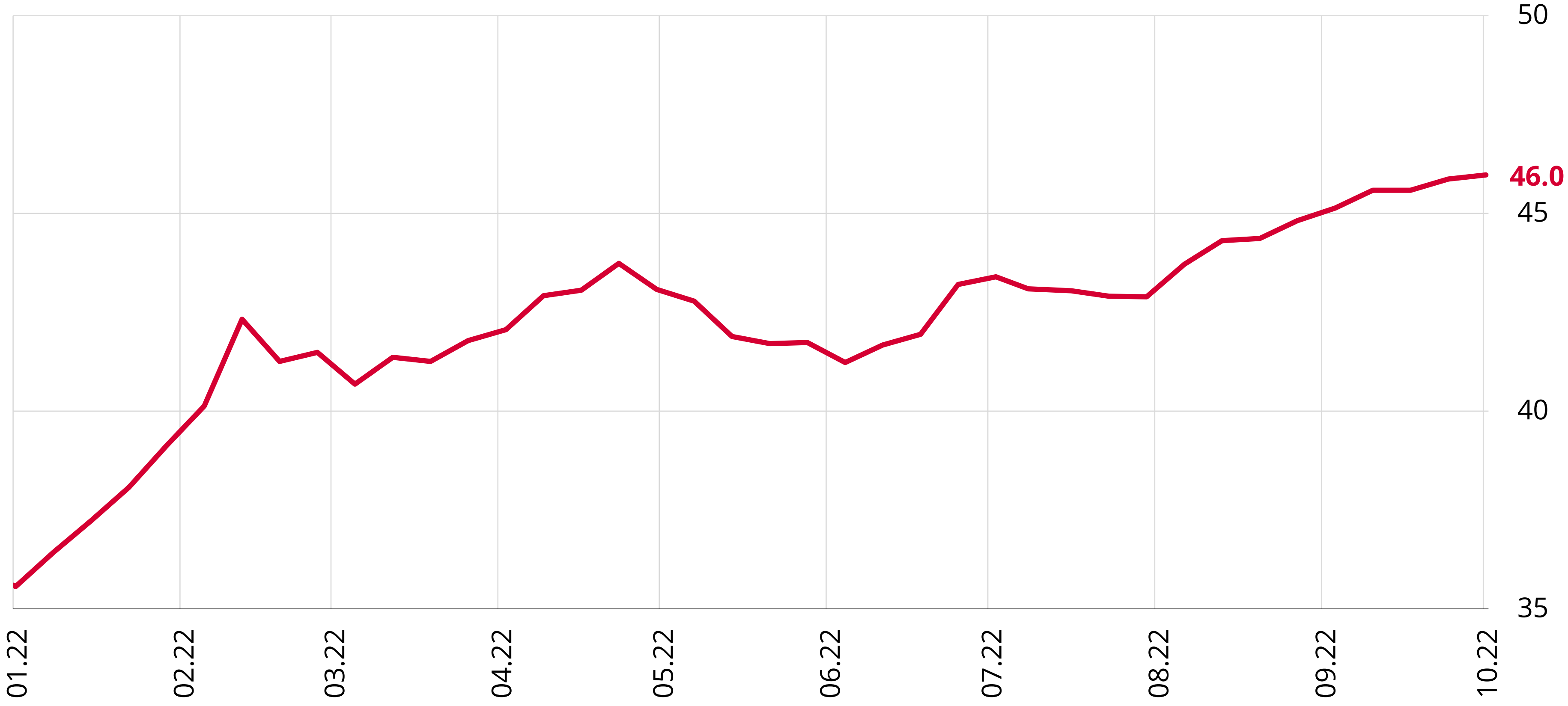


Source: Bloomberg

Last Observation: October 21, 2022

Liraization of Deposits

Total TL Deposit Ratio* (%)



Source: BRSA, CBRT

Last Observation: October 7, 2022

* FX deposits of non-residents are not included in the calculation of TL deposit ratio. In addition, deposits in official institutions, institutions within the scope of the Public Treasurer's regulation, domestic banks, CBRT, Treasury and banks established by international agreement in Turkey are excluded.

