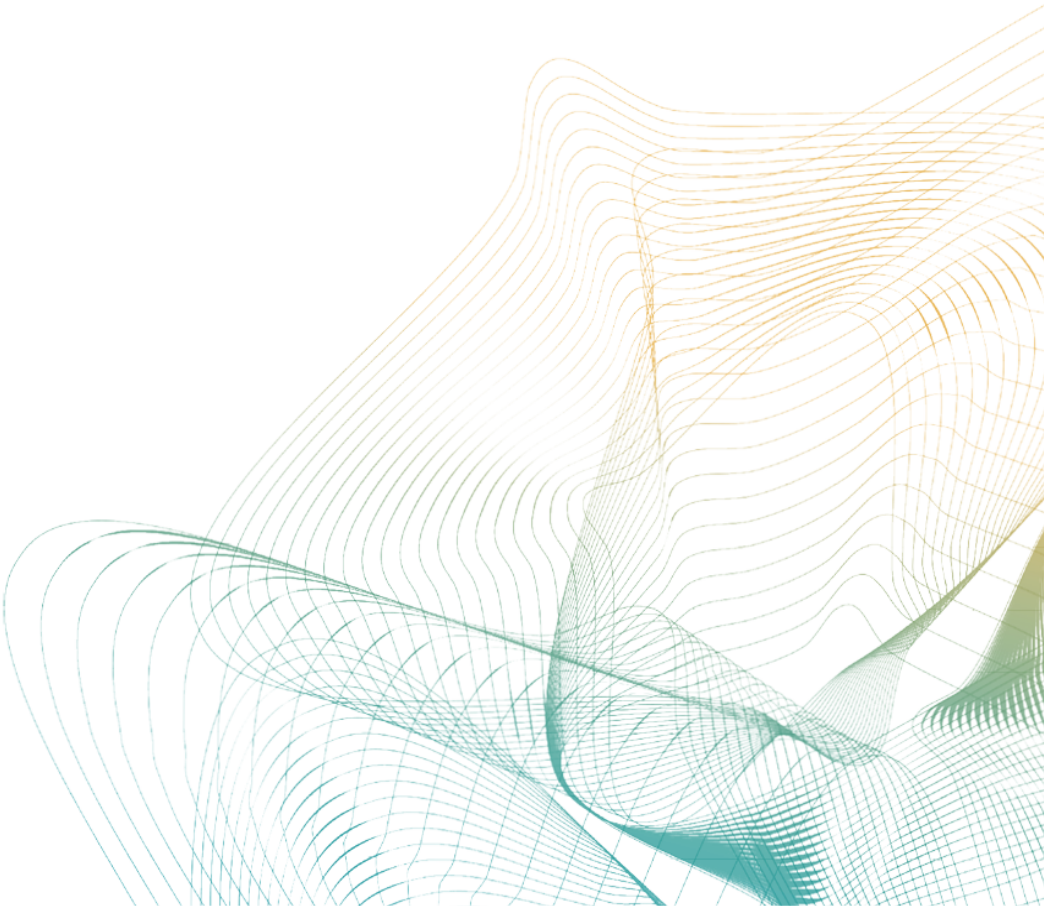
TÜRKİYE CUMHURİYET MERKEZ BANKASI

Inflation Report

2020-III



Contents

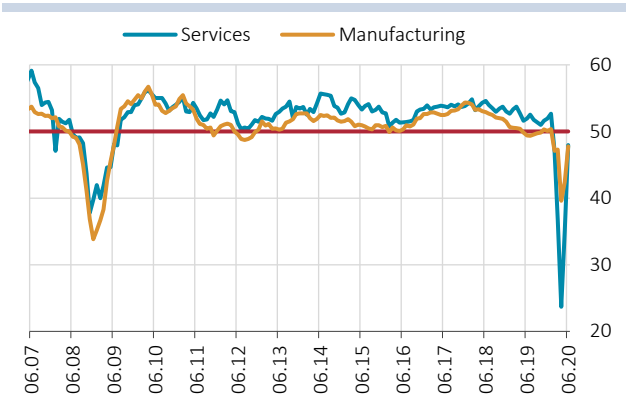
1.	OVERVIEW	1
1.1	Inflation and the Monetary Policy Outlook	4
1.2	Key Risks to Inflation Forecasts and the Likely Monetary Policy Response	6
2.	INTERNATIONAL ECONOMIC DEVELOPMENTS	9
2.1	Global Growth	9
2.2	Commodity Prices and Global Inflation	12
2.3	Global Monetary Policy	13
2.4	Global Risk Indicators and Portfolio Flows	14
3.	INFLATION DEVELOPMENTS	19
3.1	Core Inflation Outlook	19
3.2	Food, Energy and Alcohol-Tobacco Prices	22
3.3	Domestic Producer Prices	23
3.4	Agricultural Producer Prices	25
3.5	Expectations	25
4.	SUPPLY AND DEMAND DEVELOPMENTS	29
4.1	Supply Developments	29
4.2	Demand Developments	30
4.3	Labor Market	31
4.4	Wages and Productivity	32
4.5	Output Gap	34
5.	FINANCIAL CONDITIONS AND MONETARY POLICY	43
5.1	Financial Markets and Monetary Policy	43
5.2	Credit Conditions	46
6.	PUBLIC FINANCE	53
6.1	Budget Developments	53
6.2	Developments in the Public Debt Stock	55
7.	MEDIUM-TERM PROJECTIONS	57
7.1	Current State, Short-Term Outlook and Assumptions	57
7.2	Medium-Term Projections	59
	BOXES	
Box 2.1	Measures during the Pandemic, Public Health and Economic Activity	16
Box 3.1	An Evaluation of Recent Unit Cost Developments	27
Box 4.1	Weekly Economic Conditions Index (WECI)	35
Box 4.2	Survey of the Effects of the Pandemic on the Real Sector	39
Box 5.1	The CBRT's Bond Purchases in Response to The Pandemic	49
Box 7.1	Pandemic-Driven Supply and Demand Shocks and Their Impact on Potential Output and Output Gap	67

1. Overview

In the second quarter of the year, developments regarding the spread of the coronavirus (Covid-19) further deepened the weakening of global growth that started in the first quarter. Global economic activity has shown signs of partial recovery in the third quarter due to the easing of measures to contain the pandemic and the gradual normalization steps. Indeed, PMI data registered a rapid improvement and converged to the critical level of 50 in June, following the start of normalization in many countries as of May and early June (Chart 1.1). While the recovery in global growth is expected to continue in the second half of the year, uncertainties surrounding recovery remain high.

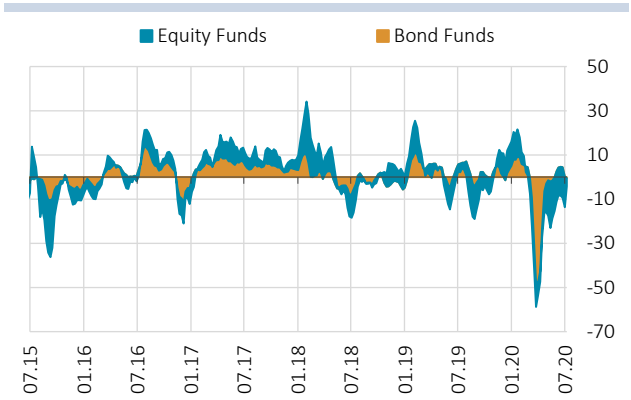
Despite rising food prices during the pandemic, headline inflation in advanced and emerging economies decreased in the second quarter on the back of the weakened global growth outlook and declining crude oil prices. Notwithstanding the supply-side effects driven by the pandemic, demand-induced downward pressure on global core inflation is expected to continue.

Chart 1.1: Global PMI (Seasonally Adjusted, Level)



Source: IHS Markit.

Chart 1.2: Weekly Portfolio Flows to Emerging Economies (USD Billion, 4-Week Cumulative)

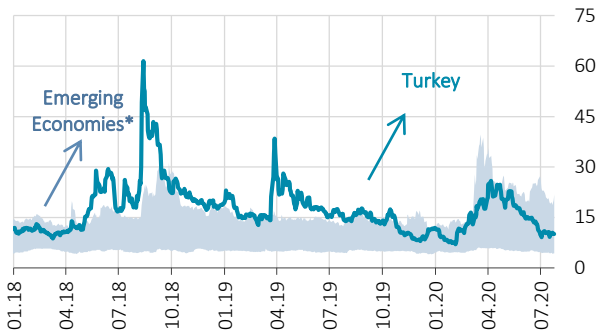


Source: EPFR.

Following the expansionary measures to alleviate the impact of the pandemic on global financial markets and economic activity, policy rates have rapidly converged to the zero lower bound in advanced economies and rate cuts have consequently stopped. Meanwhile, rate cuts have lost pace in emerging economies. These countries continued to register large amounts of portfolio outflows in the second quarter, albeit at a decelerated rate compared to the first quarter (Chart 1.2). Due to measures introduced by the central banks of advanced economies and the post-pandemic normalization phase, portfolio flows followed a relatively more positive course in July. On the back of continued expansionary monetary and fiscal policy steps, capital flows to emerging economies are expected to post some recovery in the second half of 2020.

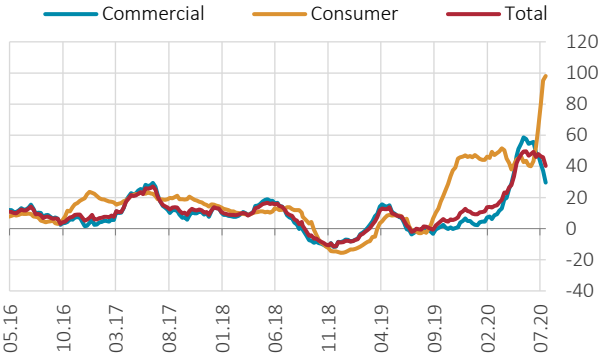
The pressure on the currencies of emerging economies has somewhat eased due to the increase in global risk appetite while the normalization steps have partially alleviated the negative effects of global developments on Turkey's risk premium and exchange rate volatility (Chart 1.3). In the period prior to the onset of the pandemic, financial conditions improved noticeably owing to the disinflation process and the rate cuts, and credit growth started to increase in the third quarter of 2019 (Chart 1.4). In the post-pandemic period, credit growth has further accelerated on the back of monetary and fiscal measures introduced to maintain the healthy functioning of the credit channel and firms' cash flows. The growth in commercial loans remains strong though it has somewhat lost pace recently. On the other hand, the growth rate of consumer loans significantly increased in the period after June due to the credit packages offered by state banks for housing and vehicle loans.

Chart 1.3: Implied FX Volatility (1-Month)



Source: Bloomberg.
* Emerging economies include Brazil, Indonesia, the Philippines, South Africa, Colombia, Hungary, Malaysia, Mexico, Poland, Romania and Chile.

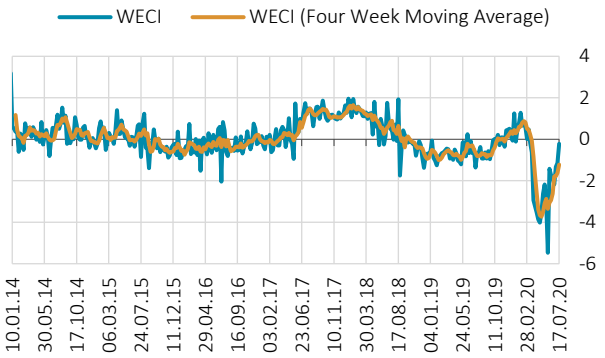
Chart 1.4: Loan Growth (13-Week Annualized Moving Average, Adjusted for Exchange Rates, %)



Source: CBRT.

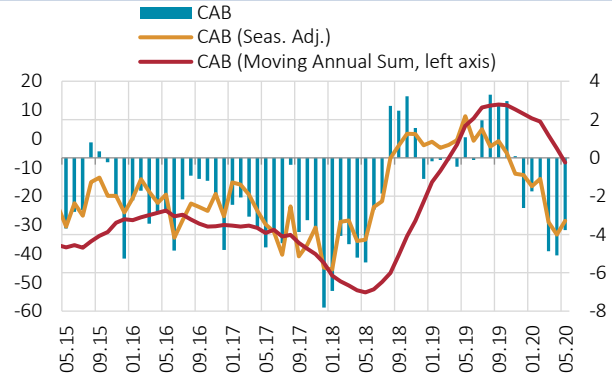
The pandemic-led weakening of economic activity that started in the second half of March became more pronounced in April. Recovery in economic activity started in May following the gradual steps towards normalization, and gained pace in June and July (Chart 1.5). May figures and provisional foreign trade data for June indicate that the foreign trade volume, most visibly exports, posted a recovery and the foreign trade deficit started to decline following the gradual easing of measures in Turkey and abroad. The easing of travel restrictions is expected to contribute to a partial improvement in tourism revenues in the period ahead. The recovery in exports of goods and low levels of commodity prices will support the current account balance in the upcoming period (Chart 1.6). Due to the impact of the pandemic on activity, unemployment rates rose while the sharp decline in the participation rate limited this rise. Leading indicators and high-frequency data suggest that the labor market remains weak despite the positive impact of the measures and the recent recovery in economic activity.

Chart 1.5: Weekly Economic Conditions Index (WECI)[1]



Source: CBRT.

Chart 1.6: Current Account Balance (CAB) (USD Billion)

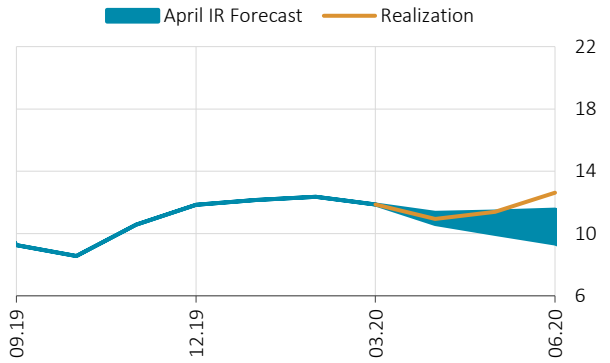


Source: CBRT.

In the second quarter of 2020, consumer inflation increased by 0.76 points to 12.62% and stood above the upper bound of the forecast range in the April Inflation Report (Chart 1.7). In the same period, annual inflation of the B index, one of the core inflation indicators, was also higher than projected (Chart 1.8). Core goods and food constituted the main groups, in the respective order, that contributed to the increase in inflation compared to the first quarter. In this period, the pandemic-related rise in unit costs, cumulative exchange rate developments, the recovery in international oil prices, and the increasing food prices driven by seasonal and pandemic-related factors were influential in the rise in consumer inflation. Against this background, annual inflation and the trends of core indicators increased.

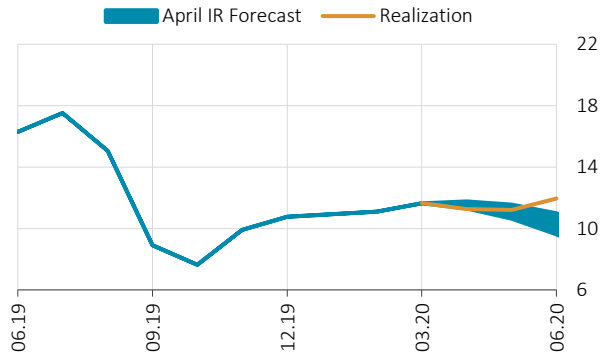
[1] A detailed explanation of the index is provided in Box 4.1.

Chart 1.7: April Inflation Forecast and Actual Inflation* (%)



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

Chart 1.8: April Forecast and Actual Rates for Inflation Excl. Unprocessed Food, Energy, Alcohol-Tobacco and Gold (B Index)* (%)

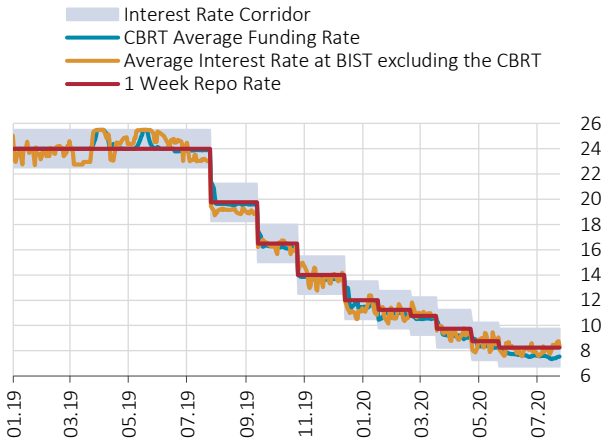


Sources: CBRT, TURKSTAT.
* Shaded area denotes the 70% confidence interval for the forecast.

Compared with the April Inflation Report projections, the effect of supply-side factors on inflation was somewhat stronger. This was mainly due to supply chain disruptions as well as capacity constraints imposed in certain sectors under gradual normalization. Leading indicators for July suggest a deceleration in monthly price increases in the said services items. As the normalization continues, supply-side factors, which have prevailed recently due to pandemic-related restrictions, will phase out. Accordingly, demand-driven disinflationary effects will become more prevalent in the second half of the year.

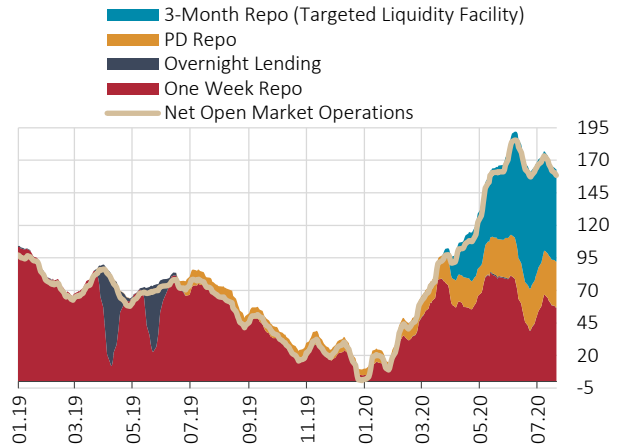
Based on the assessment that aggregate demand conditions, which weakened due to the pandemic, had an increased disinflationary effect, 250 basis points of policy rate cuts were delivered in March, April and May in total. In view of all factors affecting the inflation outlook, the policy rate was kept constant at 8.25% in June and July (Chart 1.9). In the current reporting period, a significant portion of the funding need of the system was met via the TL currency swap transactions at the CBRT and the BIST. Meanwhile, due to new facilities taking effect after the pandemic, the composition of the funding provided through open market operations (OMO) changed. Accordingly, the proportions of OMO funding taken up by three-month repo auctions under the targeted additional liquidity facilities and by funding provided to primary dealer banks both increased (Chart 1.10).

Chart 1.9: CBRT Rates and Short-Term Rates (%)



Sources: BIST, CBRT.

Chart 1.10: CBRT Open Market Operations (2-week Moving Average, TRY Billion)



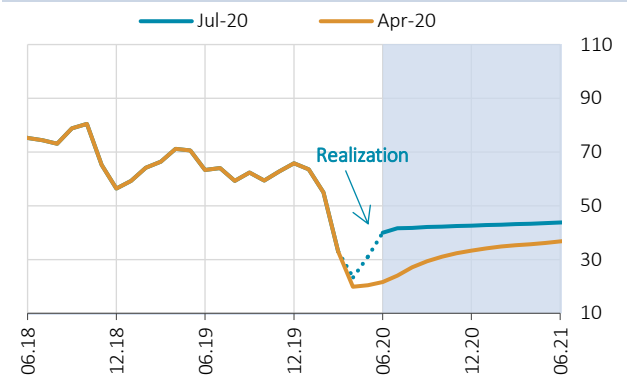
Source: CBRT.

1.1 Inflation and the Monetary Policy Outlook

Main Assumptions Regarding Exogenous Variables

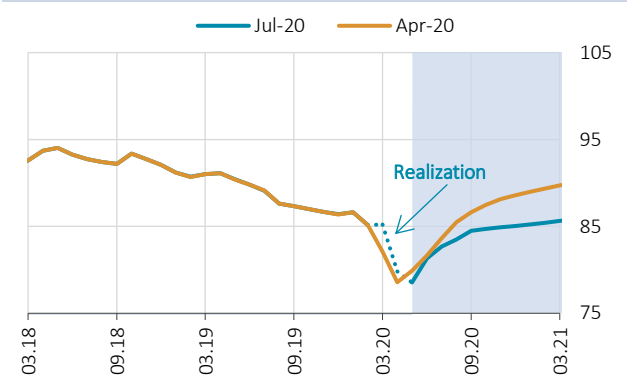
Medium-term projections are based on the macroeconomic background summarized above, as well as on the assumptions for exogenous factors such as import prices, food prices and fiscal policy. Accordingly, on the back of the agreement between OPEC+ countries over oil production cuts and the partial recovery in global demand outlook, the crude oil price assumption of the April Inflation Report was revised upwards from USD 32.6 to USD 41.6 on average for 2020, and from USD 36.8 to USD 43.8 for 2021 (Chart 1.1.1). On the other hand, the assumptions for USD-denominated import prices for 2020 and 2021 were revised downwards due to the weak course of other non-oil commodity prices such as aluminum and agricultural commodities (Chart 1.1.2). Additionally, the food inflation forecast, which was set at 9.5% for 2020 in the April Inflation Report, was revised upwards to 10.5% in view of the recent trends in unprocessed food prices. The food inflation forecast for 2021 was also revised to 8% from 7%. Medium-term projections are based on an outlook where the fiscal policy actions along with other monetary and financial measures will support the potential output of the economy during the pandemic and contribute to the recovery in the post-pandemic period. Moreover, it is assumed that adjustments in administered prices and taxes will be set broadly in line with the disinflation path.

Chart 1.1.1: Revisions to Oil Price Assumptions* (USD/bbl)



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

Chart 1.1.2: Revisions to Import Price Assumptions* (Index, 2010=100)

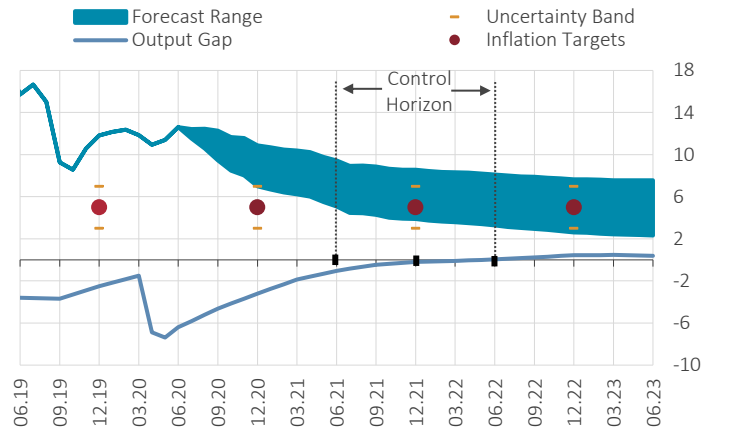


Sources: CBRT, TURKSTAT.
* Shaded area denotes the forecast period.

Medium Term Projections

Under the current monetary policy stance and strong policy coordination, inflation is projected to converge gradually to the targets. Accordingly, inflation is projected to be 8.9% at the end of 2020 and fall to 6.2% at the end of 2021, before stabilizing around 5% over the medium term. With a 70% probability, inflation is expected to be between 6.9% and 10.9% (with a mid-point of 8.9%) at end-2020 and between 3.9% and 8.5% (with a mid-point of 6.2%) at end-2021 (Chart 1.1.3).

Chart 1.1.3: Inflation and Output Gap Forecasts*



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

In the inter-reporting period, inflation rose and materialized above the forecast range on the back of the increase in unit costs driven by the pandemic despite weak aggregate demand conditions. Turkish lira import prices were slightly higher than expected mostly due to recovering oil prices, while food inflation surged due to seasonal and pandemic-related effects. In addition to ongoing capacity constraints in some sectors throughout the gradual normalization, the stronger credit impulse caused the disinflationary effect of aggregate demand conditions to become relatively limited compared to the projections in the April Inflation Report. Thus, supply and demand-side factors led to an upward revision in output gap forecasts from the second quarter of 2020 onwards. Supply-side factors, which prevailed due to pandemic-related restrictions in the short run, are expected to phase out as normalization continues, and demand-driven disinflationary effects may become more prevalent in the second half of the year, as suggested by negative output gap forecasts. Nevertheless, in light of recent inflation figures and all factors affecting the inflation outlook, inflation forecasts for end-2020 and end-2021 are revised upward.

The inflation forecast for end-2020 was revised upward by 1.5 points from 7.4% to 8.9%. Upward revisions to the assumption of oil prices for the rest of the year due to rising international oil prices brought the consumer inflation forecast up by 0.5 points compared to the previous Report, and the increase in the food inflation forecast for end-2020 pushed the inflation forecast up by 0.2 points. The upward revision in the output gap, as a result of capacity constraints easing at a slower-than-expected pace with normalization being gradual and the accelerating credit growth, brought the inflation forecast up by 0.3 points.[2] Meanwhile, supply-side factors, which prevailed due to pandemic-related restrictions in the short run, caused unit costs to rise, driving the year-end inflation forecast 0.2 points higher.[3] Moreover, the forecast error for the second quarter and the rise in underlying inflation are judged to add 0.3 points to the year-end inflation forecast.

The inflation forecast for end-2021, on the other hand, was changed from 5.4% to 6.2%. Of this upward revision of 0.8 points from the April Inflation Report, the oil price-driven rise in the assumption for Turkish lira import prices accounted for 0.1 points and the rise in the food inflation assumption from 7% to 8% accounted for 0.2 points. Meanwhile, the upward output gap revision as a result of the stronger-than-envisaged recovery in aggregate demand conditions increased the year-end forecast by 0.2 points. Lastly, the most recent realizations in inflation drove the forecast for underlying inflation up by 0.3 points.

The above-mentioned projections are based on the assumption that there will be no second wave of pandemic that will require another round of restrictions on mobility and that the global economy will continue to recover in the second half of the year. Despite expansionary monetary and fiscal measures in

[2] The impact of pandemic-led capacity constraints on output gap estimations through potential output is discussed in detail in Box 7.1.
[3] Box 3.1 analyzes how the pandemic-driven increase in unit costs affects inflation, with emphasis on unit labor costs.

advanced and emerging economies, the country risk premium is assumed to improve gradually due to the ongoing uncertainty over the effectiveness of such measures and the recovery. Global uncertainties regarding the course of the pandemic and its economic impact significantly elevate the uncertainty associated with the assumptions and forecasts.

Economic activity strengthens as normalization extends to a broader scale. Assuming that there will be no second wave of pandemic, the economy will likely continue to recover in the second half of 2020, but the pace of recovery will depend on the course of normalization both in Turkey and abroad. Within a framework in which the monetary stance will be determined based on indicators for the underlying trend and in a way to ensure that the ongoing disinflation is consistent with the medium-term inflation target, it is expected that supply-side factors, which prevailed due to pandemic-related restrictions in the short run, will phase out as normalization continues and the declining trend in inflation will resume starting from July.

1.2 Key Risks to Inflation Forecasts and the Likely Monetary Policy Response

The outlook underlying the medium-term projections presented in the Inflation Report is based on the Monetary Policy Committee's judgments and assumptions. The major downside and upside macroeconomic risks that may lead to a change in the baseline projections and the associated monetary policy stance are as follows:[4]

- Uncertainties regarding the course of the pandemic and the steps towards normalization;
- Risks to the global growth outlook;
- Uncertainties regarding demand composition, growth and the labor market outlook;
- Risks to credit supply and composition;
- Risks to the course of food prices;
- Risks to inflation expectations and pricing behavior;
- Uncertainties regarding capital flows towards emerging markets and volatilities in country risk premium;
- Volatilities in crude oil and import prices;
- Risks to the coordination between monetary and fiscal policies (fiscal stance, administered prices, wage and tax adjustments);

Measures to counter the pandemic have been eased in many countries and the global economy showed signs of a partial recovery in the third quarter on the back of the steps towards normalization. The current forecasts are based on a framework in which health measures will not be tightened again either in Turkey or abroad, and the recovery in global activity will continue in a gradual manner. However, due to the continued spread of the pandemic primarily in the southern hemisphere and the likelihood of a second wave, uncertainties over global economic recovery remain high. In addition to the uncertainties regarding the course of the pandemic, uncertainties also remain over the effectiveness of economic policies, the magnitude of the effect on supply chains and global trade, the implications of increased indebtedness on the pace of recovery, and how consumption habits and general spending behavior will change. In any case, a prolonged normalization phase could translate into a much weaker global and domestic growth outlook, calling for additional policy measures.

The impact of the pandemic-related developments on domestic growth, particularly on services, exports, tourism and other related sectors, and on the labor market are closely monitored. Effects of the pandemic-driven business closures, capacity constraints and the slowing economic activity on the labor

[4] Evaluations of how and through which channel these risks may affect the inflation forecasts cited in the previous section are summarized in Table 7.2.3. in Chapter 7.

market have become evident since February. Unemployment increased and the labor force participation rate decreased noticeably. Subsidies provided through the unemployment insurance fund and current transfers, short-time work allowance in particular, limit the income loss of households and contribute to preserving employment. The economic recovery is expected to improve employment conditions in the upcoming period. Nevertheless, demand conditions may pull inflation further down due to a weaker economic recovery or a weaker-than-envisaged impact of recovery on the labor market arising from pandemic-related uncertainties.

Unit labor costs increased due to the declines in production and sales driven by measures such as travel restrictions, lockdowns and social isolation. Despite restraining effects of aggregate demand conditions, the rise in unit costs led to an increase in the trends of core inflation indicators. During the normalization process, the impact of unit costs on inflation is expected to weaken as the supply-side capacity constraints will subside. Thus, the demand-driven disinflationary effects will become more prevalent in the second half of the year. However, the difficulty in decomposing the fluctuation in growth into its demand and supply components creates significant levels of uncertainty over the estimation of the output gap. Pricing behavior in sectors sensitive to consumer loans and the course of supply constraints may affect inflation. The fact that year-end and medium-term inflation expectations hover above targets necessitates the close monitoring of the pricing behavior.

The pandemic has taken a significant toll on firms' cash flows and balance sheets as well as household incomes both in Turkey and abroad concurrently and in an unprecedented manner. However, the monetary, financial and fiscal measures introduced, as well as the expansion of loan supply mostly by state-owned banks, make significant contribution to the uninterrupted flow of credit to the real sector and the economic recovery process. Meanwhile, in the recent period, consumer loans in particular have picked up significantly. Although this acceleration has been driven partially by pent-up demand, effects of loan growth and composition on inflation, economic activity, current account deficit and risk premium are monitored closely.

Food prices rose in the second quarter due to seasonal and pandemic-related developments. Although the weak course in tourism is expected to put a cap on the increase of food prices, particularly the recent high course in unprocessed food prices and the developments in wheat prices keep the upside risks to food price forecasts alive. In the meantime, oil prices have posted a recovery thanks to abating conflicts among oil exporting countries regarding the oil output and expectations that the worst on the demand side is over. Still, the downside risks to the prices of crude oil and other commodities remain due to the uncertainties over global economic activity.

Accommodative policy measures and steps towards normalization have driven the risk appetite slightly higher, slowing down portfolio outflows from emerging markets. Following the normalization steps, and thanks to recent monetary and financial measures, the adverse effects of global developments on Turkey's risk premium and exchange rate volatility somewhat eased. However, the ongoing uncertainties over the global economic outlook and effectiveness of policy measures might lead to fluctuations in the global risk appetite and portfolio flows to emerging economies. As uncertainty still reigns, the pandemic disease is closely monitored for its evolving global impact on capital flows, financial conditions, international trade, and commodity prices.

Fiscal policy actions, along with other monetary and financial measures taken during the pandemic, have supported the potential output of the economy by limiting the pandemic-related economic risks and significantly contributed to the start of a recovery in economic activity. Sustaining the coordination between monetary and fiscal policies during the recovery process, and determining the macro policy mix in a way that will ensure the continuation of the disinflation process while supporting the current account balance are crucial for maintaining healthy and stable growth. In the upcoming period, temporary and targeted fiscal and quasi-fiscal policy actions will be critical to support the sectors in which the recovery might take longer due to pandemic-related effects.

2. International Economic Developments

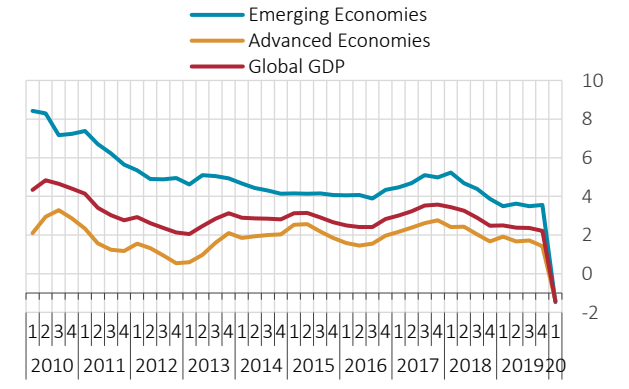
Measures to prevent the coronavirus pandemic, mounting uncertainty and tight financial conditions caused advanced and emerging economies and global trade volume to shrink in the first quarter. While global trade sank deeper into a contraction in the second quarter, PMI data point to a partial recovery in the global economy as of late May and early June, when normalization began. The main downside risks to global economic activity for the second half of 2020 are a possible second wave of COVID-19 cases and geopolitical tensions originating from the Middle East and North Africa. With the partial recovery in global economic activity, commodity prices, oil in particular, went slightly up from the previous reporting period. Rising food prices notwithstanding, falling commodity and crude oil prices remained the key determinant of global headline inflation, while core inflation is likely to see further demand-side downside pressures.

Monetary policy rates are close to zero across advanced economies while emerging economies continue with policy rate cuts. After falling amid expansionary monetary policies, long-term bond yields have flattened out. Exchange rates have been less volatile following an increase in risk appetite. The coronavirus pandemic triggered significant amount of portfolio outflows in the first quarter, which continued into the second quarter at a more accelerated pace largely from stock markets and reached historically high levels. Although portfolio flows are expected to recover in the second half thanks to the normalizing global risk appetite and accommodative financial conditions, it will take time for them to rebound to past levels.

2.1 Global Growth

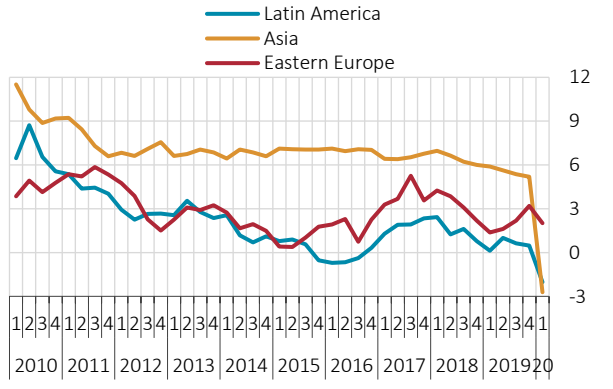
The global economy contracted in both advanced and emerging economies in the first quarter due to the supply and demand shock caused by the novel coronavirus that spread rapidly across the world (Chart 2.1.1). Strikingly, the euro area, from advanced economies, and China, from emerging economies, have been suffering a severe contraction. Across regions of emerging economies, Eastern Europe had a positive growth outlook in the first quarter while Asia and Latin America faced an economic downturn (Chart 2.1.2). According to the World Trade Organization (WTO), international trade in goods was down 3% year-on-year in real terms in the first quarter.

Chart 2.1.1: Global Growth Rates* (YoY Change)



Sources: Bloomberg, CBRT.
* Weighted by each country's share in global GDP.

Chart 2.1.2: Regional Growth Rates for Emerging Economies* (YoY Change)



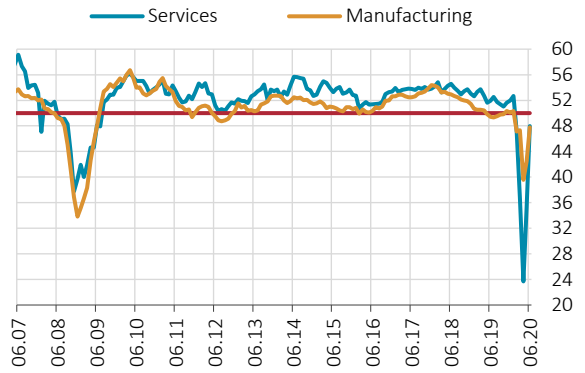
Sources: Bloomberg, CBRT.
* Aggregated by each country's share in regional GDP.

Global PMI data for the second quarter point to a worse growth performance than in the first quarter (Chart 2.1.3). The pandemic-led deterioration in global manufacturing and services PMI indicators accelerated in April, bringing global services PMI data to an all-time low. Although global PMI data recovered somewhat as of May due to partial normalization, indicators suggest that services and

industrial sectors remained sluggish.[1] The WTO estimates global trade volume to contract by 18.5% year-on-year in the second quarter. The world economy is expected to shrink significantly in the second quarter because of the coronavirus (Table 2.1.1).

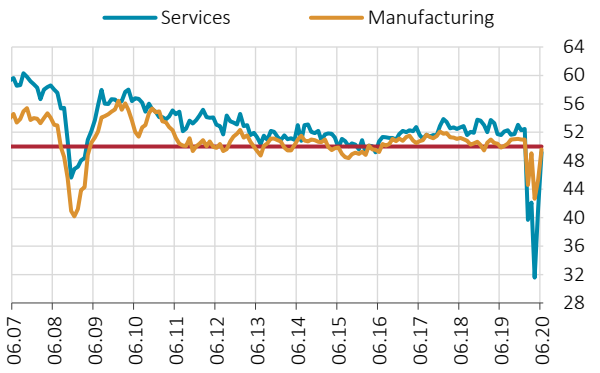
However, with the easing of social distancing measures and gradual normalization across many countries since late May and early June, PMI data recovered rapidly and reached the critical 50-mark as of June (Charts 2.1.3 and 2.1.4). PMI data were particularly upbeat for the euro area and the US in July. Likewise, other economic indicators such as unemployment rates and producer and consumer confidence indices recovered significantly in June.

Chart 2.1.3: Global PMI (Seasonally Adjusted, Level)



Source: IHS Markit.

Chart 2.1.4: Emerging Markets PMI (Seasonally Adjusted, Level)



Source: IHS Markit.

These developments feed into the expectation that the global economic outlook will be slightly more benign as of June, paving the way for a recovery starting in the third quarter. Nevertheless, the ongoing spread of the coronavirus across the rest of the world, especially in the southern hemisphere, the absence of a definitive vaccine and treatment for COVID-19, and a potential second wave of infections cast significant uncertainty over the growth outlook. In addition, the escalation in geopolitical risks associated with the Middle East and North Africa in June and the social unrest that broke out in the US in the same month appear to be other key factors adding to uncertainty that may adversely affect global growth in the second half of the year.

[1] Box 2.1 deals with how coronavirus measures taken by countries and health outcomes affected economic activity indicators.

Table 2.1.1: Growth Forecasts for 2020 and 2021 (Annual Average % Change)

	2020		2021	
	Former	Revised	Former	Revised
IMF*				
Global	-3.0	-4.9	5.8	5.4
Advanced Economies	-6.1	-8.0	4.5	4.8
USA	-5.9	-8.0	4.7	4.5
Euro Area	-7.5	-10.2	4.7	6.0
Emerging Economies	-1.0	-3.0	6.6	5.9
World Bank**				
Global	2.5	-5.2	2.6	4.2
Advanced Economies	1.4	-7.0	1.5	3.9
Euro Area	1.0	-9.1	1.3	4.5
Emerging Economies	4.1	-2.5	4.3	4.6
Consensus Forecasts***				
Global	-2.1	-4.7	4.4	5.0
USA	-4.0	-5.3	3.9	4
Euro Area	-5.7	-8.1	5.4	5.9
Japan	-3.3	-5.1	2.1	2.5
Asia Pacific	1.4	-0.1	6.7	6.9
Latin America	-4.2	-8.1	3	4
Eastern Europe	-3.4	-5.0	3.9	4.2

Sources: Consensus Forecasts, IMF, WB.

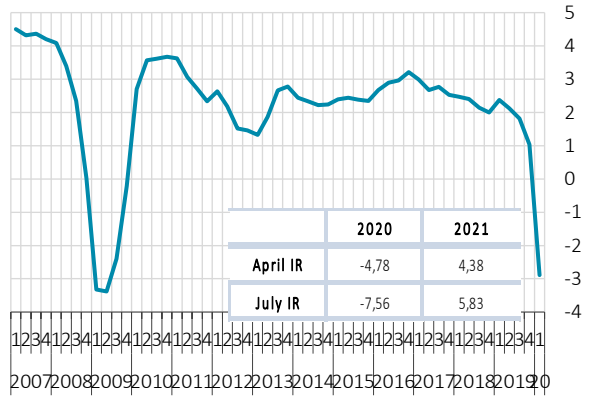
* Former forecasts are from the April issue, and revised forecasts are from the June issue of the IMF World Economic Outlook report.

** Former forecasts are from the January issue, and revised forecasts are from the June issue of the World Bank's Global Economic Prospects report.

*** Former forecasts are from April, and revised forecasts are from July publications.

Accordingly, both international economic institutions and Consensus Economics, as seen in their July forecasts, revised growth forecasts for 2020 significantly downward from the previous reporting period (Table 2.1.1). In particular, 2020 growth forecasts were slashed for the euro area, one of Turkey's top trading partners. Thus, the annual growth forecast for the export-weighted global production index for 2020 updated with July's Consensus Forecasts was down 2.8 percentage points from the April reporting period to minus 7.6% (Chart 2.1.5).

Chart 2.1.5: Export-Weighted Global Production Index
(Annual Average % Change)



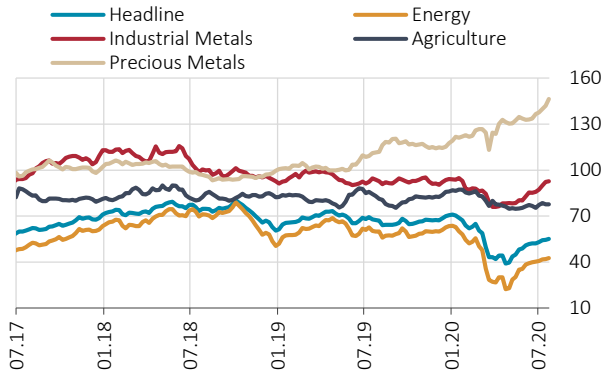
Sources: Bloomberg, CBRT.

2.2 Commodity Prices and Global Inflation

As the coronavirus began to spread across the world in late February, commodity prices excluding precious metals collapsed. As of May, global lockdown measures have been gradually eased. Thus, the demand for commodities recovered, spurring an uptick in prices of non-agricultural commodities. Through the second quarter, energy prices dropped by 33% quarter-on-quarter, while precious metal prices increased by 8% (Chart 2.2.1).

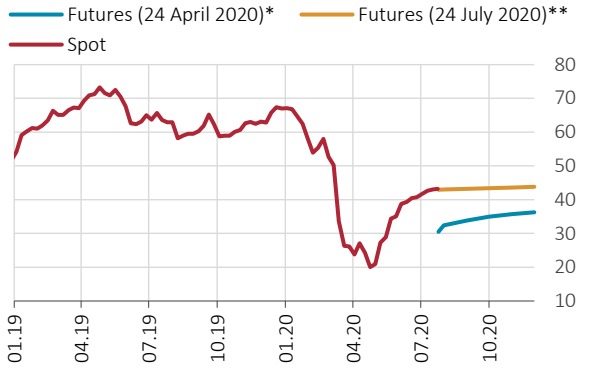
After many countries slowly lifted coronavirus lockdown measures, the moderate recovery in economic activity passed through to the demand for crude oil. On the crude oil supply side, after their production cut decision on 12 April 2020, OPEC+ countries agreed on 15 July 2020 to taper cuts from 9.6 million barrels to 7.7 million barrels per day as of August 1. On the other hand, non-OPEC oil producers, such as the US and Canada, moved to curb production due to low crude oil prices.

Chart 2.2.1: S&P Goldman Sachs Commodity Index (January 2014=100)



Source: Bloomberg.

Chart 2.2.2: Crude Oil Prices (Brent, USD/bbl)



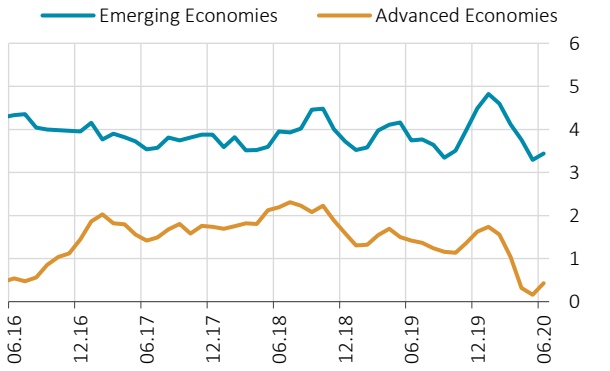
Source: Bloomberg.

*14-day average of prices on futures contracts up to 24 April 2020.

**14-day average of prices on futures contracts up to 24 July 2020.

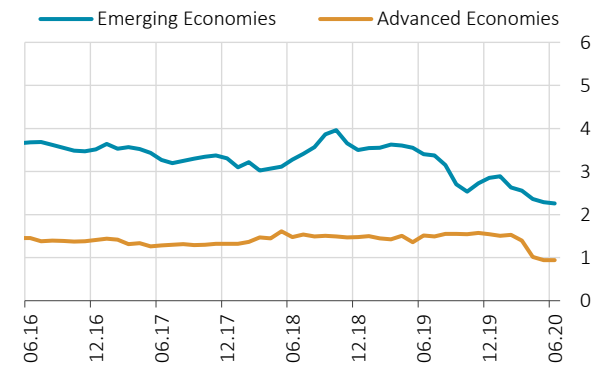
In the upcoming period, crude oil prices may rise amid a more stable global economic recovery and geopolitical risks or face downside risks from a potential second wave of coronavirus cases. Brent crude oil futures imply that prices may remain in the post-OPEC+ meeting range of USD 41 to 44 a barrel until the end of the year (Chart 2.2.2).

Chart 2.2.3: CPI Inflation in Advanced and Emerging Economies (YoY, %)



Sources: Bloomberg, CBRT.

Chart 2.2.4: Core CPI Inflation in Advanced and Emerging Economies (YoY, %)



Sources: Bloomberg, Datastream, CBRT.

Despite higher food prices during the global pandemic, headline inflation was notably lower in advanced and emerging economies than in the previous quarter due to a sluggish global growth outlook and sinking

crude oil prices (Chart 2.2.3). In the same period, core inflation fell across both country groups (Chart 2.2.4). Headline inflation expectations for 2020 have been revised downward for many emerging economies from the previous reporting period (Table 2.2.1).

Table 2.2.1: Inflation Forecasts for 2020 and 2021 (Average Annual % Change)

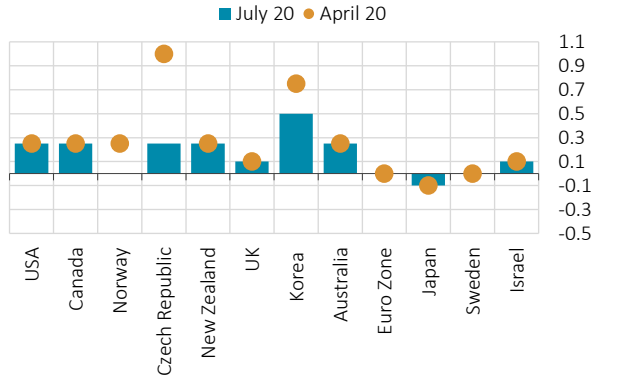
	April		July	
	2020	2021	2020	2021
Advanced Economies				
USA	0.8	1.8	0.8	1.7
Euro Area	0.4	1.3	0.4	1.0
Germany	0.7	1.4	0.6	1.5
France	0.4	1.3	0.5	1.1
Italy	-0.2	0.6	-0.1	0.5
Spain	-0.4	1.3	-0.2	0.7
Greece*	-0.4	0.6	-0.5	0.5
UK	1.0	1.6	0.8	1.3
Japan	-0.1	0.2	-0.2	0.1
Emerging Economies				
Asia Pacific	2.8	2.2	2.3	2.1
China	3.3	2.1	2.7	1.9
India**	4.0	4.3	3.7	4.2
Latin America (excl. Venezuela)	8.2	7.8	7.5	8.3
Brazil*	2.7	3.5	1.8	3.2
Eastern Europe	5.4	4.7	5.1	4.7
Russia*	4.8	3.7	3.8	3.6

Source: Consensus Forecasts.
* Annual percentage change.
** Based on fiscal year.

2.3 Global Monetary Policy

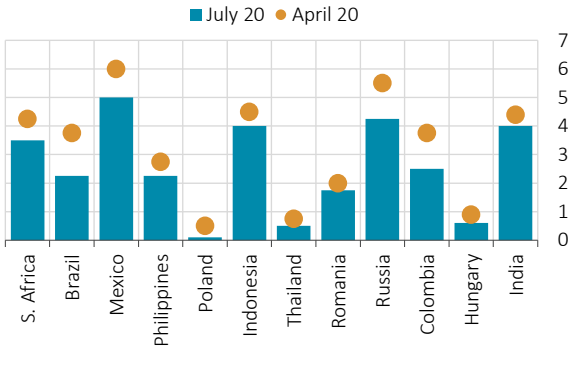
Expansionary policies aimed at mitigating the impact of the pandemic on global financial markets and economic activity brought policy rates rapidly close to the zero lower bound and curbed rate cuts in advanced economies (Chart 2.3.1). Emerging economies, on the other hand, continued with rate cuts (Chart 2.3.2).

Chart 2.3.1: Policy Rates of Advanced Economies (%)



Source: Bloomberg.

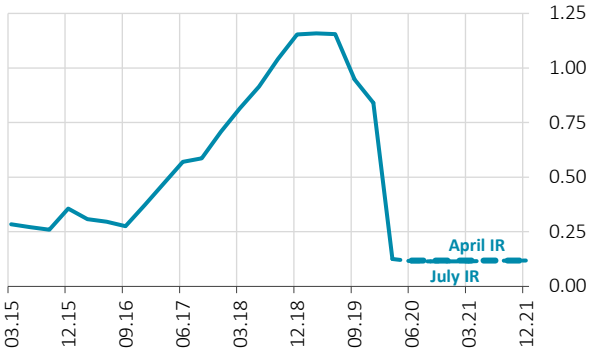
Chart 2.3.2: Policy Rates of Emerging Economies (%)



Source: Bloomberg.

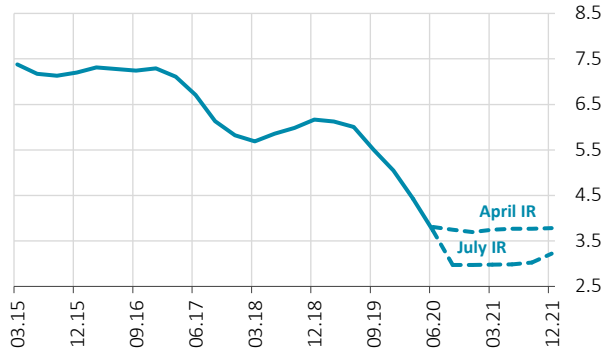
Despite its resemblance to the post 2008 global financial crisis easing programs, the current easing of monetary policies exceeded those of the crisis period in terms of pace and variety of measures. The average policy rate in advanced economies fell below that of the third quarter of 2015 when it reached its bottom after the crisis (Chart 2.3.3). Interest rates are also at historic lows in emerging economies (Chart 2.3.4).

Chart 2.3.3: Advanced Economies Average Policy Rate and Expectations (%)



Sources: Bloomberg, CBRT calculations.

Chart 2.3.4: Emerging Economies Average Policy Rate and Expectations (%)

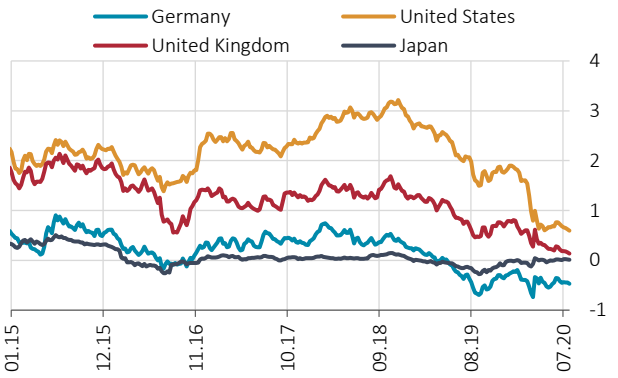


Sources: Bloomberg, CBRT calculations.