MEDIUM-TERM PROJECTIONS

Revisions to Main Assumptions

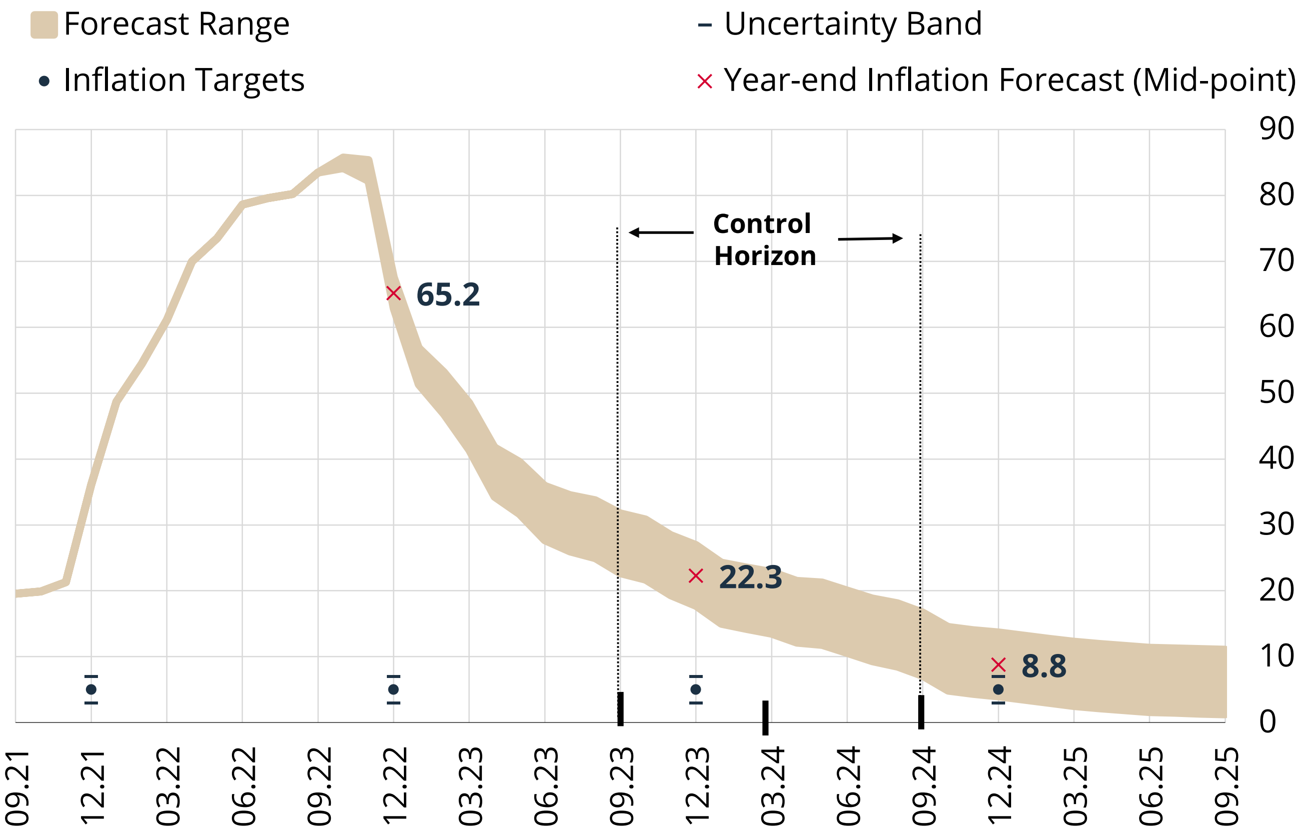
		July 2022	October 2022
Export-Weighted Global Production Index (Average Annual % Change)	2022	2.6	3.0
	2023	2.5	1.8
Oil Prices (Average, USD)	2022	99.6	100.5
	2023	73.7	79.3
Import Prices (USD, Average Annual % Change)	2022	23.3	25.2
	2023	-8.4	-9.2
Energy Prices (Year-end % Change)	2022	87.2	101.4
	2023	22.0	23.2
Food Prices (Year-end % Change)	2022	71.3	75.0
	2023	25.7	22.0

Inflation Outlook

Inflation Forecasts* (%)

Accordingly, inflation is expected to be

- Between 62.8% and 67.6% (with a mid-point of 65.2%) at end-2022
- Between 17.7% and 26.9% (with a mid-point of 22.3%) at end-2023 with 70% probability.



Source: CBRT, TURKSTAT

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

TÜRKİYE CUMHURİYET MERKEZ BANKASI

Inflation Outlook

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

	2022	2023
2022-III (July 2022) Forecast (%)	60.4	19.2
2022-IV (October 2022) Forecast (%)	65.2	22.3
Forecast Revision as Compared to 2022-III Period	+4.8	+3.1
Sources of Forecast Revisions (% Point)		
TL-Denominated Import Prices (Including Exchange Rate, Oil and Import Prices)	+2.2	+1.1
Food Prices	+0.9	-0.9
Administered Prices	+0.6	-
Output Gap	+0.2	-
Deviation from the Inflation Forecast	+0.9	+2.9

Source: CBRT

OVERVIEW

Overview

- The monetary policy framework, which would suit the needs and conditions of our country, was gradually built, by reviewing all policy instruments.
- In order to reduce inflation, instead of implementing contractionary aggregate demand policies that harm investment and export capacity, policies are implemented to support production in line with the targeted loan policy.
- Supply and current account surplus capacity are expanded by creating favorable financing conditions with interest and targeted loan decisions.
- Thanks to the strong policies, which include tools that have been developed and offered as well as efforts for the targeted and efficient use of loans, the Turkish lira has positively diverged as one of the stable currencies in the recent period.
- The share of Turkish lira deposits is increasing. This contributes to stability of exchange rates and to the control of inflation.
- It will be ensured that expectations and exchange rate stability support the decline in inflation through effective policy tools created within an integrated framework.

Overview

- It is considered that the decline in inflation to provide permanent price stability depends on two prerequisites.
- The first is to reach the capacity to have a permanent current account surplus.
- The second is to ensure the dominance of the Turkish lira in the balance sheets of households, companies and banks.
- Since the previous reporting period, the effectiveness of monetary transmission has been increased and the prudent stance on loans has been strengthened.
- Despite global challenges, a program is implemented with patience and determination to reduce inflation by working in harmony and coordination with all the stakeholders.

TÜRKİYE CUMHURİYET
MERKEZ BANKASI

BRIEFING ON 2022-IV INFLATION REPORT

Prof. Şahap Kavcıoğlu
Governor

October 27, 2022

Ankara