2.4 Global Risk Indicators and Portfolio Flows

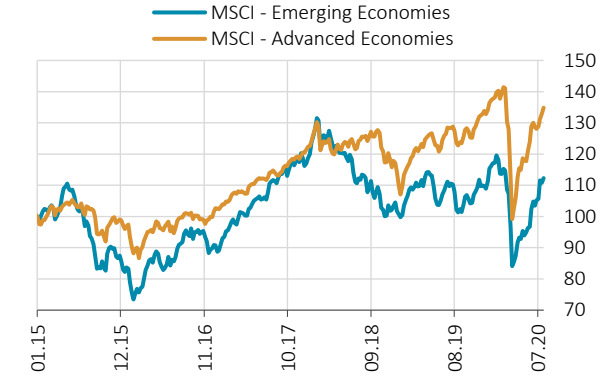
After having declined rapidly amid expansionary monetary policies taken by major central banks to counter the effects of the pandemic, long-term bond yields have recently been flat due to a decline in new expansionary measures (Chart 2.4.1). Low inflation and high uncertainty foster expectations that monetary policies will remain loose for some time and thus bond yields will remain subdued.

Chart 2.4.1: 10-Year Bond Yields (%)



Source: Bloomberg.

Chart 2.4.2: MSCI Indices (January 2015=100)

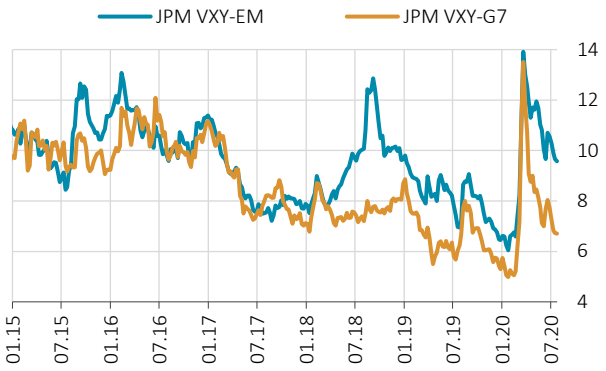


Source: Bloomberg.

The recovery that started in advanced and emerging stock markets in March continues on the back of monetary and fiscal policy measures and steps toward economic normalization (Chart 2.4.2). Likewise, with increased risk appetite, exchange rates have been less volatile across emerging and, especially, advanced economies (Chart 2.4.3).

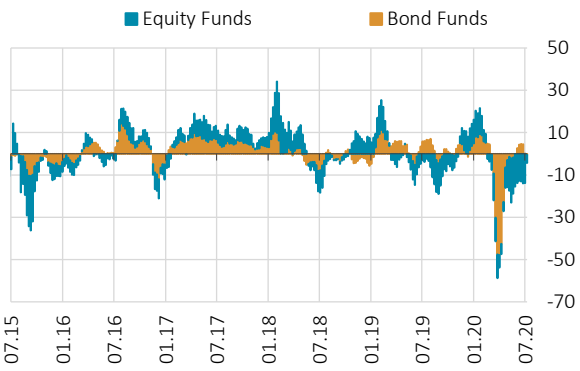
The massive exodus of capital from emerging economies after the pandemic emerged in the first quarter continued into the second quarter at an even faster clip. As of the first week of July, portfolio outflows from emerging markets within the year amounted to USD 109.2 billion. Outflows from emerging stock markets accounted for almost all of total outflows in the second quarter (Chart 2.4.4). This period was marked by one of the largest portfolio outflows from emerging economies ever.

Chart 2.4.3: JP Morgan Exchange Rate Volatility Indices (Weekly)



Source: Bloomberg.

Chart 2.4.4: Weekly Fund Flows to Emerging Economies (USD Billion, 4-Week Cumulative)



Source: EPFR.

All regions except Europe experienced portfolio outflows. As in the previous period, Asian economies, especially China, suffered the largest portfolio outflow, but unlike the previous period, the vast majority of these outflows were from stock markets. As of the first half of July, outflows from stock markets have slowed across regions other than Latin America, while outflows from bond funds have decreased across all regions (Table 2.4.1). This slowdown can be attributed to the measures taken successively by major central banks and the post-pandemic economic normalization.

Flows to emerging portfolio markets are expected to pick up slightly in the second half of 2020. However, it will likely take time for emerging market portfolio inflows to revert back to previous levels due to high uncertainty over the upcoming period, ongoing problems of access to external finance, albeit less acute than in the previous reporting period, and the narrow policy room to maneuver.

Table 2.4.1: Composition of Fund Flows to Emerging Economies (Quarterly, USD Billion)

		Total	Portfolio Composition		Regional Composition			
			Bond Funds	Equity Funds	Asia	Europe	Latin America	Middle East and Africa
2017	Q1	32.7	19.9	12.8	8.2	7.7	12.4	4.3
	Q2	52.6	24.4	28.2	25.2	7.6	14.5	5.4
	Q3	37.1	17.3	19.8	19.4	4.9	9.2	3.5
	Q4	29.5	11.8	17.6	14.8	3.7	8.3	2.7
2018	Q1	57.9	12.0	46.0	34.1	6.5	12.0	5.3
	Q2	-10.4	-10.4	0.0	-0.7	-4.3	-3.3	-2.1
	Q3	-9.9	-3.6	-6.3	-4.6	-1.4	-3.2	-0.7
	Q4	4.5	-14.0	18.5	14.1	-4.5	-3.1	-2.0
2019	Q1	29.8	20.2	9.6	9.7	4.2	10.3	5.5
	Q2	-6.7	7.9	-14.6	-8.1	-1.2	-0.9	3.5
	Q3	-19.4	9.2	-28.6	-19.2	-0.7	0.8	-0.2
	Q4	24.7	8.7	16.0	16.8	2.1	4.8	1.1
2020	Q1	-36.1	-34.8	-1.3	-12.0	-8.5	-9.5	-6.1
	Q2	-41.4	0.8	-42.2	-37.9	0.1	-2.2	-1.4

Source: EPFR.

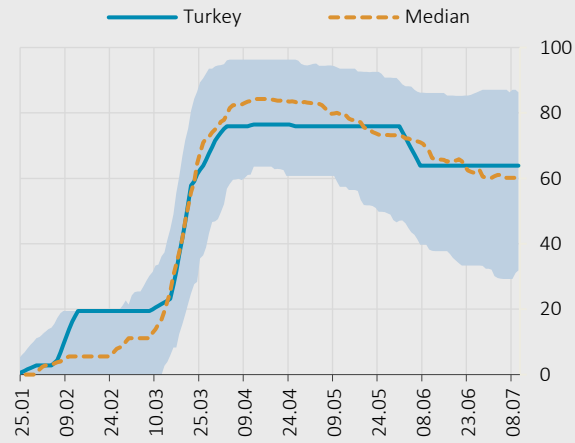
Box 2.1

Measures during the Pandemic, Public Health and Economic Activity

With COVID-19 becoming a pandemic, countries have implemented measures to limit social mobility. In order to monitor how strict such measures are, a "stringency index", which is a composite indicator based on nine categories including school and workplace closures, domestic and international travel restrictions, and diagnostic testing policies, has been created by Oxford University. Such measures became more common and more stringent worldwide as the outbreak affected more countries (Chart 1). Due to these measures, social mobility decreased significantly (Chart 2). The "mobility index", constructed by using the average of mobility trends in shopping malls, places of entertainment, grocery stores-pharmacies and workplaces, shows that social mobility decreased until the middle of April across the world and then began a gradual recovery.

Several measures were put in place to limit the impact of the pandemic after the first case was reported in mid-March in Turkey. With the effect of curfews imposed due to holidays in May, Turkey is one of the countries where mobility saw the sharpest decline with respect to the beginning of the year, compared to more than 130 countries for which data are available. The measures taken against the epidemic are effective in controlling the number of cases and mortality rates. Gradual easing of the measures supports the recovery in economic activity.

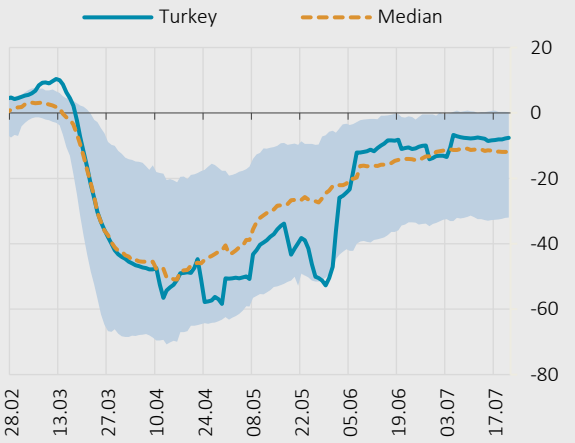
Chart 1: Pandemic Control Measures Stringency Index* (7-Day Moving Average)



Source: Oxford COVID-19 Government Response Tracker (Hale et al., 2020).

* The Stringency Index is a composite indicator based on nine categories including school and workplace closures, domestic and international travel restrictions, and diagnostic tests policy that are scaled to a value from 0 to 100. The index can only be used for comparison purposes and does not interpret the appropriateness or effectiveness of a country's policy. The blue zone shows the range of 10th percentile to 90th percentile. Based on data for 121 countries.

Chart 2: Google Mobility Trends Index* (7-Day Moving Average, Change from Reference Period)



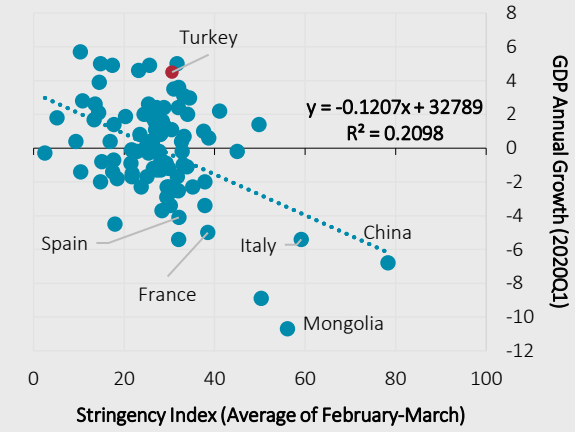
Source: Google Mobility Trends.

* The mobility index data published by Google shows the change in mobility compared to the period of 3 January-6 February 2020. The blue zone represents the range of 10th percentile to 90th percentile. Based on data for 132 countries. The mobility index is created by using the average of published data on mobility trends in shopping malls, places of entertainment, grocery stores-pharmacies and workplaces.

Analyzing the data for the first quarter of 2020, it is seen that growth shows an inverse relationship with the increase in stringency, as expected. Countries such as China and Italy, which were more severely affected by the outbreak relatively early, experienced stricter measures and a larger decline in national income (Chart 3). Since the first case in Turkey was detected in mid-March, the effect of the pandemic on the first quarter's national income was

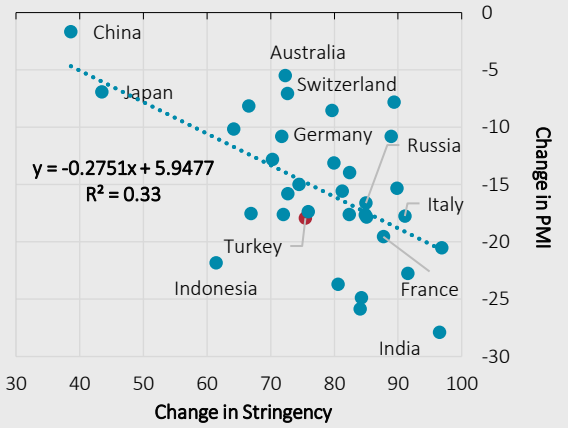
limited. PMI data are analyzed to evaluate economic activity for the second quarter. Firstly, PMI data in April when the pandemic's impact on economic activity across countries was most evident and PMI data in January, which represents the pre-pandemic period, were evaluated. Accordingly, with the spread of restrictions on social mobility across countries, PMI indicators fell to historically low levels in many countries (Chart 4). A similar trend is observed for Turkey.

Chart 3: Stringency Index and Real GDP Growth
(First Quarter of 2020)



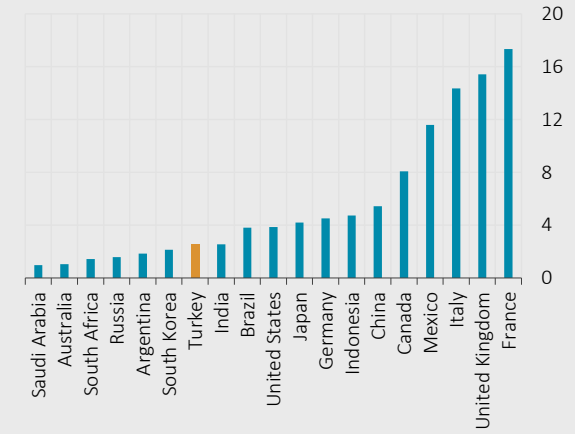
Source: Bloomberg, Oxford COVID-19 Government Response Tracker.

Chart 4: Manufacturing PMI and Stringency Index
(Change from January to April)



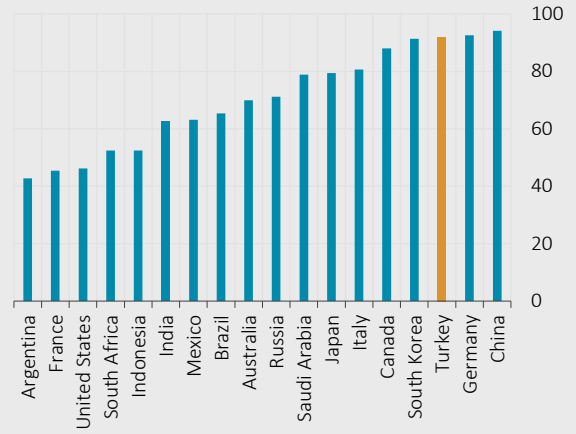
Source: IHS Market, Oxford COVID-19 Government Response Tracker.

Grafik 5: Case Fatality Rates of G-20 Countries (%)



Source: Our World in Data.

Grafik 6: The Ratio of Total Recovered Patients to Total Cases of G-20 Countries (%)

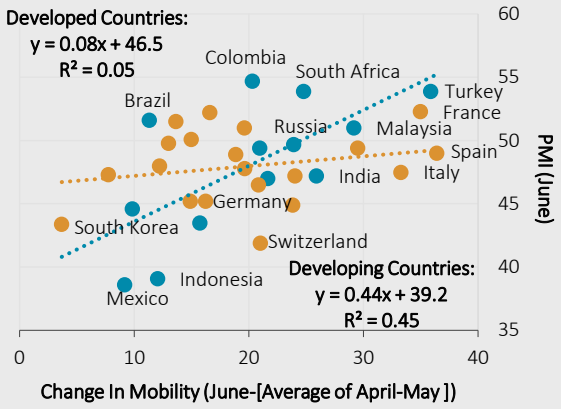


Source: Worldometers.

Although stricter measures against the pandemic led to much weaker economic activity in the short term, they contributed to a positive outlook for healthcare. Indeed, large investments in public health and measures taken in Turkey helped drive mortality rates well below the world average (Chart 5).[1] Turkey is also one of the countries where the ratio of recovered patients to total cases is high (Chart 6).

[1] Capacity of Intensive care unit (ICU) beds can play a crucial role in tackling the pandemic. Turkey, that is one of the leading countries in terms of ICU beds capacity per population with Germany, has significantly higher rates compared to the following developed and developing countries (Number of ICU beds per 100000 population is 48 in Germany, 41 in Turkey. However, average number of ICU beds per 100000 population of following four countries and rest of the countries are 24 and 7, respectively.). This gains importance in terms of the rapidness and efficiency of the response to the critical cases, contributing to the fight against the epidemic more effectively and much lower number of casualties. For more information, please visit website https://ourworldindata.org/grapher/intensive-care-beds-per-100000.

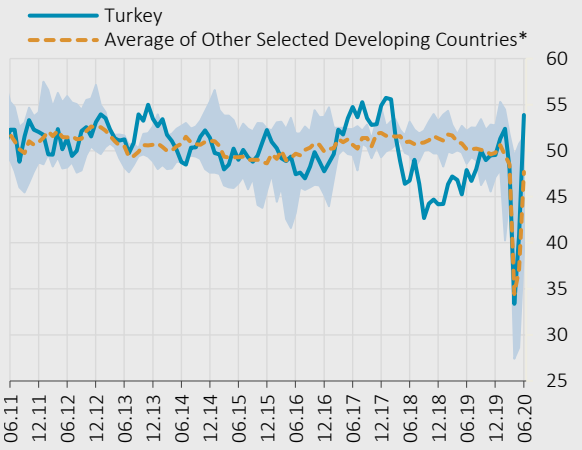
Chart 7: Manufacturing PMI and Change in Mobility*



Source: Google Mobility Trends, IHS Markit.

* Developing countries represented with blue dots are South Africa, Malaysia, Thailand, Turkey, Egypt, Hungary, Philippines, Brazil, Mexico, Colombia, Poland, Russia, India and Indonesia; developed countries represented with orange dots are Switzerland, South Korea, Czech Republic, Netherlands, Germany, Australia, Sweden, Italy, Canada, Singapore, Norway, Greece, Spain, USA, England, Ireland, Austria, Denmark and France.

Chart 8: Manufacturing PMI (Seasonally Adjusted, Level)



Source: IHS Markit.

* Other selected developing countries are Brazil, China, India, Indonesia, Mexico and Russian Federation.

Success in healthcare supports the normalization steps and lays the ground for a relatively stronger recovery in economic activity. As a matter of fact, there is a strong relationship between increased mobility and PMI, especially in developing countries, and a relatively weak one for developed countries (Chart 7). Survey indicators such as confidence in industry and PMI for June indicate that Turkey exhibits a more pronounced economic recovery compared to European and other developing countries (Chart 8).

In sum, global economic activity is affected by the measures taken against the pandemic and the easing of these measures. The measures were tightened from the time the first case was reported in Turkey until the end of May, and the number of cases and mortality rates were brought under control. This helped accelerate normalization in June. Recent data such as June PMI and the mobility index indicate that Turkey has diverged positively from other countries. Services are recovering more slowly compared to manufacturing industry due to the containment measures and changes in consumer preferences. However, together with the contribution of positive developments in the healthcare field, economic activity in Turkey is expected to continue to maintain a positive outlook.

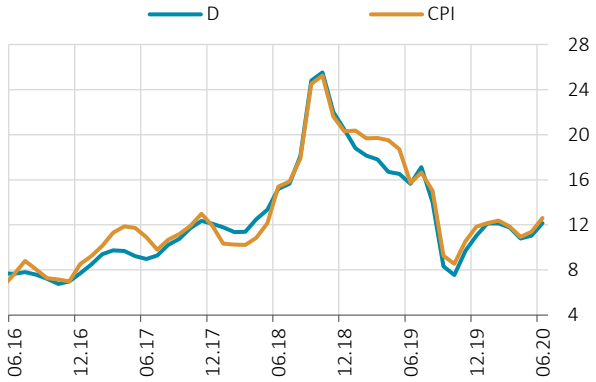
References

Hale, Thomas, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira (2020). Oxford COVID-19 Government Response Tracker.

3. Inflation Developments

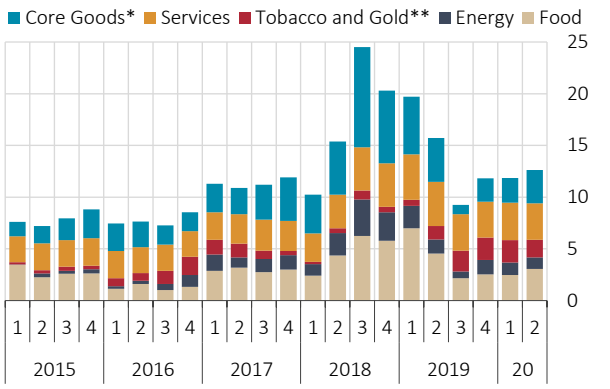
In the second quarter of 2020, consumer inflation increased by 0.76 points to 12.62%, slightly surpassing the upper limit of the forecast range of the April Inflation Report forecast (Chart 3.1). Compared to the previous quarter, core goods and food were the main groups that contributed to the rise in inflation (Chart 3.2). The rise in consumer inflation was mainly driven by the increase in unit costs[1] stemming from the pandemic, cumulative exchange rate effects, and recovery in international oil prices as well as food prices that rose on the back of cyclical and pandemic-induced effects. Against this background, annual inflation and trends in core indicators somewhat increased. Supply-side factors, which have been effective for a short period due to the pandemic-related measures, are expected to phase out as the normalization process continues and demand-driven disinflationary effects are projected to become more evident in the second half of the year.

Chart 3.1: CPI and D Index* (YoY % Change)



Source: TURKSTAT.
* CPI excluding unprocessed food, alcoholic beverages and tobacco products.

Chart 3.2: Contributions to Annual CPI (% Points)

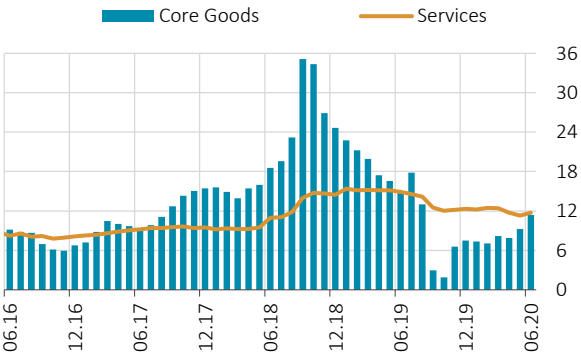


Source: CBRT, TURKSTAT.
* Core Goods: Goods excluding food, energy, alcoholic beverages, tobacco and gold.
** Tobacco and Gold: Alcoholic beverages, tobacco products and gold.

3.1 Core Inflation Outlook

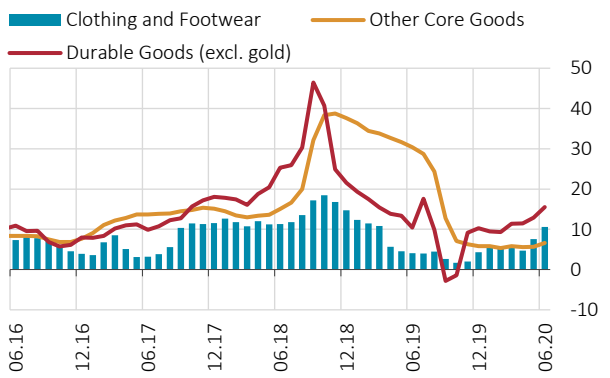
In the second quarter, annual core goods inflation increased by 3.21 points quarter-on-quarter to 11.39% (Chart 3.1.1). While the rise was mainly driven by the cumulative exchange rate effects, the rapid rise in the demand for durable goods stemming from the resurfacing deferred demand, caused by the acceleration in loans, have also supported it. In this quarter, annual inflation rose across the entire group (Chart 3.1.2).

Chart 3.1.1: Prices of Core Goods and Services (YoY % Change)



Source: TURKSTAT.

Chart 3.1.2: Prices of Core Goods (YoY % Change)



Source: TURKSTAT.

[1] Box 3.1 explains recent unit cost developments.

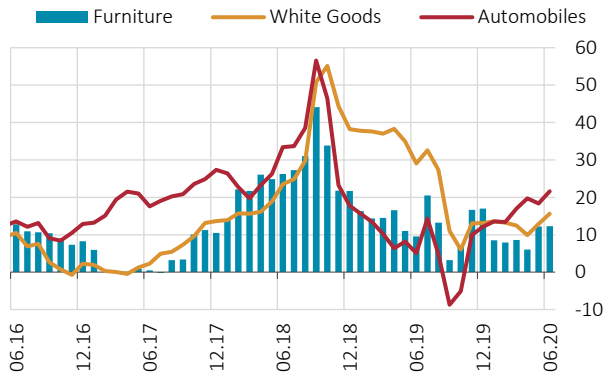
In the second quarter, prices of durable goods increased by 7.38% quarter-on-quarter to 15.54% (Chart 3.1.2). In this quarter, a significant rise was observed in prices of automobiles, white goods and furniture (Chart 3.1.3, Table 3.1.1). While the rise in prices of clothing and footwear group remained significantly lower than historical averages in April due to the pandemic-driven effects, prices in this group increased significantly more than seasonal averages in May and June, and annual inflation in the group was recorded at 10.58%. In sum, annual inflation and trend in core goods increased due to the cumulative exchange rate effects, the rise in unit costs due to the pandemic, and the rise in demand for certain groups in tandem with the normalization process (Chart 3.1.4).

Table 3.1.1: Prices of Goods and Services (3-Month and YoY % Change)

	2019				2020		
	II	III	IV	Annual	I	II	Annual
CPI	**2.69**	**3.24**	**3.15**	**11.84**	**2.29**	**3.39**	**12.62**
1.Goods	2.29	3.07	3.96	11.65	1.81	3.53	12.94
Energy	**0.20**	**6.64**	**5.57**	**10.98**	**-2.66**	**-0.42**	**9.12**
Food and Non-Alcoholic Beverages	**-1.45**	**-2.46**	**4.86**	**10.89**	**9.18**	**1.12**	**12.93**
Unprocessed Food	-8.46	-8.24	6.16	6.10	15.88	-0.53	12.29
Processed Food	6.28	3.03	3.75	15.39	3.23	2.77	13.41
Core Goods	**4.02**	**2.84**	**3.54**	**7.48**	**-2.33**	**7.11**	**11.39**
Clothing and Footwear	8.06	-2.37	12.71	4.32	-10.85	12.72	10.58
Durable Goods (excl. Gold)	3.53	6.33	1.34	10.27	-0.15	7.38	15.54
Furniture	0.89	11.73	2.72	16.95	-6.20	4.28	12.26
Electrical and Non-Electrical Devices	0.84	3.26	-0.88	2.20	-0.07	5.33	7.73
Automobiles	5.95	6.28	1.88	12.14	1.97	10.12	21.59
Other Durable Goods	2.59	4.50	1.85	10.71	2.13	4.47	13.56
Core Goods excl. Clothing and Durable Goods	2.09	1.44	0.76	5.83	1.44	2.80	6.57
Alcoholic Beverages, Tobacco Products and Gold	**14.86**	**18.77**	**0.00**	**39.10**	**1.79**	**4.98**	**26.91**
2. Services	**3.67**	**3.66**	**1.17**	**12.30**	**3.40**	**3.06**	**11.76**
Rent	2.28	3.09	1.88	10.05	2.51	1.45	9.22
Restaurants and Hotels	5.49	3.76	0.74	13.17	3.11	3.12	11.13
Transport	4.91	9.00	0.32	15.03	1.70	7.64	19.70
Communication	0.77	0.63	3.84	6.92	0.18	0.77	5.48
Other Services	3.32	2.91	0.74	13.40	5.64	2.88	12.68

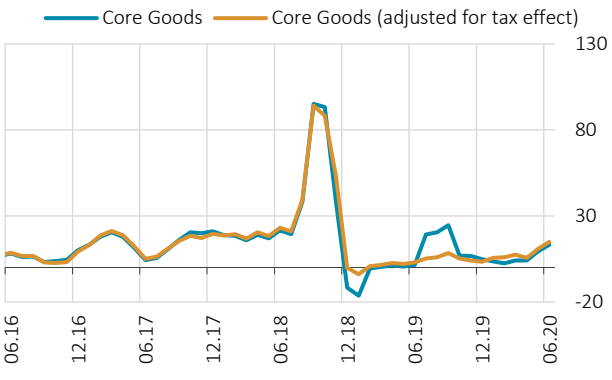
Source: TURKSTAT.

Chart 3.1.3: Selected Durable Goods Prices (YoY % Change)



Source: CBRT, TURKSTAT.

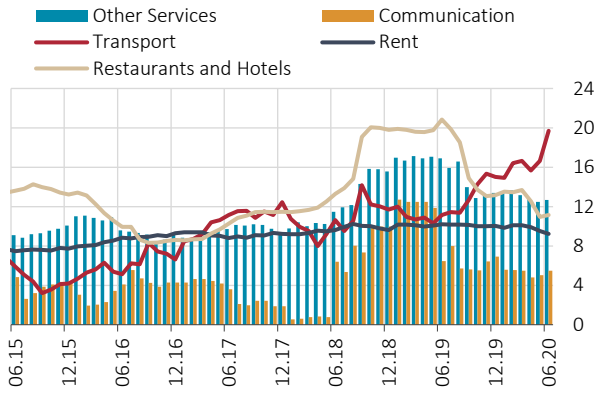
Chart 3.1.4: Prices of Core Goods (Seasonally-Adjusted, Annualized 3-Month Average % Change)



Source: CBRT, TURKSTAT.

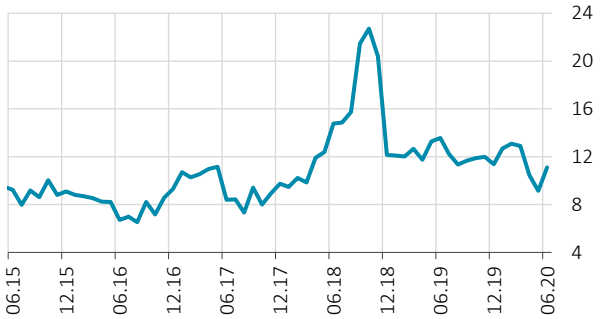
In the second quarter, services prices rose by 3.06%, whereas annual inflation in this group dropped by 0.66 points to 11.76% (Chart 3.1.1 and Table 3.1.1). In the services group, there have been significant developments in prices of items affected by interruptions due to the pandemic. Accordingly, following a moderate course in April, prices in services groups that were subject to capacity limitations such as transportation, food and beverage services, accommodation, barber and hairdressing services displayed significant increases after the normalization steps. While annual inflation decreased in restaurants-hotels, other services and rents groups, it remained flat in communication services but significantly increased in the transport group (Chart 3.1.5). In this quarter, economic activity was interrupted because of the measures taken to counter the pandemic, thus, the main trend of services inflation decreased in April and May and rised in June again (Chart 3.1.6).

Chart 3.1.5: Prices of Services by Subcategories (YoY % Change)



Source: TURKSTAT.

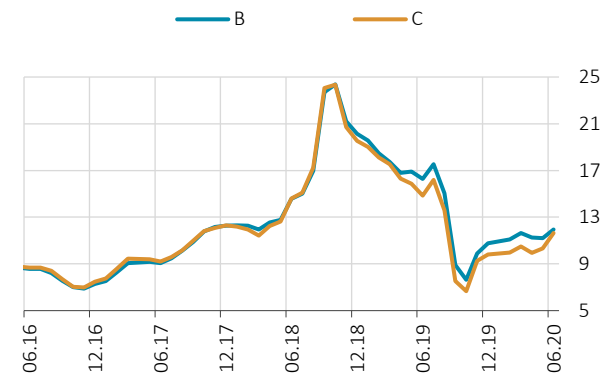
Chart 3.1.6: Prices of Services (Seasonally-Adjusted, Annualized 3-Month Average % Change)



Source: CBRT, TURKSTAT.

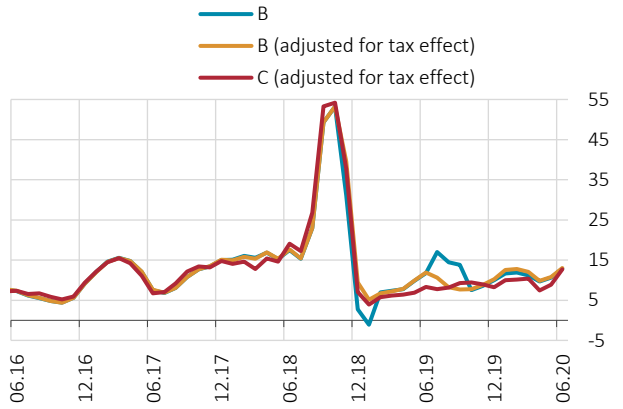
Among core inflation indicators, annual inflation in B and C indices rose by 0.30 and 1.15 points quarter-on-quarter to 11.95% and 11.64%, respectively (Chart 3.1.7). Seasonally adjusted three-month averages suggest that the trend of core inflation indicators moved upward (Chart 3.1.8).

Chart 3.1.7. Indices B and C (YoY % Change)



Source: TURKSTAT.

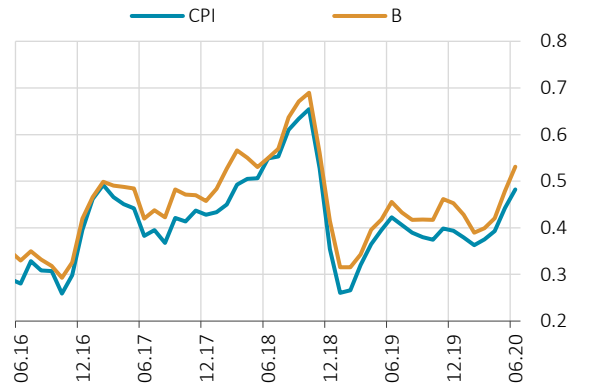
Chart 3.1.8. Indices B and C (Seasonally Adjusted, Annualized 3-Month Average % Change)



Source: CBRT, TURKSTAT.

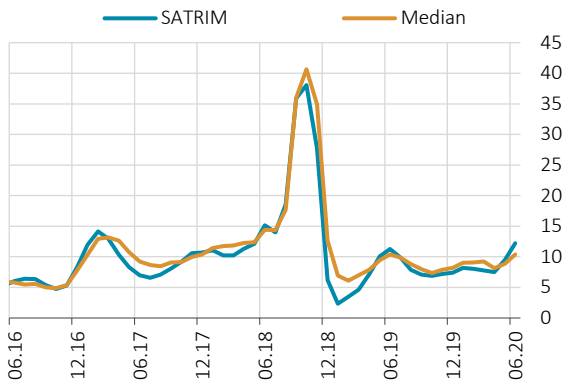
Diffusion indices for CPI and core indicators suggest that the tendency to increase prices moved slightly upward compared to the previous quarter (Chart 3.1.9). Moreover, the underlying trends of alternative core inflation indicators, Median and SATRIM confirmed the rise in annual inflation (Chart 3.1.10).

Chart 3.1.9. CPI and B Diffusion Indices (Seasonally-Adjusted 3-Month Average)



Source: CBRT, TURKSTAT.

Chart 3.1.10. Core Inflation Indicators SATRIM* and Median** (Annualized 3-Month Average, %)

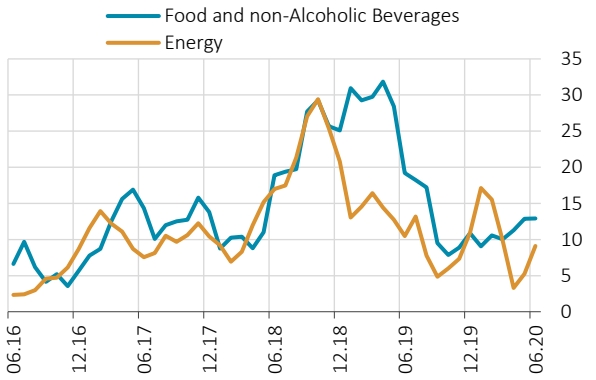


Source: CBRT, TURKSTAT.
*SATRIM: Seasonally adjusted, trimmed mean inflation.
**Median: Median monthly inflation of seasonally adjusted 5-digit subprice indices.

3.2 Food, Energy and Alcohol-Tobacco Prices

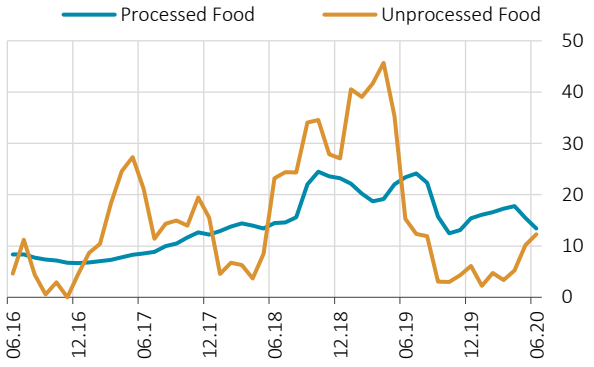
Annual inflation in food and non-alcoholic beverages was up 2.88 points to 12.93% in the second quarter (Chart 3.2.1). This rise was mainly driven by unprocessed food prices led by fresh fruits and vegetables prices, while annual inflation in processed food decreased (Chart 3.2.2).

Chart 3.2.1: Food and Energy Prices (YoY % Change)



Source: TURKSTAT.

Chart 3.2.2: Food Prices (YoY % Change)

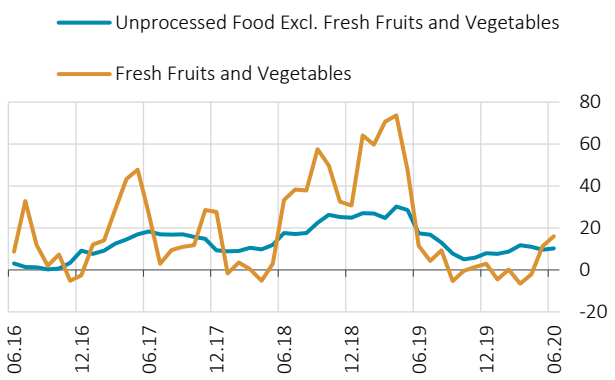


Source: TURKSTAT.

In the second quarter of the year, annual unprocessed food inflation rose by 8.96 points to 12.29% (Chart 3.2.2). While annual fresh fruits and vegetables inflation increased by 22.65 points to 16.09%; inflation in the other unprocessed food group dropped by 1.49 points to 10.30% (Chart 3.2.3). Red meat prices, which displayed a significant rise in the first quarter, remained favorable in the second quarter. Meanwhile, pulses, which have a large import share in total supply, continued to display significant price increases, curbing further decline in inflation in the other unprocessed food group (Chart 3.2.4).

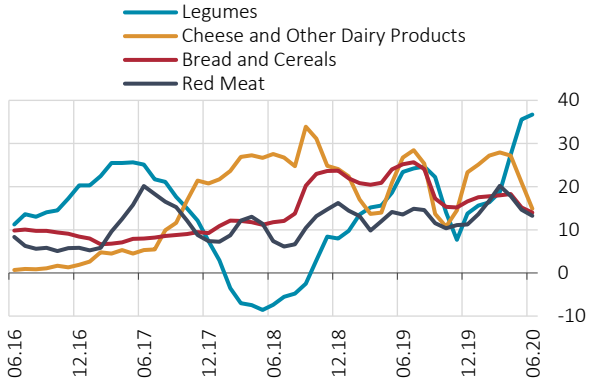
Annual processed food inflation dropped by 3.87 points to 13.41% in the second quarter (Chart 3.2.2). While the favorable outlook observed in the processed food was prevalent across the group, the most remarkable contribution to the decline in annual inflation in this group came from cheese and other dairy products. Meanwhile, annual inflation in bread and cereals, which make up a large percentage of processed foods and rose in the first quarter, slightly decreased in the second quarter thanks to the more moderate rise in this quarter (Chart 3.2.4).

Chart 3.2.3: Prices of Fresh Fruits and Vegetables and Other Food (YoY % Change)



Source: CBRT, TURKSTAT.

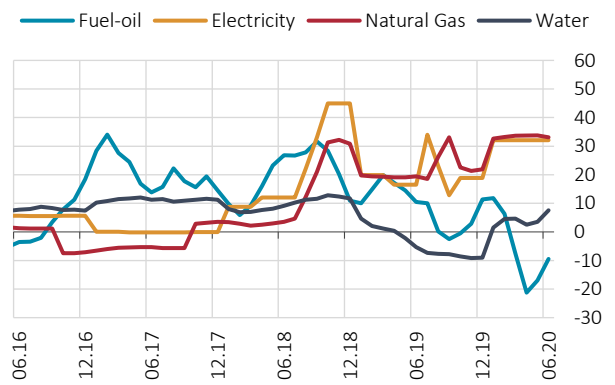
Chart 3.2.4: Selected Food Items (YoY % Change)



Source: CBRT, TURKSTAT.

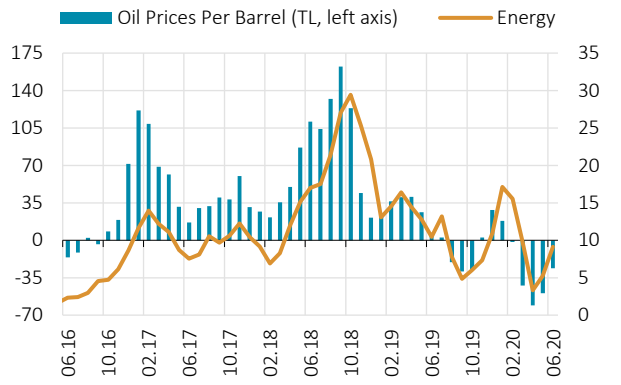
Energy prices decreased by 0.42% in the second quarter of the year (Table 3.1.1). The average Brent crude oil price per barrel, which was USD 33 at the end of the previous quarter, decreased to USD 23 in April and increased to USD 40 at the end of the quarter again. In this framework, prices of fuel and bottled gas, which decreased by 12.8% and 11.3% respectively in April, increased by 13.3% and 7.5% respectively in the May-June period. Thus, annual energy inflation, which dropped to 3.30% in April, increased to 9.12% owing to the price increments over the last two months (Chart 3.2.5 and Chart 3.2.6).

Chart 3.2.5: Domestic Energy Prices (YoY % Change)



Source: TURKSTAT.

Chart 3.2.6: Energy Prices (YoY % Change)



Source: Bloomberg, CBRT, TURKSTAT.

In the second quarter, tobacco prices increased by 1.62% due to the rise in the minimum lump sum special consumption tax in May. In early July, the lump sum and minimum lump sum special consumption taxes on tobacco and alcohol increased in line with the automatic adjustment.

3.3 Domestic Producer Prices

In the second quarter, domestic producer prices (D-PPI) were up 3.56%, while annual D-PPI inflation decreased by 2.33 points quarter-on-quarter to 6.17% on the back of the high base effect (Table 3.3.1 and Chart 3.3.1).

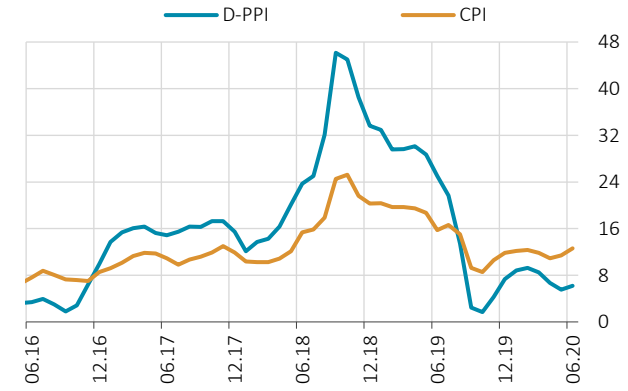
Table 3.3.1: D-PPI and Sub-Categories (3-Month and YoY % Change)

	2019				2020		
	II	III	IV	Annual	I	II	Annual
D-PPI	**5.83**	**-1.45**	**0.78**	**7.36**	**3.22**	**3.56**	**6.17**
Mining	5.92	-0.59	1.78	13.31	3.47	-0.49	4.19
Manufacturing	5.34	-1.89	0.82	6.98	3.45	3.58	5.99
Manufacturing excl. Petroleum Products	5.51	-1.82	0.75	6.90	4.78	3.78	7.56
Manufacturing excl. Petroleum and Base Metal Products	5.49	-1.25	1.13	8.09	4.30	3.72	8.03
Production and Distribution of Electricity and Gas	14.30	3.88	-0.08	12.43	-0.47	5.90	9.40
Water Supply	-1.74	0.91	0.55	-7.94	5.83	-0.07	7.30
D-PPI by Main Industrial Groupings							
Intermediate Goods	4.87	-2.28	-0.29	4.27	4.76	3.99	6.14
Durable Consumption Goods	2.97	1.94	0.77	7.25	5.34	4.46	13.04
Durable Consumption Goods (excl. jewelry)	2.72	1.71	0.85	6.63	4.39	3.26	10.57
Non-Durable Consumption Goods	7.79	-1.85	2.46	11.93	4.47	2.80	8.00
Capital Goods	3.67	-0.64	1.14	8.09	5.58	5.16	11.57
Energy	8.54	0.82	0.86	9.02	-8.01	1.56	-5.00

Source: CBRT, TURKSTAT.

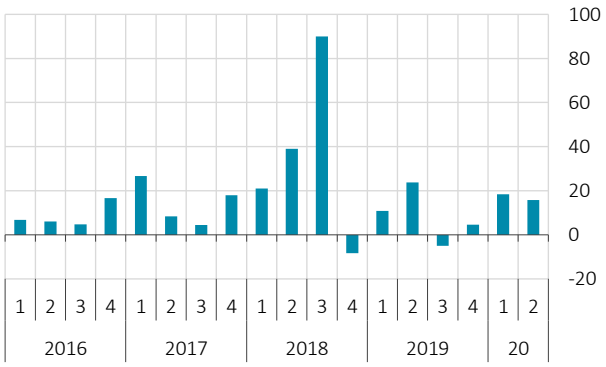
By main industrial groupings, prices increased in all sub-categories (Table 3.3.1). Despite the significant decrease in April, energy prices picked up again over the last two months owing to the rebound in international oil prices. Meanwhile, the strong rise observed in prices of intermediate goods as well as in capital and consumer goods in the first quarter continued in the second quarter as well. Even though the uptrend in prices in manufacturing industry excluding petroleum and base metal, which contains information on the underlying trend of producer prices, slowed down quarter-on-quarter, it remained high (Chart 3.3.2). Therefore, the producer prices-driven pressure on consumer prices continued.

Chart 3.3.1: Domestic Producer and Consumer Prices (YoY % Change)



Source: TURKSTAT.

Chart 3.3.2: Manufacturing Prices excl. Petroleum and Base Metals (Seasonally-Adjusted, Annualized QoQ % Change)

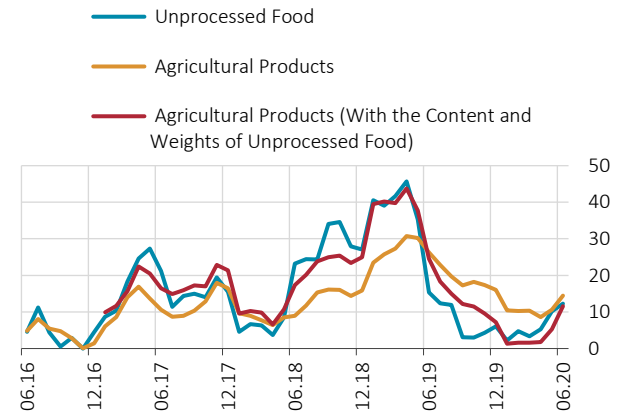


Source: CBRT, TURKSTAT.

3.4 Agricultural Producer Prices

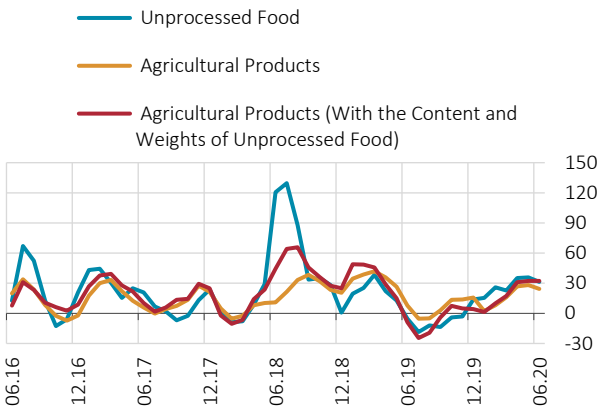
In the second quarter of 2020, annual inflation in agricultural producer prices increased by 4.12 points quarter-on-quarter to 14.50% (Chart 3.4.1). In this quarter, annual inflation in vegetables and dried beans increased while dropped in wheat and corn prices. The uptrend in sunflower prices continued while prices of livestock remained flat. Looking at agricultural producer prices calculated by contents and weights of unprocessed food, it is observed that annual inflation in this group has increased in tandem with unprocessed food (Chart 3.4.1). Seasonally adjusted three-month averages reveal that the trends of agricultural producer prices and unprocessed food prices were higher compared to the previous quarter (Chart 3.4.2).

Chart 3.4.1: Prices of Agricultural Products and Unprocessed Food (YoY % Change)



Source: CBRT, TURKSTAT.

Chart 3.4.2: Prices of Agricultural Products and Unprocessed Food (Seasonally-Adjusted, Annualized 3-Month Average % Change)

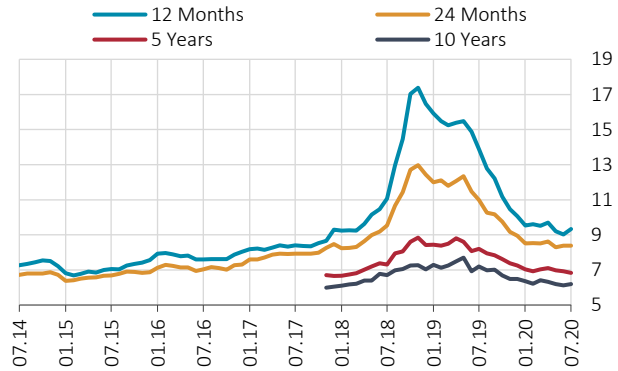


Source: CBRT, TURKSTAT.

3.5 Expectations

The downtrend in 12-month-ahead inflation expectations continued in June and slightly increased in July. In this quarter, the year-end inflation expectation was 10.22%, while the 12-month and 24-month-ahead inflation expectations were 9.33% and 8.38%, respectively (Chart 3.5.1). Compared to the previous quarter, upward revisions in the inflation curve are for the short term and there has been no remarkable change in the medium-term expectations (Chart 3.5.2).

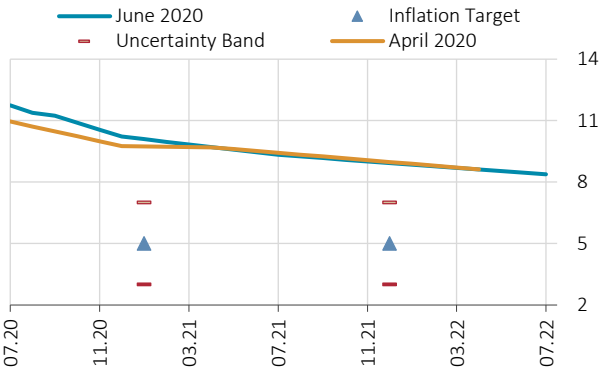
Chart 3.5.1: CPI Inflation Expectations* (%)



Source: CBRT.

* Results of the CBRT Survey of Expectations that polls corporate sector and financial sector representatives as well as professionals.

Chart 3.5.2: Medium-Term Inflation Expectations Curve* (%)

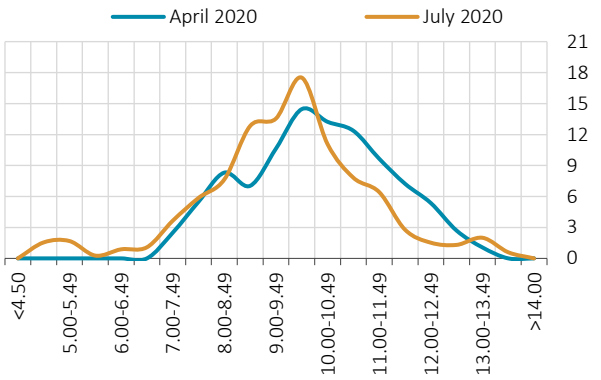


Source: CBRT.

* Calculated by linear interpolation of expectations for different time spans using the CBRT Survey of Expectations that polls corporate sector and financial sector representatives as well as professionals.

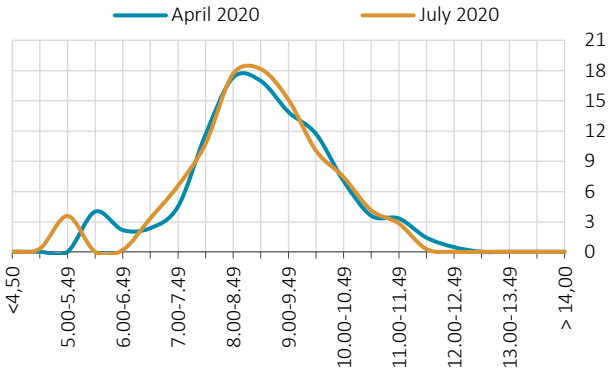
Probability distributions of 12 month-ahead inflation expectations shifted slightly leftward converging to the normal distribution while the same for 24-month-ahead displayed no significant change compared to April (Chart 3.5.3 and Chart 3.5.4).

Chart 3.5.3: Probability Distribution of 12-Month-Ahead Inflation Expectations* (%)



Source: CBRT.
* Horizontal axis denotes the expected inflation rate, while the vertical axis denotes the respective probability. For further details, see Statistics/Tendency Surveys/Survey of Expectations/Metadata at the CBRT's website.

Chart 3.5.4: Probability Distribution of 24-Month-Ahead Inflation Expectations* (%)



Source: CBRT.
* Horizontal axis denotes the expected inflation rate, while the vertical axis denotes the respective probability. For further details, see Statistics/Tendency Surveys/Survey of Expectations/Metadata at the CBRT's website.

Box 3.1

An Evaluation of Recent Unit Cost Developments

Unit cost is defined as the average cost per unit of total goods and services produced in an economy. A gradual normalization in supply and demand conditions has taken place recently after the sharp decline in production and sales due to the pandemic. This makes the concept of unit cost a current issue due to fixed costs. When the adaptation in cost factors, labor, rent and energy in particular, does not accompany the decline in economic activity in the short term, unit costs increase as a result. The recent price increases, especially in sectors such as catering, accommodation, transportation and personal care services that are subject to capacity constraints in the gradual normalization, can be evaluated in this context. Although this box addresses the concept of unit cost over labor costs, similar inferences can be made for all cost factors that affect profitability and pricing behavior, such as non-variable input costs and debt service.

The real unit labor cost is calculated by multiplying the amount of labor used for a unit of production by the real labor cost. The two main components of this indicator can also be expressed as real labor cost per person and partial labor productivity (production amount / employment):

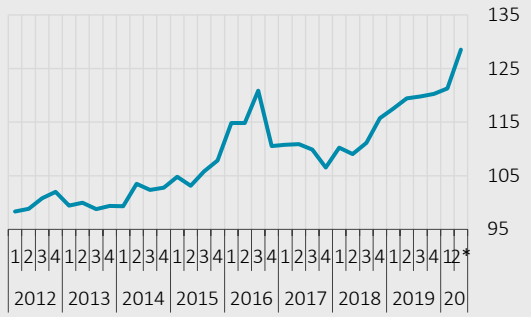
$$Real\ Unit\ Labor\ Cost^{1} = \frac{Total\ Labor\ Cost}{Total\ Production\ Value} = \frac{Labor\ Cost\ per\ Person}{Price} * \frac{Employment}{Production}$$

Accordingly, when the increase in the real labor cost is larger than the increase in productivity, the unit labor cost increases and exerts an upward pressure on inflation. When the real labor cost increase is compensated for by a productivity increase, the real unit labor cost does not change. In historical terms, significant increases in real unit labor costs are observed in 2016 and 2019 when nominal wage adjustments were high, or in periods such as the global financial crisis period when economic activity and productivity declined. In times of production decline, the adaptation in the labor market may be slower and limited compared to the goods and services market, in which case the per capita production (partial labor productivity) decreases. Given the sticky wages, this loss of productivity causes an increase in real unit wages. A similar picture is predicted to have appeared in the second quarter of 2020 when economic activity weakened significantly due to the pandemic (Chart 1).

When the components of this increase predicted in the real unit labor cost are analyzed, it can be seen that contrary to previous periods, the sharp contraction in production has played a significant role. The fact that the decrease in employment is limited compared to production results in a decrease in partial labor productivity and an increase in the real unit labor cost (Chart 2). It should be noted at this point that measures to protect formal employment, particularly the short-term employment allowance, limit the increase in labor cost calculated here.

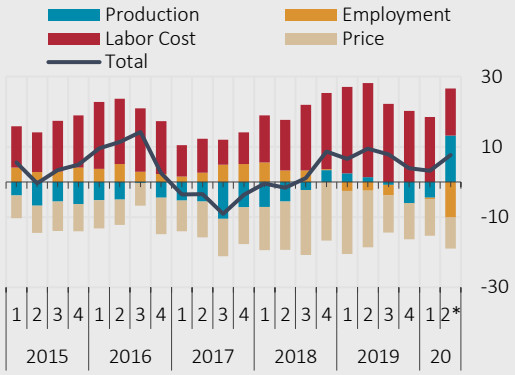
[1] In the calculations, the production variable stands for Non-Agricultural GDP; employment is the Non-Agricultural Employment from the Household Labor Force Survey, labor cost stands for the Hourly Labor Cost data from TURKSTAT's Labor Cost and Earnings Statistics, and Non-Agricultural GDP deflator is used for the price variable.

Chart 1: Real Unit Labor Cost (2012=100)



Sources: CBRT, TURKSTAT. *Forecast.

Chart 2: Real Unit Labor Cost and Its Contribution (YoY % Change, % Point)



Sources: CBRT, TURKSTAT. *Forecast.

In addition to the real unit labor cost, additional costs specific to the pandemic period may also be effective in pricing behavior. Besides increased logistics costs and spending on hygiene and health products due to supply-side problems and pandemic measures, factors such as debt service in periods of sharply declining cash flows can also be determinant in inflation dynamics and limit the disinflationary effect of demand conditions in the short term. Unit cost increases due to capacity constraints also play an important role in the recent price increases in the sectors whose activities were interrupted and then gradually normalized with various restrictions (Table 1).

Table 1: Selected Subgroups of Services (Seasonally Adjusted, Monthly % Change)

	January-March 2020*	April 2020	May 2020	June 2020
Catering services	1.1	0.2	0.0	2.5
Accommodation services	0.5	-0.6	-0.1	1.4
Intercity passenger transport by road	1.4	-0.5	8.2	20.0
Passenger transport by air	0.8	-2.5	-1.3	9.4
Hairdressing and personal grooming services	1.5	-0.4	6.6	3.1

Sources: CBRT, TURKSTAT.
* Monthly averages are taken.

In conclusion, there has been some increase in the trend of core inflation indicators recently due to the decline in production and sales as well as to the impact of unit cost increases driven by the measures against the pandemic. It is projected that with the continuation of the normalization process, the capacity constraints will be alleviated, and accordingly, the supply-side factors that have been effective in the short term due to the pandemic measures will gradually disappear.

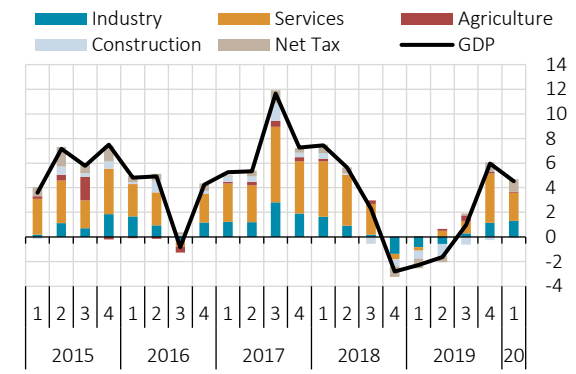
4. Supply and Demand Developments

In the first quarter of 2020, economic activity continued to grow on the back of the strong course in the January-February period. The slowdown in economic activity that was driven by the pandemic since mid-March became more pronounced and spread across sectors in April due to increased measures. Economic recovery, which started in May following the gradual steps towards normalization, is gaining pace. Recent monetary and fiscal measures contribute to financial stability and economic recovery by supporting the potential output of the economy. Accordingly, assuming that there will be no second wave of the pandemic, the economy will likely continue to recover in the second half of the year, but the pace of recovery will depend on the course of normalization both in Turkey and abroad.

4.1 Supply Developments

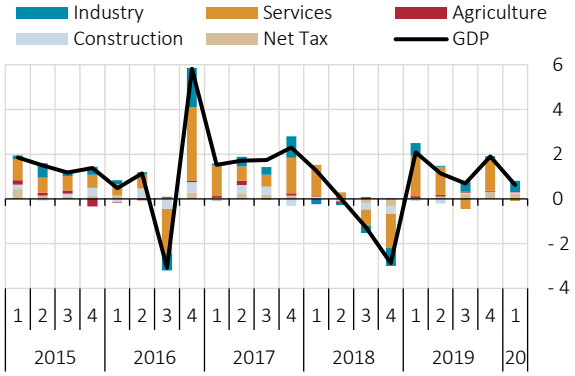
In the first quarter of 2020, GDP increased by 4.5% year-on-year and by 0.6% quarter-on-quarter. The impact of the pandemic on economic activity became more evident in March and curbed growth. Annual growth was supported by all main sectors except the construction sector (Chart 4.1.1). While the industrial sector was the main driver of quarterly growth, the value-added decreased in services sectors that were intensely affected by the pandemic, in particular wholesale-retail trade, transport-storage, and accommodation-catering services (Chart 4.1.2).

Chart 4.1.1: Contributions to Annual GDP Growth from the Production Side (% Points)



Sources: CBRT, TURKSTAT.

Chart 4.1.2: Contributions to Quarterly GDP Growth from the Production Side (Seasonally Adjusted, % Points)



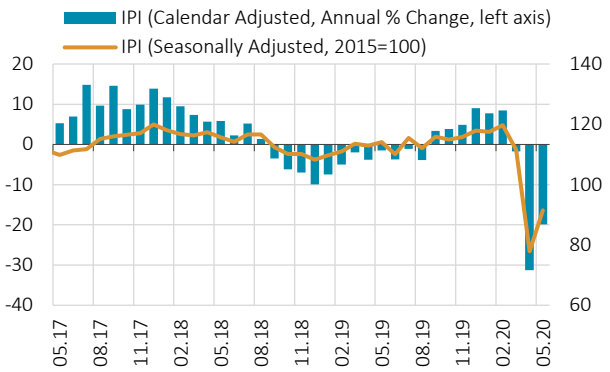
Sources: CBRT, TURKSTAT.

In the second quarter, the restraining effect of the pandemic on economic activity became more apparent starting from April (Box 4.2). As of early May, partial normalization steps triggered a recovery from the trough in the economy, and economic recovery further strengthened in June. Despite the recovery in the May-June period, economic activity is expected to decelerate significantly in the second quarter due to the weak course in April.

The economic slowdown spread across sectors in the second quarter. The Industrial Production Index (IPI) and sectoral turnover indices started to recover in May following the decline in April (Charts 4.1.3 and 4.1.4). However, the fact that the contraction in the March-April period was partially compensated for indicates that the activity remained weak in May. The outlook is comparatively weaker in main exporting sectors such as clothing, textiles, leather, motor vehicles and electrical equipment on the industry side due to weakened export opportunities across all regions, and in sectors on the services side whose activities were negatively affected by the pandemic (such as wholesale-retail trade, transport, accommodation-catering, travel, etc.).

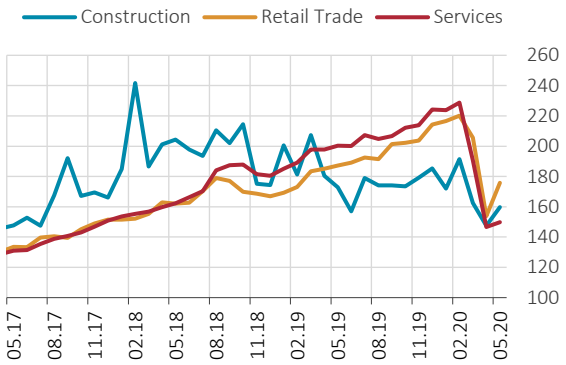
Survey indicators such as the PMI, BTS and sectoral confidence indices as well as high-frequency data suggest that the recovery in economic activity strengthened in June following the expansion of normalization steps (Box 4.1). In that period, survey indicators registered a more visible improvement compared to advanced and emerging economies. The improvement in high-frequency indicators continued in July, which indicates that the recovery was sustained into the third quarter.

Chart 4.1.3: Industrial Production Index



Source: TURKSTAT

Chart 4.1.4: Sectoral Turnover Indices (Seasonally Adjusted, 2015=100)

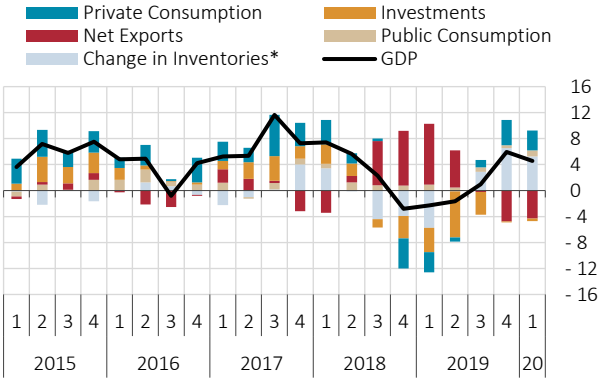


Source: TURKSTAT.

4.2 Demand Developments

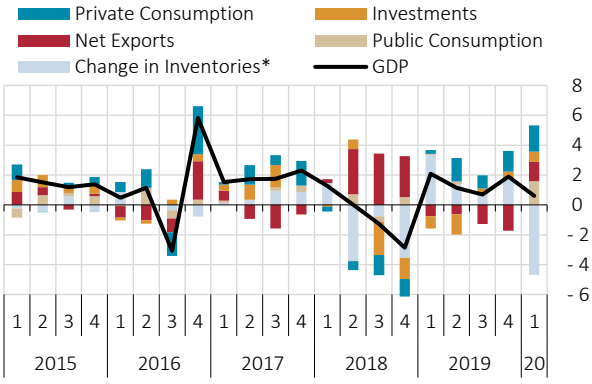
On the expenditures side, the quarterly GDP growth was mainly driven by final domestic demand in the first quarter of 2020, underpinned by the improvement in financial conditions and the acceleration in credits. In this period, private consumption continued to increase while public consumption bolstered growth. Despite the fall in construction investments, the rise in machinery-equipment investments helped boost total investment in quarterly terms though they remained weak in terms of level. While exports of goods and services declined due to the pandemic-led contraction in external demand and deceleration in tourism activity, imports were relatively strong on the back of domestic demand. Accordingly, net exports negatively contributed to annual growth (Charts 4.2.1 and 4.2.2).

Chart 4.2.1: Contributions to Annual Growth from the Expenditure Side (% Points)



Sources: CBRT, TURKSTAT.
* Includes inventories and statistical discrepancy due to chain linking.

Chart 4.2.2: Contributions to Quarterly Growth from the Expenditure Side (% Points)



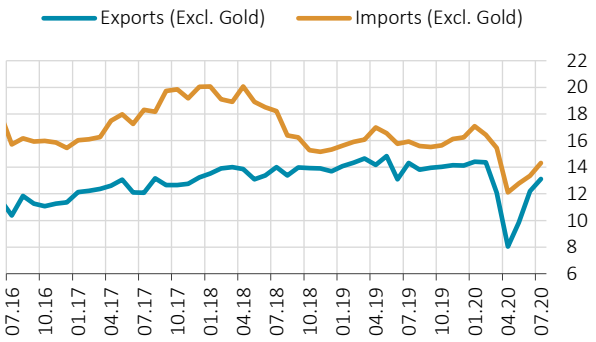
Sources: CBRT, TURKSTAT.
* Includes inventories and statistical discrepancy due to chain linking.

Business closures and movement restrictions driven by the pandemic measures as well as heightened uncertainties significantly weakened domestic demand in the second quarter. However, the lifting of movement restrictions and the ongoing strong acceleration in credits led by state banks have facilitated recovery in domestic demand. In fact, there has been a quite rapid recovery in credit card spending on items other than tourism and affiliated groups such as airlines, travel/transport, and accommodation. Accordingly, spending on items with pent-up demand that are highly sensitive to financing conditions (items linked to construction such as furniture, construction materials and contracting services, and electronics, maintenance/repair, etc.) have considerably strengthened. Besides, the public sector continues to support growth.

In April when the pandemic had the most drastic negative effects, exports sharply declined due to the contraction in external demand and the closure of borders while the deceleration in imports was milder. Accordingly, the foreign trade deficit increased. May figures and provisional foreign trade data for June indicate that the foreign trade volume, most visibly exports, posted a recovery and the foreign trade deficit started to decline following the gradual easing of measures in Turkey and abroad (Chart 4.2.3). Meanwhile, travel restrictions brought activity in tourism and affiliated sectors almost to a halt in the second quarter.

Due to the sharp fall in export and tourism revenues, the annualized current account balance continued to deteriorate and posted a deficit of USD 8.2 billion as of May. However, seasonally adjusted data for May suggest an improvement in the monthly current account balance led by the recovery in exports (Chart 4.2.4). The recovery in exports of goods following the normalization and low levels of commodity prices are projected to support the current account balance in the upcoming period.

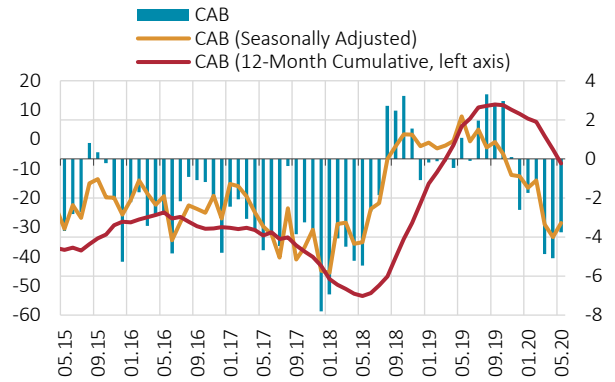
Chart 4.2.3: Exports and Imports* (Billion USD)



Sources: CBRT, TURKSTAT. Last Observation: 25 July 2020

* Forecasts based on MT provisional data for June, and daily data for July.

Chart 4.2.4: Current Account Balance (CAB) (Billion USD)



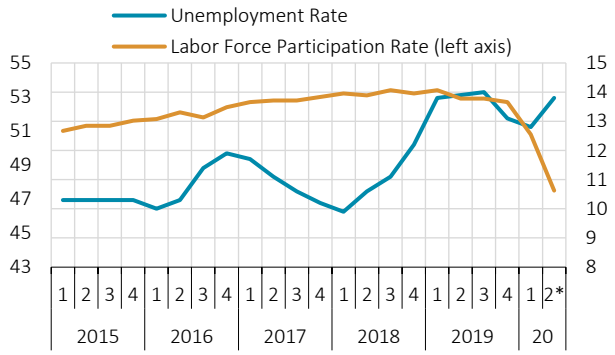
Source: CBRT.

To sum up, while the slowdown in economic activity became more evident in April, the recovery has gained pace since May following the gradual steps towards normalization. Recent monetary and fiscal measures contribute to financial stability and economic recovery by supporting the potential output of the economy. Against this background, economic activity is expected to register a substantial improvement in the third quarter despite the significant weakening across the second quarter. The pace of recovery in the upcoming period will depend on the course of normalization both in Turkey and abroad. Assuming that there will be no second wave of the pandemic that would call for measures again, the economy will likely continue to recover in the second half of 2020.

4.3 Labor Market

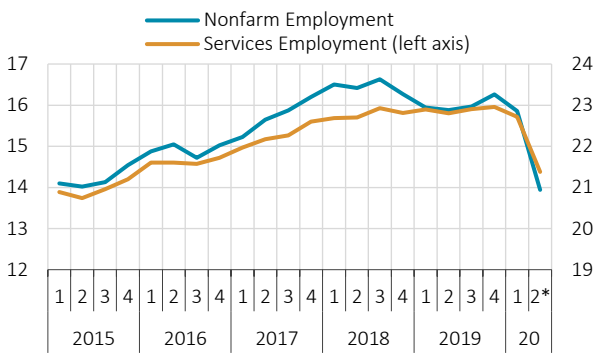
Since the February period, effects of the pandemic-driven business closures, capacity constraints and the slowing economic activity on the labor market have become more pronounced. In the period following January, the seasonally-adjusted nonfarm (total) employment loss reached approximately 2.2 (2.5) million people. However, as the persisting fall in the labor force participation rate became evident, the impact of employment losses on unemployment rates remained limited. Seasonally-adjusted total and nonfarm unemployment rates stood at 12.8% and 14.7%, respectively, in the first quarter, whereas they rose to 13.8% and 16.1% in the April period (Chart 4.3.1). The rise was more pronounced in broad unemployment rates that are calculated taking into account underemployment, seasonal workers, and people who do not actively seek job.

Chart 4.3.1: Unemployment and Labor Force Participation Rates (Seasonally Adjusted, %)



Sources: HLFS, TURKSTAT.
* As of April period.

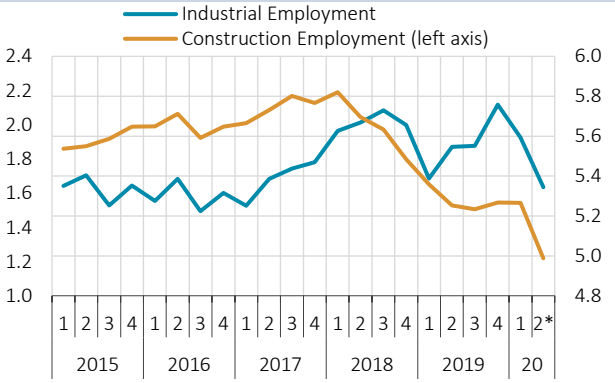
Chart 4.3.2: Nonfarm and Services Employment (Seasonally Adjusted, Million People)



Sources: CBRT, TURKSTAT.
* As of April period.

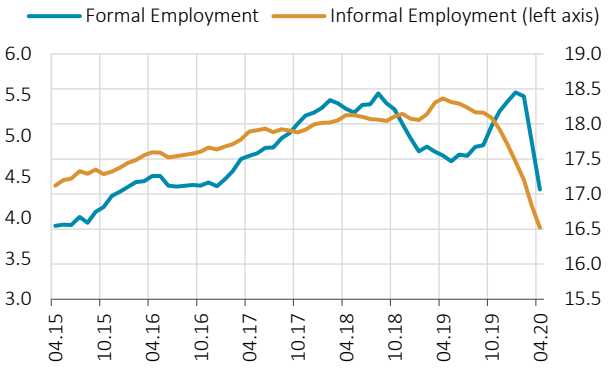
An analysis of nonfarm employment developments by sectors reveals that employment losses extended across all main sectors, most visibly in services (Charts 4.3.2 and 4.3.3). Losses were noticeable particularly in wholesale-retail trade and accommodation services whose activities were negatively affected by the halt in tourism and the pandemic measures. Broken down by formal and informal employment, nearly half of employment losses were registered across those working informally (Chart 4.3.4). Measures to maintain employment contained the formal employment losses to a large extent while employment losses in informal sectors were observed across all groups, more apparently in wholesale-retail trade and accommodation services.

Chart 4.3.3: Industrial and Construction Employment (Seasonally Adjusted, Million People)



Sources: TURKSTAT.
* As of April period.

Chart 4.3.4: Nonfarm Employment in Formal vs. Informal Breakdown (Seasonally Adjusted, Million People)



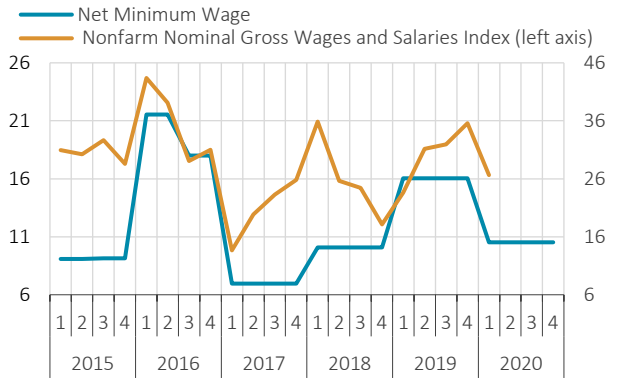
Sources: TURKSTAT.

Leading indicators and high-frequency data suggest that the labor market remains weak despite the positive impact of the measures and the recent recovery. In this respect, it is projected that the rise in unemployment rates will continue in the second quarter but the fall in labor force participation rates will somewhat limit this rise.

4.4 Wages and Productivity

The minimum wage was raised by 15% in 2020 to net TRY 2,325. Accordingly, the annual non-farm nominal wage growth reached 16.3% in the first quarter of 2020 (Chart 4.4.1). As the quarterly rate of increase stood above inflation, real wages rose on a quarterly basis in the first quarter (Chart 4.4.2).

Chart 4.4.1: Nonfarm Gross Wage Salary Index and Net Minimum Wage (Nominal, 2015=100, Annual % Change)



Sources: MLSS, CBRT, TURKSTAT

Chart 4.4.2: Nonfarm Hourly Earnings Index and Minimum Wage* (Real, Seasonally Adjusted, 2015=100)

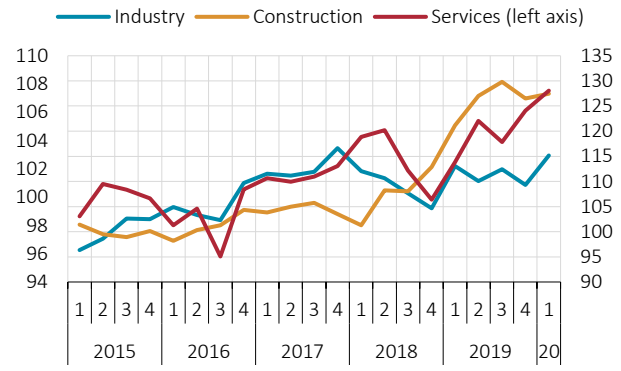
Sources: CBRT, TURKSTAT.

* Deflated by the CPI.

Nonfarm partial labor productivity posted a strong increase in the first quarter of 2020 that spread across all sectors (Chart 4.4.3). Since per capita real wages rose to a limited extent despite this increase, real unit wages (per capita real wage/productivity) decreased (Chart 4.4.4).

In addition to minimum wage developments, the course of economic activity, unemployment rates, and inflation developments are also the main factors affecting wages. With the stronger impact of the pandemic on economic activity in the second quarter of the year, production and sales decreased sharply, leading to a significant hike in real unit wages. Accordingly, capacity constraints due to gradual opening in particular are causing unit wages to rise in some sectors (transport, restaurants, hotels, personal care services, etc.) (Box 3.1). While the short-time work allowance is alleviating the labor cost burden on employers, the exclusion of informally working employees from its coverage is curbing this effect or increasing employment losses. It is projected that the negative effects on employment will be largely temporary and unit labor cost-driven effects on inflation will get milder following the recovery expected in the second half of the year once the pandemic loses pace in Turkey.

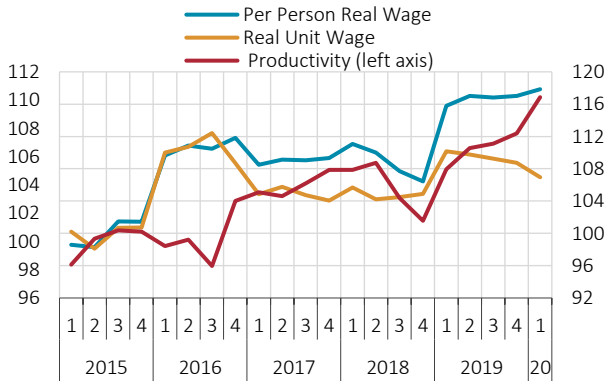
Chart 4.4.3: Sectoral Partial Labor Productivity* (Seasonally Adjusted, 2015=100)



Sources: CBRT, TURKSTAT.

* Value added/ Employment (HLFS).

Chart 4.4.4: Nonfarm Partial Labor Productivity*, Per Capita Real Wage and Real Unit Wage** (Over Value Added, Seasonally Adjusted, 2015=100)



Sources: CBRT, TURKSTAT.

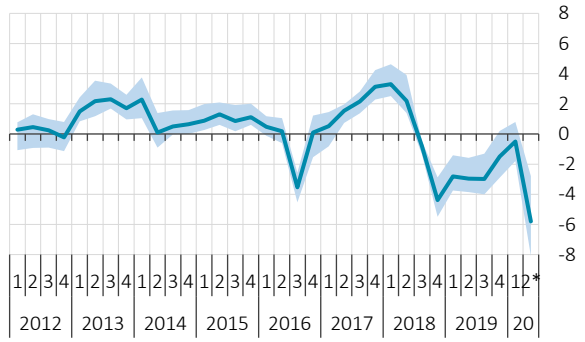
* Nonfarm value added/nonfarm employment (HLFS).

** Per capita real wage x employment/value added. Deflated by CPI.

4.5 Output Gap

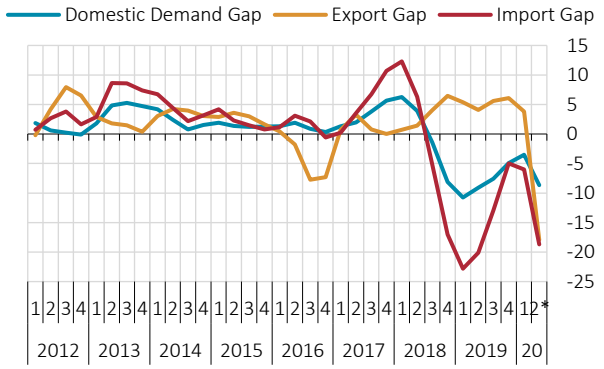
The weakening economic activity hampered the economic recovery process in the second quarter of the year. Although it is estimated that aggregate demand conditions had a stronger disinflationary effect in this period compared to the first quarter, this effect remained relatively limited since a significant part of the slowdown registered in the second quarter was driven by supply factors and certain sectors were subject to capacity constraints in the gradual normalization phase (Box 7.1). As the normalization continues, supply-side factors, which have prevailed recently due to pandemic-related restrictions, will phase out and demand-driven disinflationary effects will become more prevalent in the second half of the year.

Chart 4.5.1: Output Gap Indicators (Average and Minimum-Maximum Band)



Source: CBRT calculations.
* Based on second quarter forecasts.

Chart 4.5.2: Breakdown of Output Gap by Demand Components**



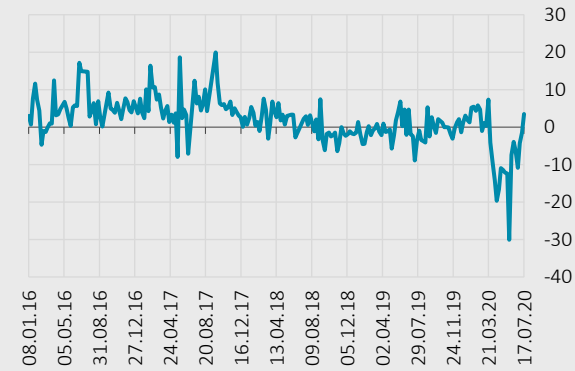
Source: CBRT calculations.
* Based on second quarter forecasts.
**Output gap series by demand components (see Inflation Report 2018-III Box 4.1).

Box 4.1

Weekly Economic Conditions Index (WECI)

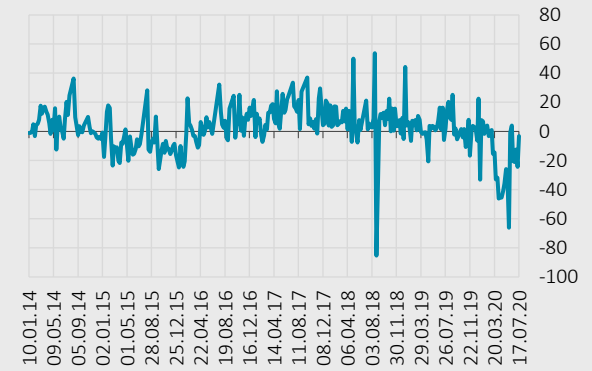
Since main indicators (national income, industrial production, etc.) that provide information on economic activity are released with a delay, high frequency indicators are needed to obtain timely information about the course of economic activity. In this context, in addition to using surveys and financial indicators, early signals about the pace of economic activity can be obtained through certain high frequency data such as electricity consumption and foreign trade statistics, which can be monitored on a daily basis (Charts 1 and 2). In fact, the high frequency data monitored by the CBRT indicate that the effects of the pandemic became evident in mid-April and that the recovery started in May. Meanwhile, industrial production and turnover indices, which are announced with a delay in mid-July, confirmed these signals received in May.

Chart 1: Electricity Consumption (Weekly, Annual % Change)



Source: Turkish Electricity Transmission Corporation.

Chart 2: Exports (Nominal, Weekly, Annual % Change)



Source: Ministry of Trade.

Obtaining reliable early signals by aggregating information from different indicators in the most appropriate way became even more important during the pandemic. Accordingly, many central banks have started to construct weekly indicators and share them with the public (Lewis et al. (2020) for the US economy and Eraslan and Götz (2020) for the German economy). In this box, a Weekly Economic Conditions Index (WECI) is introduced aiming at tracking developments in the Turkish economic activity in a timely manner (Çelgin and Günay, 2020).

Data and Methodology

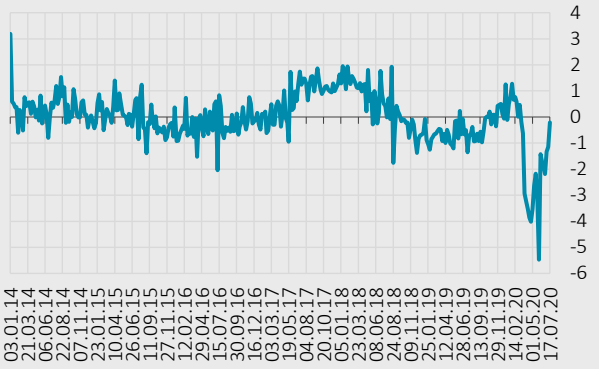
The WECI uses high frequency real and financial data with the potential to provide information on the course of economic activity. In this context, total credit growth and total expenditures by domestic and foreign cards are tracked on a weekly basis; while total job postings on the Kariyer.net website, electricity consumption, exports and imports are tracked on a daily frequency. After converting daily flow variables into weekly frequency by aggregating the daily values of the relevant week, the weekly annual percentage changes of all variables are calculated. Additionally, in the periods that correspond to religious and national holidays, annual changes are smoothed by the trends of the weeks before and after the relevant week so that the calendar effects would not disturb the main trend. This procedure does not affect recent values of the index much, but facilitates the interpretation of the index by correcting the high volatilities observed in the past. The WECI is calculated from 2014 due to data constraints.

While constructing the index, the Weekly Economic Index (WEI) method developed by the Fed to monitor the effects of the pandemic on the US economy is adopted (Lewis et al., 2020). The WEI is constructed by taking the principal component of the weekly annual percentage change of ten variables. These variables are informative about consumption, production and the labor market. Similar to Lewis et al., the WECI is constructed using the first principal component of the annual percentage change of the weekly indicators. After calculating the WECI, it is associated with GDP growth by taking the quarterly average.

Estimation Results

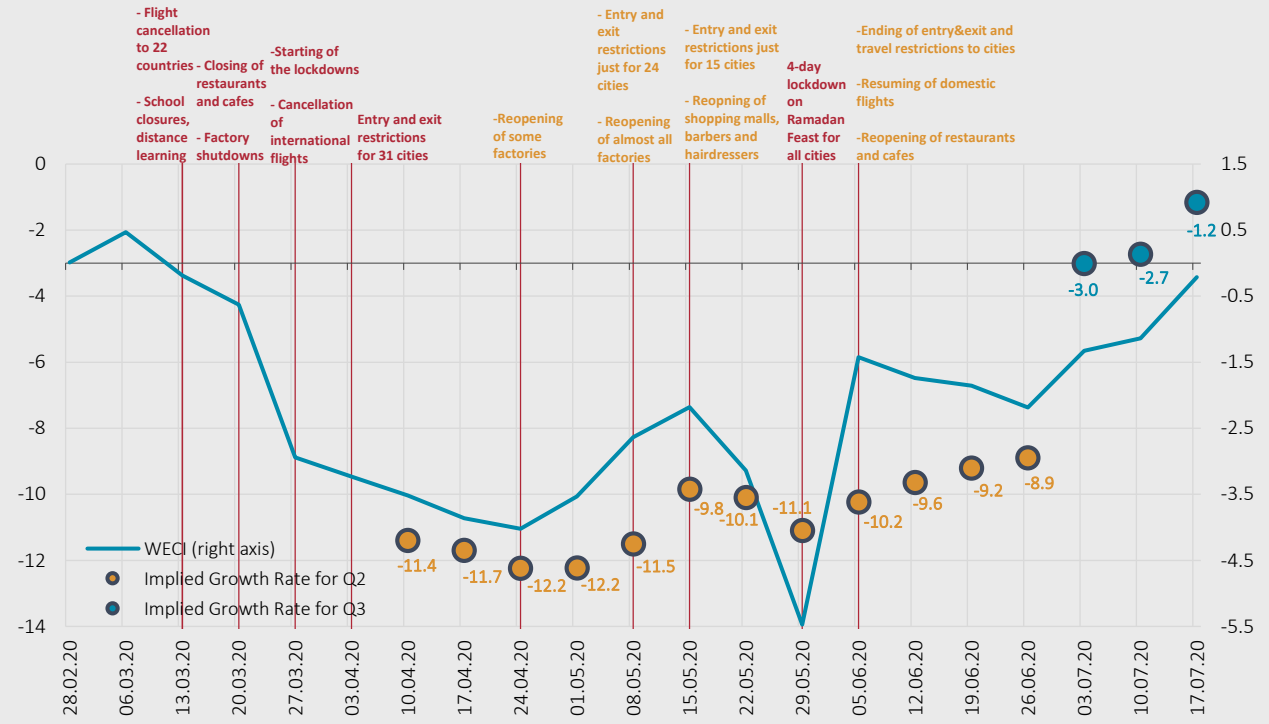
Calculated values of the WECI are presented in Chart 3. The index is standardized so that its mean is zero and standard deviation is one. Thus, the values of the index indicate how many standard deviations away the index is from its average in the sample. The final value of the index indicates that economic conditions are 0.2 standard deviations lower than the average. Having dropped below zero since mid-March after the report of the first coronavirus case and enforcement of subsequent preventive measures, the index records its lowest level at the week ending on the 29th of May due to the effect of the 4-day lockdown enforced across the country during the Ramadan Feast. The second lowest level is observed at the week ending on the 24th of April, and after this week, the index improves, indicating that economy starts to recover from the consequences of the pandemic.

Chart 3: Weekly Economic Conditions Index (WECI)



Source: Authors' own calculations. Last Observation: July 17, 2020

Chart 4: Weekly Economic Conditions Index and Event Timeline



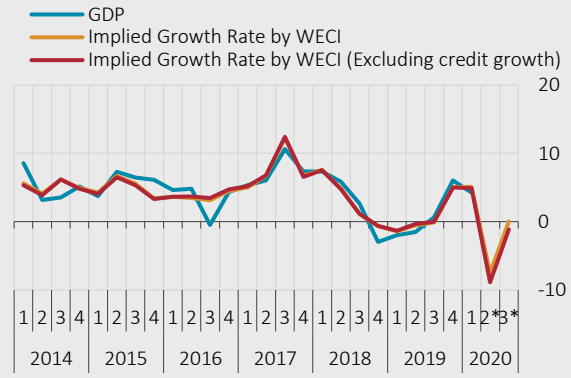
Source: Authors' own calculations. Last Observation: July 17, 2020

In Chart 4, the WECI is plotted with some key weekly events since the beginning of March to examine recent developments. It is observed that with the introduction of restrictions on mobility and travel, interruption of production in factories and temporary suspension of the activities of the workplaces, the index posts a noticeable decline on the second half of March to the end of April. As the measures are eased and the partial normalization steps are implemented with the decline in the number of cases, signals of recovery in economic activity have appeared as of the first week of May. The index, which declines due to the temporary measures in the second half of May, starts to increase with the widening of the scope of normalization steps in June.

For a better interpretation of the signals of the WECI on developments in economic activity, a regression is run between calendar-day-adjusted annual GDP growth and the quarterly average of the WECI. Model estimates imply that there may be a significant annual contraction in the national income data in the second quarter, but there may be a significant recovery in the third quarter (Chart 5). Finally, the index, here presented with data up to the week ending on the 17th of July, may increase further with the data flow in the following period.

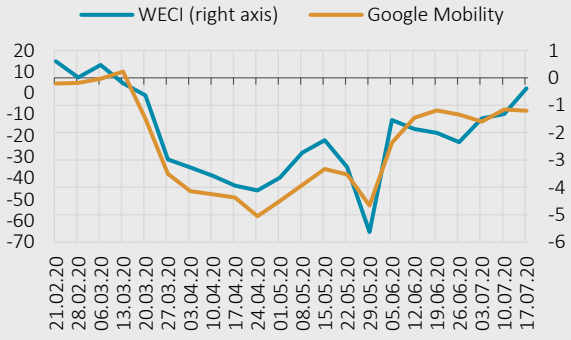
However, it should be noted that indicators included in the index may not fully reflect the developments in the services sector. Also, because of the increased electricity consumption of households especially in the second quarter, electricity consumption of workplaces may be weaker. So, there may be downward risks to these model estimates. Additionally, considering that the credit-growth relationship may differ at the current juncture, mostly in the second quarter, the index is reconstructed excluding credit growth. The WECI, estimated by excluding credit data, implies that the contraction in in the second-quarter GDP may have been somewhat deeper, and the above-mentioned downward risks remain for this indicator as well (Chart 5).

Chart 5: GDP (Adjusted for Calendar Effects, Annual % Change) **and Implied Growth Rate for GDP**



Source: Authors' own calculations, TURKSTAT. * Forecast.

Chart 6: WECI and Google Mobility Index



Source: Authors' own calculations, Google. Last Observation: July 17, 2020

Measures to reduce social mobility and subsequent easing of these measures shape the course of activity. As a matter of fact, a relatively high correlation is seen between the Google mobility index, obtained from mobile devices to monitor the effects of the pandemic disease on a global scale, and the WECI (Chart 6). [1] As of June, the restrictions have been lifted to a large extent and mobility has increased, which points to an improvement in economic conditions. In this respect, it is projected that effects of the steps towards normalization will be more visible in the third quarter and the recovery in economic activity will continue.

[1] Mobility data show percentage changes in six categories, shopping-entertainment, market-pharmacy, workplaces, parks, transportation points and residences, compared to the period of January 3-February 6, 2020. The mobility index is calculated by aggregating data for the first three categories.

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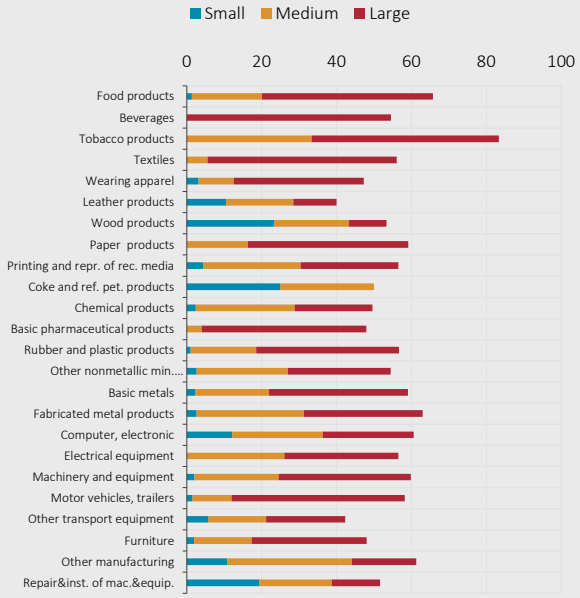
Box 4.2

Survey of the Effects of the Pandemic on the Real Sector

To learn how senior managers view the effects of the pandemic on production, level of employment, costs and selling prices as well as the policy measures that can be taken in response to the problems the pandemic created for manufacturing industry, the Central Bank of the Republic of Turkey conducted the "Survey of the Effects of the Pandemic on the Real Sector" with firms in the Business Tendency Survey (BTS) between 31 March and 7 April.

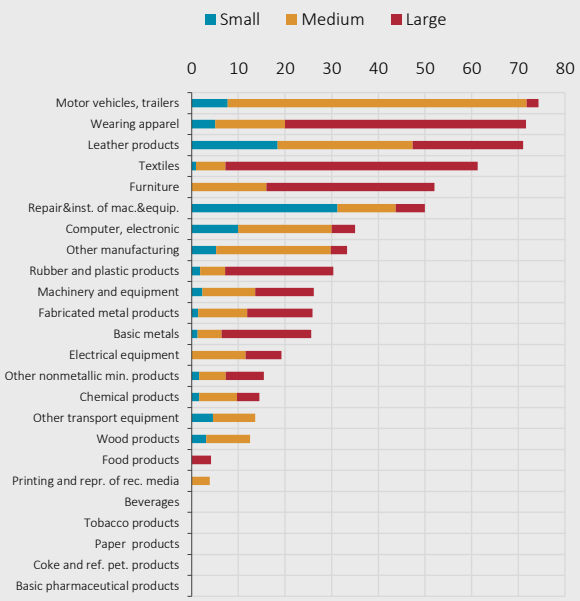
A total of 1,249 firms responded to the survey, and the response rate was 56.3%. Chart 1 presents the response rates by sector and scale. Among the surveyed firms, 6.6% are small-sized (with less than 50 employees), 35.2% are medium-sized (with more than 50, less than 250 employees), and 58.2% are large-sized (with more than 250 employees) enterprises.

Chart 1: Response Rate to the Survey by Sector and Scale (%)



Source: CBRT.

Chart 2: Percentage of Firms That Suspended Their Operation by Sector and Scale (%)



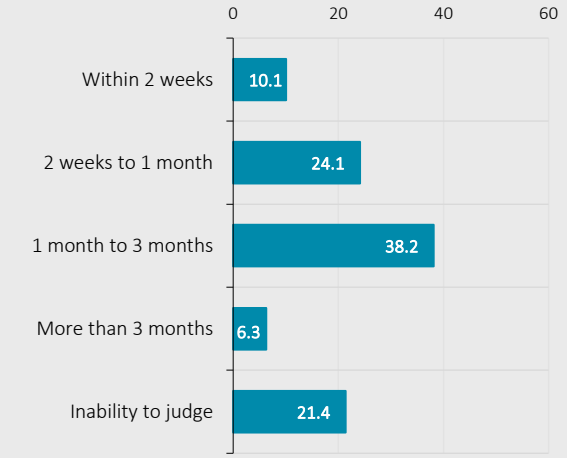
Source: CBRT.

The survey results show that 71.2% of firms continued their operation while 28.8% suspended their operation during the pandemic. The operation status by sectors shows that more than 50% of firms in the textile, clothing, leather, vehicle and furniture sectors stopped operations, which is high compared to other sectors (Chart 2). When we look at the operation status by scale, we see that the firms that stopped operations constitute 36.4%, 25.1% and 30.5% of small, medium and large-sized firms, respectively.

As for business recovery, nearly 21.4% of the firms could not foresee a certain period of time for recovery while the expected time for the remaining firms concentrated on one month to three months (Chart 3).

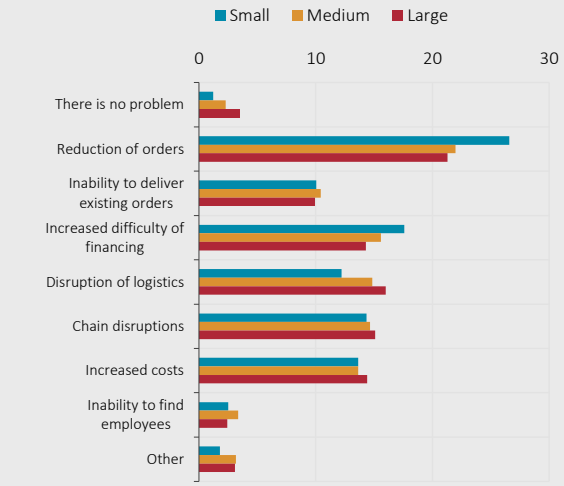
The reduction in orders has been reported as the most important problem caused by the pandemic (Chart 4). Increased difficulty of financing, logistics disruptions, supply chain disruptions, and increased costs are among other problems driven by the pandemic. When the problems faced by firms are compared by scale, it is observed that the reduction in orders and increased difficulty of financing are more evident problems for small-sized firms. The percentage of firms that indicate the disruption of logistics as a business problem are higher in large-sized firms.

Chart 3: Expected Time for Business Recovery (%)



Source: CBRT.

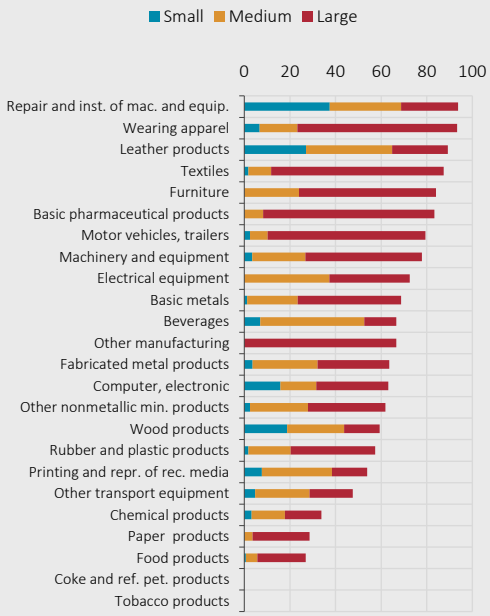
Chart 4: Business Problems Due to the Pandemic (%)



Source: CBRT.

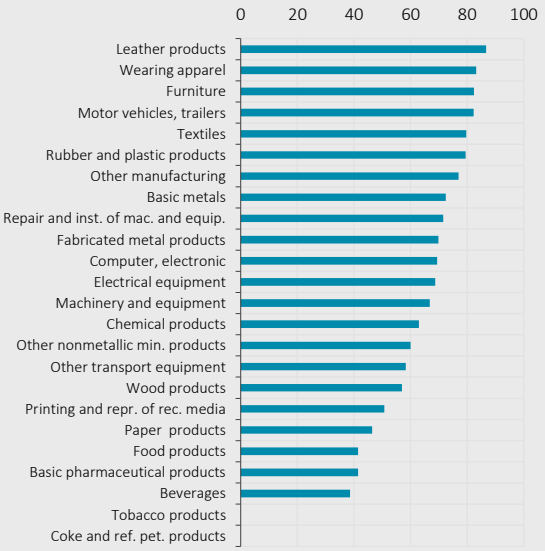
As of early April, the effects of the slowdown in production activities on the employment trend were relatively limited. The rate of layoffs was limited to 1.5%, while the average percentage of those planning layoffs was 9.1%. It is seen that 63.4% of the firms considered using the short-time working allowance, and these firms stated that they would use this facility for 70.5% of their employees on average (Charts 5 and 6).

Chart 5: Percentage of Firms That Consider Using Short-time Working Allowance by Sector and Scale (%)



Source: CBRT.

Chart 6: Percentage of Employees That the Firms Plan to Use Short-time Working Allowance for by Sector (%)

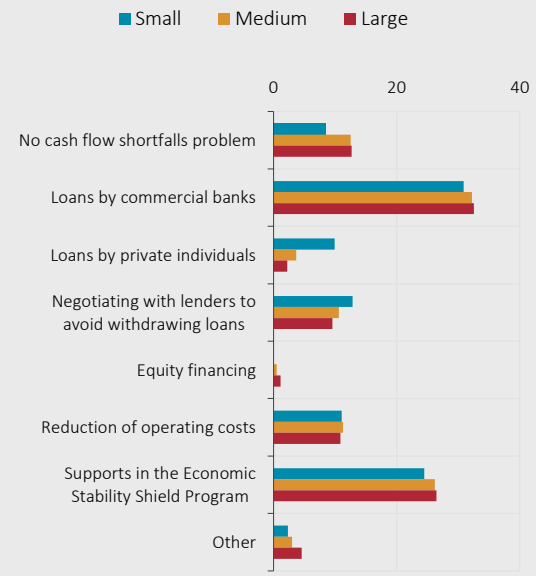


Source: CBRT.

It is noted that large-sized firms plan to use the short-term working allowance at a higher rate than others. The tendency to use the short-time working allowance in the food, paper products, and chemical products sectors, whose activities were relatively less affected, remained low compared to others.

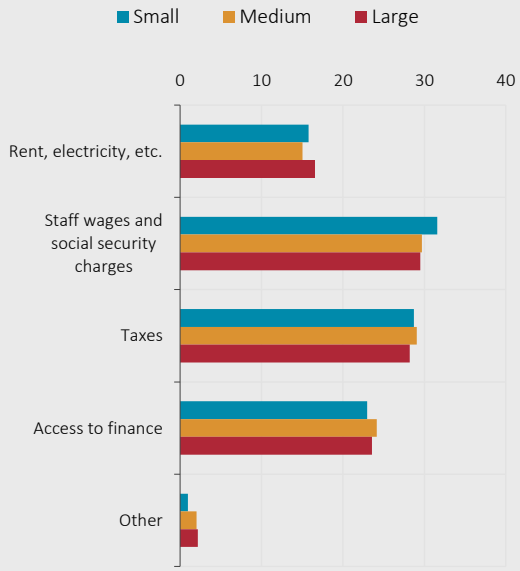
Firms specified commercial bank credits as the most important tool to deal with cash flow shortages (Chart 7). Benefiting from the support announced under the Economic Stability Shield program stands as the second important tool. On the other hand, it has been observed that small firms made more use of the options of obtaining loans from individuals and negotiating with lenders to avoid withdrawing loans, compared to others. When asked about their opinion on which policies would prove more effective to maintain the pre-pandemic employment level, the respondents mentioned “personnel expenses”, “taxes” and “access to finance” as the most important (Chart 8).

Chart 7: Main Tools Used to Cope with Cash Flow Shortages (%)



Source: CBRT.

Chart 8: Which Policies would be More Effective to Maintain the Pre-pandemic Employment Level (%)



Source: CBRT.

To conclude, the thematic survey applied to the firms in the manufacturing industry in early April provided significant information by sector and scale to identify the effects of the pandemic on the real sector in a timely manner and to design appropriate policies. Accordingly, the survey has formed a basis for the comprehensive measures taken to secure interrupted flow of credits to the real sector and broadly support firms with a view to limiting the adverse effects of the pandemic on the Turkish economy.

5. Financial Conditions and Monetary Policy

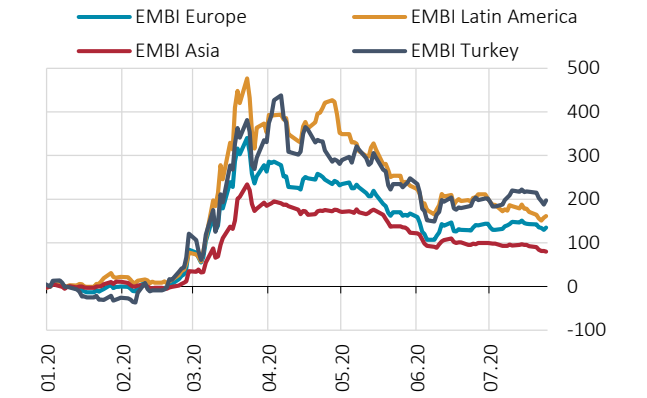
In the second quarter of 2020, owing to the monetary and fiscal policies in effect in addition to the start of the post-pandemic normalization period , global risk appetite improved somewhat and the risk sentiment towards emerging economies improved. In the current reporting period, the pace of capital outflows from emerging economies slowed, and increased risk appetite pushed asset and commodity prices upwards. In this period, emerging economies witnessed a fall in risk premiums and some appreciation in currencies. In the second quarter of the year, financial conditions proved more supportive of economic activity than the previous quarter, yet they have not retained pre-pandemic levels.

The CBRT made a more measured cut in May compared to April, but left the policy rate unchanged at 8.25% in June and July in view of all the factors affecting inflation. In tandem with the CBRT's rate cuts, the easing trend in domestic funding conditions, which started in the third quarter of 2019, continued in the second quarter. TL loan rates, which remained relatively flat in the first quarter of the year, decreased in the second quarter amid the decline in funding costs. Owing to the declining rates as well as the support packages to mitigate the adverse impacts of the pandemic on households and firms, consumer and commercial loan utilization displayed an upsurge.

5.1 Financial Markets and Monetary Policy

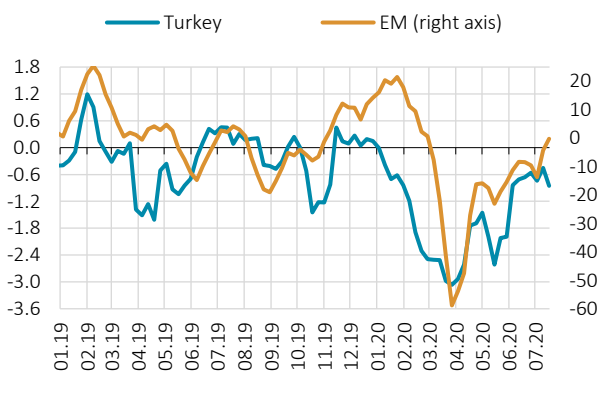
After a notable pandemic-driven downturn in the first quarter of the year, global risk appetite recovered somewhat in the second quarter. This is mainly attributed to the gradual commencement of the normalization process as well as the accommodative steps of central banks and comprehensive fiscal measures announced by governments. Amid increased risk appetite, stocks of advanced economies appreciated and commodity prices increased. Risk premiums of emerging economies receded in the second quarter of the year, yet remained above pre-pandemic levels. Turkey's sovereign risk premium receded, along with those of other emerging economies, yet remained high (Chart 5.1.1). In the current reporting period, capital outflows from emerging economies including Turkey continued, albeit at a slower pace (Chart 5.1.2). In this period, GDDS markets of emerging economies recorded limited capital inflows, while Turkey saw further outflows from the GDDS market. Despite capital outflows, returns on GDDS receded due mainly to the increased bond demand amid the asset ratio measures applied to banks and partly to the bond purchases of the CBRT (Box 5.1). In the stock markets, outflows both from emerging economies and Turkey continued in the current reporting period.

Chart 5.1.1: Change in Regional Risk Premiums* (2 January 2020 = 0, Basis Points)



Source: Bloomberg.
* Shows cumulative changes since 2 January 2020.

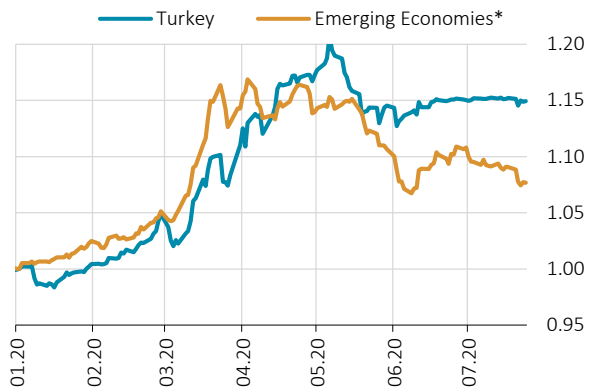
Chart 5.1.2: Portfolio Flows in Emerging Economies* (4-Week Cumulative, Billion USD)



Source: EPFR, CBRT.
* Turkey data includes portfolio inflows to stocks and GDDS market. Repo is included in the GDDS data. Emerging economy data is from the EPFR database. It includes all the database-covered funds' weekly net investments in equity and GDDS markets in emerging economies.

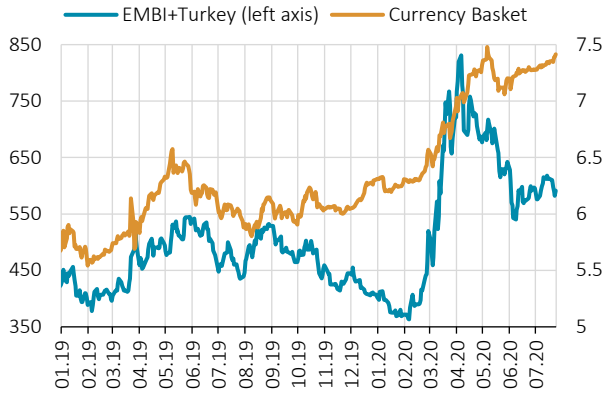
Currencies of emerging economies appreciated slightly against the US dollar in the current reporting period, while the appreciation in the Turkish lira remained more limited (Charts 5.1.3 and 5.1.4). Due to the upswing in global risk appetite, the pressure on the currencies of emerging economies alleviated to a lesser extent. However, the rise in oil prices led to a negative divergence in the currencies of oil-importing emerging economies that also include Turkey.

Chart 5.1.3: Turkish Lira and Emerging Market Currencies against US Dollar (02.01.2020=1)



Sources: Bloomberg.
* Emerging economies: Brazil, Chile, Colombia, Hungary, Malaysia, Mexico, Poland, Romania, S. Africa, India, Indonesia and the Philippines.

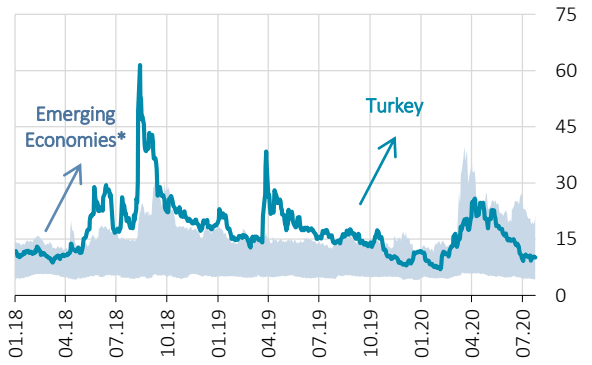
Chart 5.1.4: Exchange Rate Basket* and EMBI Index of Turkey



Sources: Bloomberg.
* Exchange rate basket represents the value of the Turkish lira against 0.5*USD + 0.5*euro.

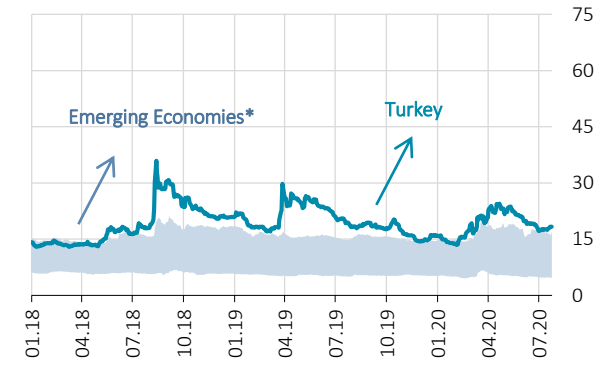
The implied volatility of the Turkish lira has decreased in the current reporting period, yet still hovers above the pre-pandemic levels. The one-month implied volatility of the Turkish lira receded as of late April and displayed positive divergence compared to other emerging market currencies. Nevertheless, the decline in the 12-month implied volatility of the Turkish lira proved more limited (Charts 5.1.5 and 5.1.6).

Chart 5.1.5: Exchange Rate Volatilities Implied by Options (1-Month Forward)



Sources: Bloomberg.
* Emerging economies: Brazil, Indonesia, the Philippines, S. Africa, Colombia, Hungary, Malaysia, Mexico, Poland, Romania, Chile.

Chart 5.1.6: Exchange Rate Volatilities Implied by Options (12-Month Forward)



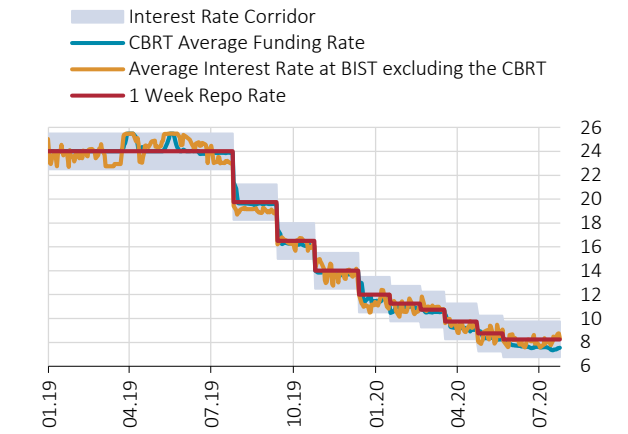
Sources: Bloomberg.
* Emerging economies: Brazil, Indonesia, the Philippines, S. Africa, Colombia, Hungary, Malaysia, Mexico, Poland, Romania, Chile.

Monetary Policy Response

In view of the increased downside risks to the year-end inflation projections in March and April, the CBRT made a policy rate cut of 200 basis points in total. Highlighting the rise in unit costs resulting from declining production and sales in May, the CBRT made a measured policy rate cut of 50 basis points considering that inflation may increase slightly in the short term, but demand-driven disinflationary effects would be more prevalent. Despite the restraining effects of aggregate demand conditions in June, the CBRT left the policy rate unchanged emphasizing that the pandemic-related rise in unit costs had led to some increase in the trends of core inflation indicators. In July, the CBRT maintained the view that

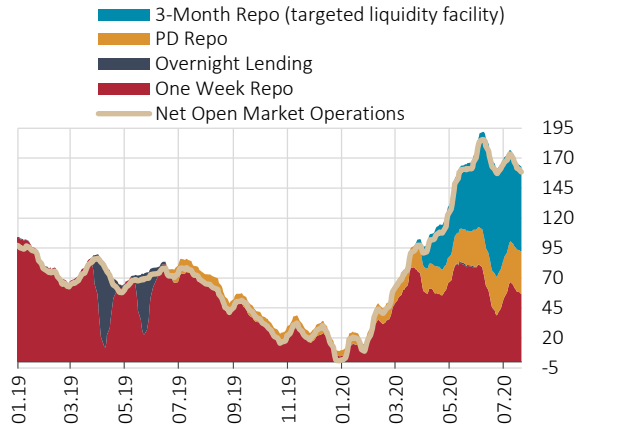
demand-driven disinflationary effects will become more prevalent in the second half of the year, but risks to the end-year projection are considered to be on the upside due to recent realizations in inflation. In view of all factors affecting the inflation outlook, the Committee kept the policy rate unchanged (Chart 5.1.7).

Chart 5.1.7: Short-term Rates (%)



Sources: BIST, CBRT.

Chart 5.1.8: CBRT Open Market Operations (2-week Moving Average, TRY Billion TL)

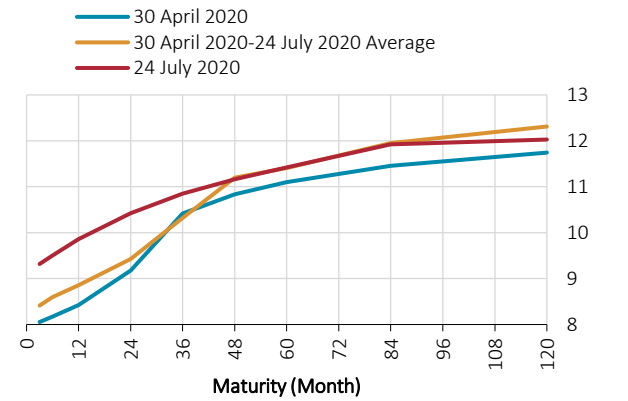


Sources: CBRT.

In the current reporting period, a large portion of the funding need of the system has been met by TL currency swap transactions at the CBRT and BIST. However, the composition of funding provided through open market operations (OMO) changed parallel to the new facilities launched following the pandemic (Chart 5.1.8). The amount of funding provided by 3-month repo auctions launched with the CBRT's package of measures announced on 17 March 2020 has displayed a significant rise in the current reporting period. Due to the large portion of long-term repo auctions in OMO funding held at lower rates than the CBRT policy rate, the CBRT average funding rate hovered steadily below the policy rate (Chart 5.1.7).

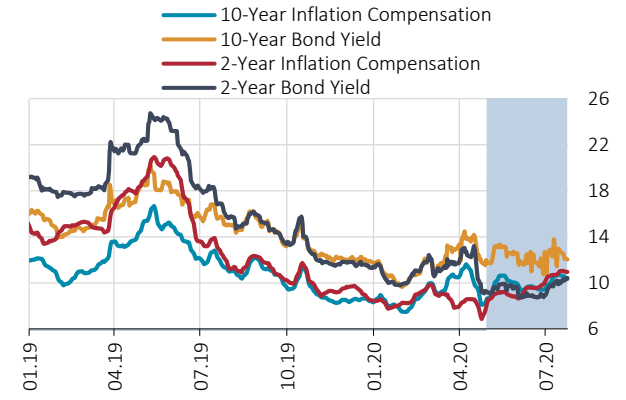
The yield curve has maintained its positive slope in the current reporting period, and has shifted upwards across all maturities due to the rise in the sovereign risk premium and inflation compensation (Chart 5.1.9). Due to the rising inflation and sovereign risk premiums that followed a high course in May and June, market-based inflation compensation increased. Increases in inflation compensation proved higher than the long-term inflation expectations in the CBRT Survey of Expectations (Chart 5.1.10).

Chart 5.1.9: Recent GDDS Yield Curve (%)



Source: Bloomberg.

Chart 5.1.10: Bond Yields (%) **and Inflation Compensation** (5-day Moving Average, %)

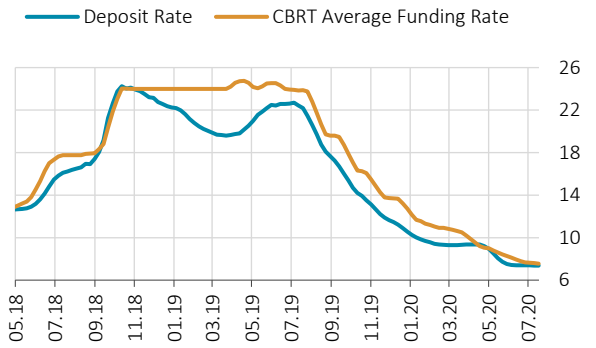


Source: Bloomberg.

5.2 Credit Conditions

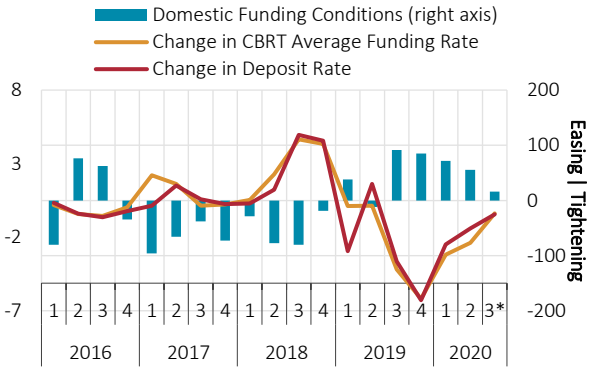
The downtrend in the CBRT average funding rate and deposit rate, which started in the third quarter of 2019, continued in the second quarter of 2020 (Chart 5.2.1). In addition to the CBRT's rate cuts, arrangements in required reserves based on loan growth implemented since August 2019 and liquidity facilities that support loan supply provided with the measures announced on 17 March 2020 have also improved funding conditions of banks. Consistent with the decline in banks' funding costs, as the data from the Bank Loans Tendency Survey (BLTS) suggests, the contribution of domestic funding conditions to easing in loan standards continued during the second quarter of the year, albeit with a diminishing pace (Chart 5.2.2). In the third quarter of the year, the proportion of banks expecting an easing in loan standards owing to funding conditions declined notably.

Chart 5.2.1: Indicators of Banks' Funding Costs (4-week Moving Average, %)



Sources: Bloomberg, CBRT.

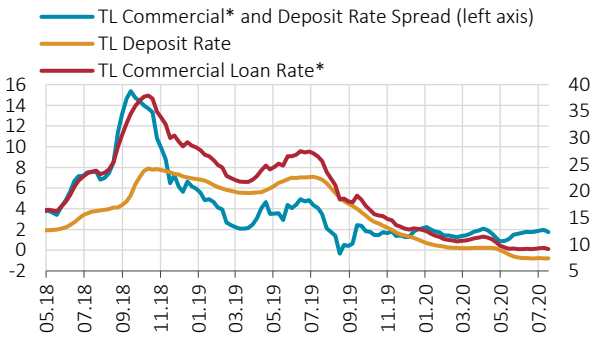
Chart 5.2.2: Banks' Domestic Funding Conditions (Quarterly % Change)



Source: CBRT.
* The BLTS indicate banks' expectations. July average is used as the third quarter in change in rates. *Note*: Blue lines indicate the contribution of domestic funding conditions to loan standards in the BLTS.

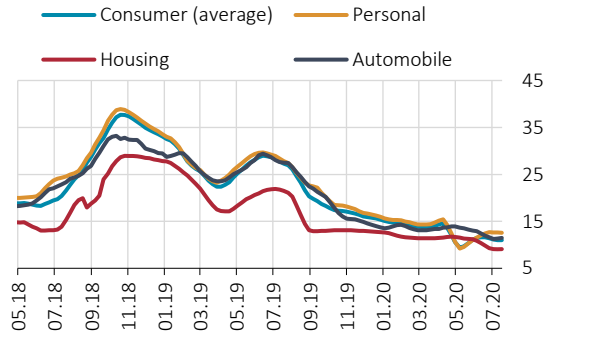
The CBRT's policy rate reductions made as of July 2019 spread strongly into loan and deposit rates. After remaining almost flat in the first quarter of the year, loan rates inched down in the second quarter (Charts 5.2.3 and 5.2.4). In the second quarter of the year, deposit rates receded, while the loan-deposit rate spread remained lower than past years in line with the easing in domestic funding conditions (Chart 5.2.3). After having followed a relatively flat course in the first quarter of the year, automobile and housing loan rates decreased somewhat towards the end of the second quarter. Meanwhile, general-purpose loan rates, which fell in April, increased at the end of the second quarter and converged to other loan rates.

Chart 5.2.3: TL Commercial Loan and TL Deposit Rates (Flow Data, Annual, 4-Week Moving Average, %)



Source: CBRT.
* Overdraft accounts and credit cards excluded.

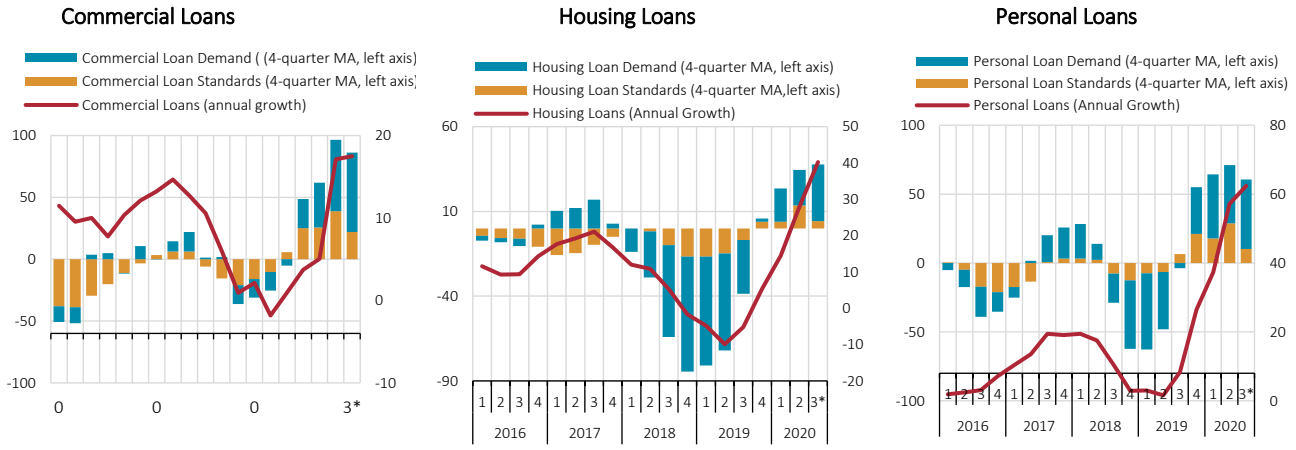
Chart 5.2.4: Consumer Loan Rates (Flow Data, Annual, 4-Week Moving Average, %)



Source: CBRT.

According to the results of the BLTS, both business and consumer loan standards eased, while loan demand increased in the second quarter (Chart 5.2.5). While banks expect a further increase in loan demand in the third quarter, the expectation for an additional easing in loan standards lost a little strength.

Chart 5.2.5: Credit Standards, Credit Demand and Annual Credit Growth

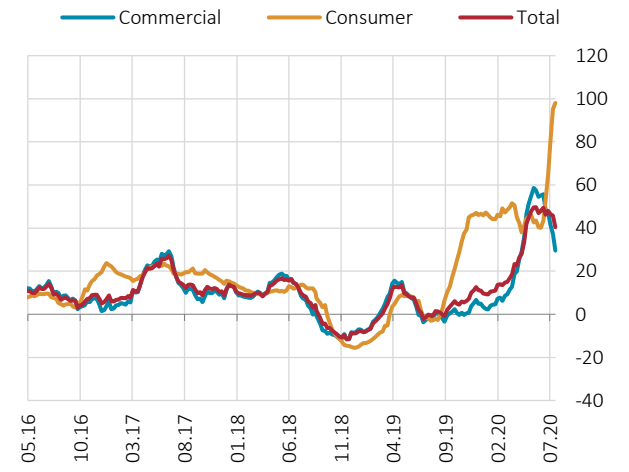


Source: CBRT.

* 2020 third-quarter data indicate banks' expectations of the value those variables will take in that quarter. Third-quarter loan growth is the July data.
Note: To calculate Credit Standards (Demand) Index, banks are asked how their credit standards (credit demand) have changed over the past three months. Net tendencies calculated based on response percentages indicate the direction of the change in credit supply (demand). The index is calculated as (Ease Somewhat+ Ease Considerably)-(Tighten Somewhat +Tighten Considerably). Index values above 0 indicate easing in credit standards (increase in credit demand).

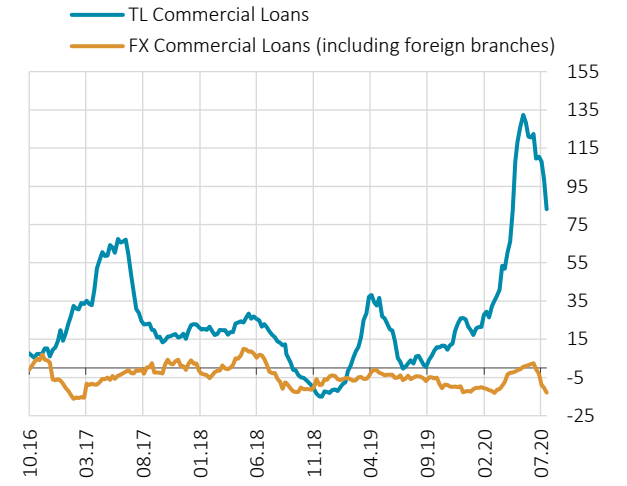
With decreasing loan rates, easing in loan standards and recovery in domestic demand loan growth accelerated in the third quarter of 2019, with a larger emphasis on consumer loans. Pandemic-related support packages as well as advantageous maturities and rates for housing and automobile loans provided in June caused consumer loans to gain an additional momentum. Parallel to the pre-pandemic mild recovery in economic activity in the first quarter of 2020, commercial loan growth displayed an uptick (Charts 5.2.6 and 5.2.7). Commercial loan growth, which accelerated with the support provided to enterprises with the Economic Stability Shield Package to curb the adverse impacts of the pandemic on economic activity, lost some momentum as the firms' loan demand reached a saturation point and economic activity registered a rebound as of the second half of June.

Chart 5.2.6: Loan Growth (13-Week Moving Average, Adjusted for Exchange Rates, %)



Source: CBRT.

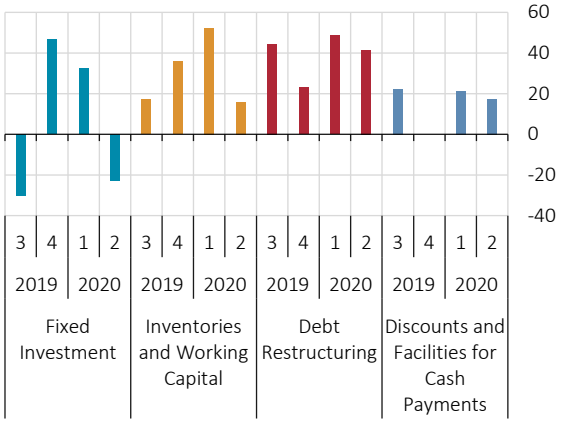
Chart 5.2.7: TL and FX Commercial Loan Growth (13-week Annualized, Adjusted for Exchange Rates, %)



Source: CBRT.

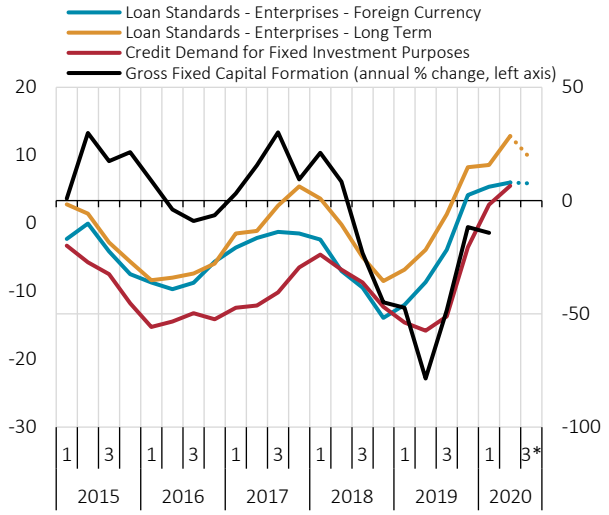
A breakdown of commercial loans by currency suggests that the acceleration in TL commercial loans, which started in the last quarter of 2019, increased remarkably in the second quarter of 2020 on the back of support packages, whereas the contraction in FX loans continued (Chart 5.2.7). According to the results of the BLTS, the business loan demand received positive contribution from fixed investments in the pre-pandemic period, while it was driven mainly by use for financial purposes, for debt restructuring in particular, in the second quarter (Chart 5.2.8). Following an easing in the last quarter of 2019, credit standards for FX-denominated and long-term commercial loans, generally used for investment purposes, remained flat in the ensuing period (Chart 5.2.9). In the second quarter, long-term loan standards eased further, while banks expect a more limited easing in the third quarter.

Chart 5.2.8: Leading Sub-factors of Firms' Loan Demand



Source: CBRT.
Note: Net percentage changes regarding factors are the difference between the percentage of the banks reporting that this factor increased the loan demand and those reporting that it decreased the loan demand.

Chart 5.2.9: Effect of Fixed Investments on Credit Demand and Fixed Capital Formation (4-Quarter Moving Average)



Sources: CBRT.
* 2020 third-quarter data indicate banks' expectations of the values those variables will take in that quarter.

In sum, the CBRT's rate cuts and supportive policy measures that started in the third quarter of 2019 have contributed to loan growth. In this period, with low-rated housing and general-purpose loan promotions implemented chiefly by state banks, consumer loan growth gained momentum. The use of business loans, which increased due to support packages provided to curb the adverse impacts of the pandemic on the household and firms, lost some momentum with the rebound in economic activity. In the second quarter of 2020, the slowdown in economic activity and the rise in uncertainties led to a decline in investment-oriented loan demand, which had gained strength in the previous two quarters. Meanwhile, the easing in funding conditions and the support in housing loans led by state banks are expected to continue to support private consumption and construction activity.

Box 5.1

The CBRT's Bond Purchases in Response to The Pandemic

Emerging market economies (EMEs) have announced a series of measures for bond markets in response to the pandemic and have launched local currency bond purchase programs varying in size. The CBRT also shared the details of changes made in the bond purchase program as announced in the Monetary and Exchange Rate Policy for 2020, with press releases of 31 March and 17 April 2020. In this box, details of the CBRT's bond purchases and the course of the bond yields are presented in comparison with the other EMEs that launched bond purchase programs. When compared with other EMEs, the decline in the Turkish bond yields proves more notable and is attributed to the CBRT's rate cuts as well as the BRSA's asset ratio regulation announced on 18 April.

Bond Purchase Programs in EMEs

In response to the pandemic shock, central banks of many emerging market economies have launched local currency bond purchase programs to ensure effective functioning of the markets and to maintain market depth (Table 1).

Table 1: Bond Purchase Programs Announced by EMEs in Response to the Pandemic

Country	Security Type	Announcement	Country	Security Type	Announcement
Indonesia	Government	01/04	Hungary	Government, Mortgage Backed	07/04
Philippines	Government	10/04	Mexico	Government	21/04
South Africa	Government	25/03	Poland	Government	17/03, 08/04
India	Government	18/03,20/03	Romania	Government	20/03
Colombia	Government, Bank Bond	23/03	Chile	Government	19/03, 08/04
Korea	Government	19/03, 09/04	Thailand	Government, Corporate Bond	19/03, 22/03, 07/04
Turkey	Government	31/03, 17/04			

Source: BIS.

The recent bond purchase programs of EMEs are quite different from those of advanced economies in many aspects.[1] Firstly, purchases in EMEs, which are smaller in scale compared to the programs implemented in advanced economies, were made primarily to prevent unhealthy price formation in the bond markets and to strengthen the transmission mechanism rather than monetary accommodation. In addition to government bonds, central banks of advanced economies also implemented large-scale corporate bond purchases, which are primarily aimed at providing financial and credit support to firms.

The CBRT's Bond Purchase Program

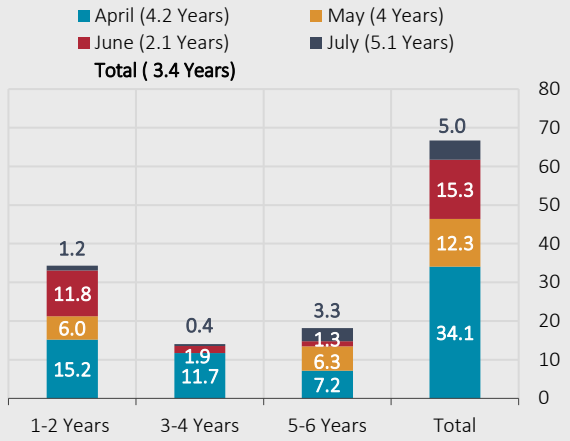
In the press release of 31 March 2020 on the additional measures taken against the economic and financial effects of the coronavirus, the CBRT announced that the outright purchase operations under the Open Market Operations (OMO) portfolio executed within the limits determined in the Monetary and Exchange Rate Policy for 2020 may be carried out in a front-loaded manner and these limits may be revised depending on market conditions.

[1] For a recent comparison of the bond purchase programs, see Arslan et al (2020).

In addition, it was stated that for a temporary period, the Primary Dealer (PD) banks would be able to sell the Government Domestic Debt Securities (GDDS) that they bought from the Unemployment Insurance Fund to the CBRT under the terms and amounts set by the CBRT, out of the scope of the limits set for the OMO portfolio.

With the press release of 17 April 2020, the maximum limit for the ratio of the OMO portfolio nominal size to the CBRT analytical balance sheet total assets, set at 5% for 2020 in the Monetary and Exchange Rate Policy for 2020 text, was revised to 10%. The same press release announced that the limits offered to PD banks for outright sales of GDDS to the CBRT would be applied independent of the repo transaction limits and that the GDDS selling limit for PD banks would be equal to the repo transaction limits. It was also announced that these purchases would be carried out within the total maximum limit of 10% set for the OMO portfolio.

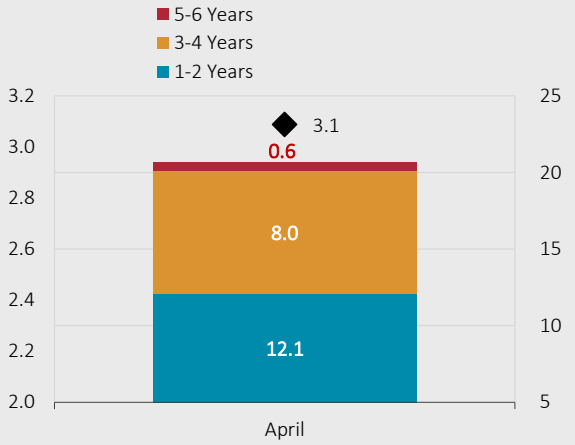
Chart 1: CBRT Outright Purchases* (Net Amount, Billion TRY, Years)



Source: CBRT. Last Observation: 24 July 2020

* Weighted average maturity of the securities purchased is shown in parentheses next to the relevant month.

Chart 2: CBRT's Bond Purchases From Unemployment Insurance Fund (Net Amount, Billion TRY, Years)

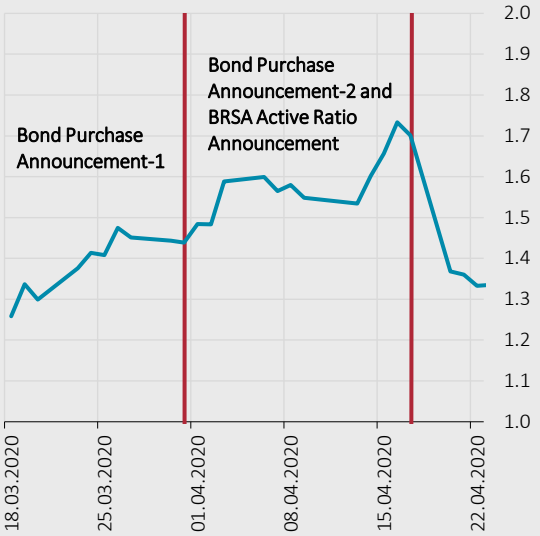


Source: CBRT. Last Observation: 24 July 2020

As of 24 July 2020, the CBRT's purchases of government securities, which started in April, reached a total of 67 billion TL (nominal 56 billion TL) (Chart 1). Purchases from the Unemployment Insurance Fund reached 20.7 billion TL, and the nominal equivalent of these transactions which is 12.2 billion TL, is excluded from the 10% limit (Chart 2). The CBRT purchased the highest amount of government securities in April and due to the Unemployment Insurance Fund transactions, all purchases were concentrated mostly on 1-2 year bonds (Chart 1). The weighted average maturity of all GDDS purchases of the CBRT in the April-July period is approximately 3.5 years.

When compared with other EMEs that launched bond purchase programs, Turkey's two-year bond yields fell more significantly (Chart 3). In addition to the CBRT's purchases, the banks' increased demand for government bonds after the BRSA's active ratio announcement on 18 April and policy rate cuts are also considered to have been effective in this decline (Chart 4).

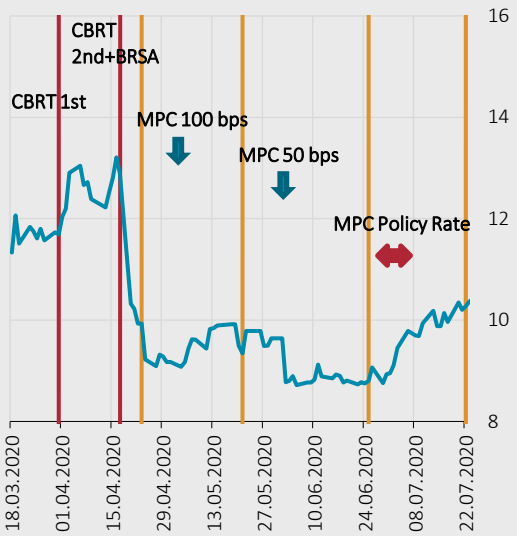
Chart 3: Relative 2-Year Bond Yield (Turkey/EME Yields For The Period Excluding MPC Meetings*)



Source: Bloomberg. Last Observation:22 April 2020

* Emerging market economies that announced bond purchase programs: Indonesia, Philippines, S. Africa, India, Colombia, Korea, Hungary, Mexico, Poland, Romania, Chile, Thailand. Bond yields are normalized to 1 as of 01.01.2015.

Chart 4: Turkey 2-Year Bond Yield (The Period Including MPC Meetings, %)



Source: Bloomberg. Last Observation: 24 July 2020

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CBRT Open Market Operations, Outright Purchases Through Auction: https://www.tcmb.gov.tr/wps/wcm/connect/en/tcmb+en/main+page+site+area/open+market+operations/outright+purchases+auctions.

6. Public Finance

In the first half of the year, the public sector continued to support growth and the budget deficit widened. While tax revenues remained weak due to the toll of the pandemic on economic activity, the increase in primary expenditures accelerated on account of consumption expenditures and current transfer expenses. Meanwhile, the increase in non-tax revenues limited the budget deficit. Thus, the central government budget balance and the primary budget balance posted deficits of TRY 109.5 billion and TRY 38.2 billion, respectively, in the first half of 2020. While the Treasury was a net payer of foreign debt in this period, the budget deficit was financed through domestic borrowing. The domestic debt roll-over ratio increased significantly compared to 2019, while the external debt roll-over ratio decreased.

6.1 Budget Developments

In the first half of 2020, the central government budget balance posted a deficit of TRY 109.5 billion and 78.8% of the 2020 budget deficit target was achieved. This was driven by the relatively weaker increase in tax revenues despite the strong performance of non-tax revenues thanks to the CBRT's transfer of its profit and reserve funds, and the rise in interest and primary expenditures. The primary balance registered a deficit of TRY 38.2 billion in the first half of 2020 (Table 6.1.1).

Table 6.1.1: Central Government Budget Aggregates (TRY billion)

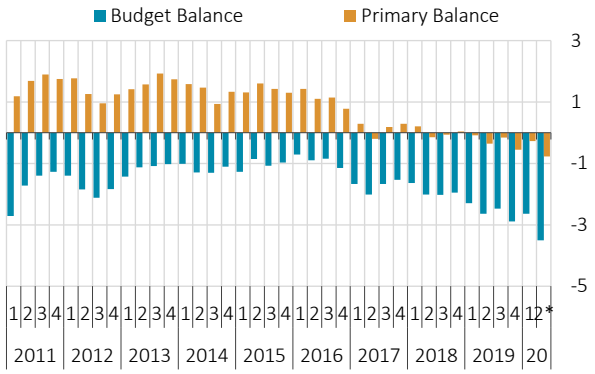
	January-June 2019	January-June 2020	Rate of Increase (%)	Realization/ Budget Target (%)
Central Government Budget Expenditures	481.6	564.9	17.3	51.6
Interest Expenses	50.7	71.3	40.4	51.3
Primary Budget Expenditures	430.8	493.6	14.6	51.6
Central Government Budget Revenues	403.0	455.4	13.0	47.6
I. Tax Revenues	307.7	335.9	9.2	42.8
II. Non-Tax Revenues	95.2	119.5	25.4	69.5
Budget Balance	**-78.6**	**-109.5**	**39.3**	**78.8**
Primary Balance	**-27.8**	**-38.2**	**37.2**	**-**

Source: Ministry of Treasury and Finance.

Taken as a proportion of GDP, the annual budget deficit and the primary budget deficit are expected to stand at 3.5% and 0.8%, respectively in the first half of 2020 (Chart 6.1.1). In the same period, the ratio of central government budget revenues to GDP is projected to increase by 0.8 points year-on-year to 21.1%, while that of central government primary expenditures to GDP is estimated to rise by 1.3 points to 21.8% (Chart 6.1.2).

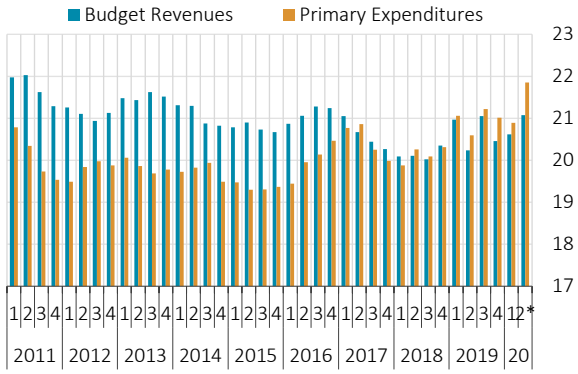
Central government primary budget expenditures increased by 14.6% year-on-year to TRY 493.6 billion in the first half of 2020. While the increases in personnel expenditures and current transfer expenditures determined the rise in primary expenditures, the increases in purchases of goods and services and in SSI premium expenses remained relatively lower. While capital expenditures, which are indicative of public investment spending, posted a limited rise, capital transfers contracted (Table 6.1.2). In brief, in the first half of the year, the public sector supported growth through consumption expenditures, rather than through investment expenditures. Current transfers have also posted an increase in the recent period due to measures to mitigate the impact of the pandemic.

Chart 6.1.1: Central Government Budget Balances (Annualized, % of GDP)



Source: Ministry of Treasury and Finance.
*Forecast.

Chart 6.1.2: Central Government Budget Revenues and Primary Expenditures (Annualized, % of GDP)



Source: Ministry of Treasury and Finance.
*Forecast.

Table 6.1.2: Central Government Primary Expenditures (TRY billion)

	January-June 2019	January-June 2020	Rate of Increase (%)	Realization/ Budget Target (%)
Primary Budget Expenditures	**430.8**	**493.6**	**14.6**	**51.6**
1. Personnel Expenditures	125.8	145.9	16.0	51.7
2. State Premium Payments to SSI	21.7	24.3	11.9	50.4
3. Purchase of Goods and Services	31.9	35.6	11.5	47.1
4. Current Transfers	199.3	239.1	20.0	53.0
a) Duty Losses	3.8	5.0	30.3	54.2
b) Health, Pension and Social Benefit Expenditures	98.1	120.6	23.0	55.1
c) Agricultural Support Payment	11.9	15.5	30.4	70.4
d) Allocated Revenues	47.3	52.0	10.0	43.2
e) Household Transfers	13.1	15.4	18.4	55.6
5. Capital Expenditures	31.0	32.6	5.4	57.7
6. Capital Transfers	7.3	2.3	-68.8	33.7
7. Lending	13.8	13.8	-0.6	50.8

Source: Ministry of Treasury and Finance.

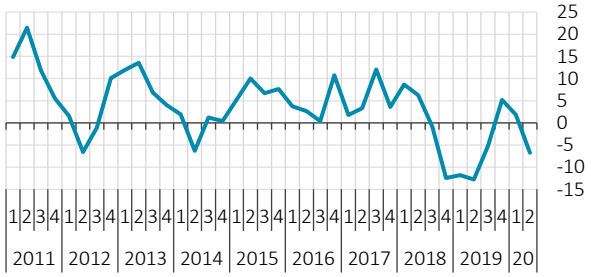
Central government general budget revenues increased by 13.2% year-on-year to TRY 441 billion in the first half of 2020 (Table 6.1.3). Tax revenues posted a modest increase by 9.2%, while non-tax revenues surged by 28.3%. This is mainly attributable to the CBRT's transfer of its profit and reserve funds in the amount of TRY 40.5 billion to the budget in January. Additionally, TRY 3 billion was transferred to the budget in this period as part of the restructuring laws no. 7143, 7020 and 6736. An analysis by subcategories indicates that corporate taxes increased at a relatively faster pace, while income taxes declined. Due to the economic effects of the pandemic, the collection of domestic VAT among consumption-based indirect taxes declined noticeably, while that of imports increased relatively moderately. The collection of SCT, on the other hand, rose on the back of the increase in SCT on motor vehicles. In real terms, it is obvious that tax revenues declined due to the slowdown in activity (Chart 6.1.3). While the revenues from domestic VAT and from VAT on imports declined, in real terms SCT revenues only edged up (Chart 6.1.4).

Table 6.1.3: Central Government General Budget Revenues (TRY billion)

	January-June 2019	January-June 2020	Rate of Increase (%)	Realization/ Budget Target (%)
General Budget Revenues	**389.6**	**441.0**	**13.2**	**47.1**
I-Tax Revenues	**307.7**	**335.9**	**9.2**	**42.8**
Income Tax	74.8	67.7	-9.4	37.2
Corporate Tax	36.5	49.3	35.0	55.2
Domestic VAT	25.2	20.6	-18.3	35.6
SCT	64.8	77.5	19.6	44.2
VAT on Imports	57.9	63.3	9.2	40.0
II-Non-Tax Revenues	**81.9**	**105.1**	**28.3**	**69.1**
Enterprise and Property Revenues	45.5	52.3	15.0	81.3
Interests, Shares and Fines	26.7	42.5	59.3	68.4
Capital Revenues	2.9	3.3	15.4	24.5

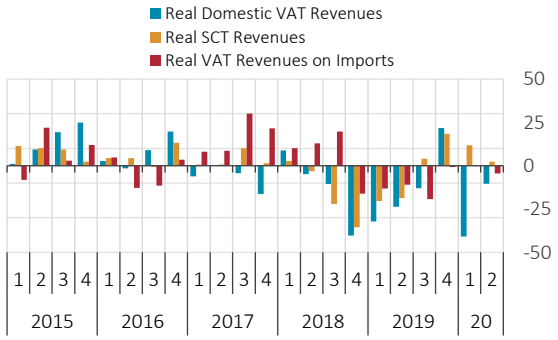
Source: Ministry of Treasury and Finance.

Chart 6.1.3: Real Tax Revenues* (YoY % Change)



Source: Ministry of Treasury and Finance.
*Deflated by CPI.

Chart 6.1.4: Real VAT and SCT Revenues* (YoY % Change)

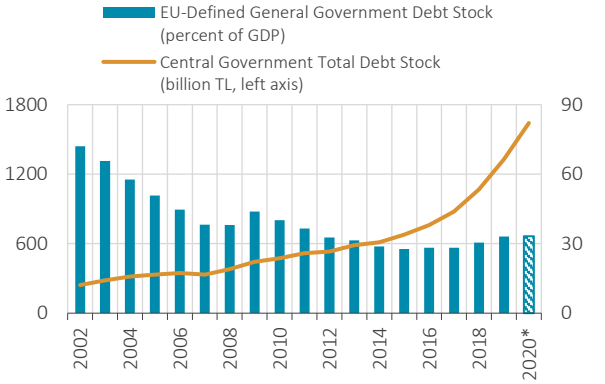


Source: Ministry of Treasury and Finance.
*Deflated by CPI.

6.2 Developments in the Public Debt Stock

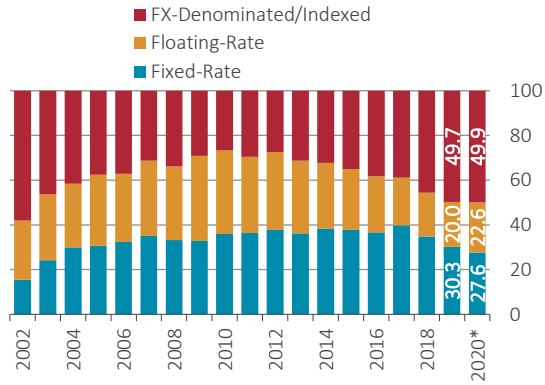
The EU-defined general government debt stock to GDP ratio stood at 35.1% by the first quarter of 2020 (Chart 6.2.1).

Chart 6.2.1: Public Debt Stock Indicators



Source: Ministry of Treasury and Finance.
* Actual June 2020 figure for the central government total debt stock and NEP 2020 target for the EU-defined general government debt stock

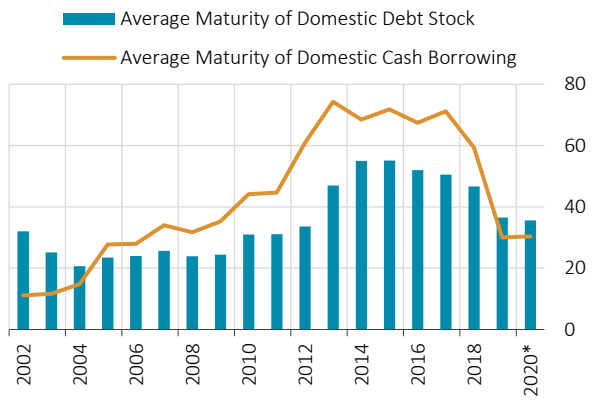
Chart 6.2.2: Composition of the Central Government Debt Stock



Source: Ministry of Treasury and Finance.
* As of June.

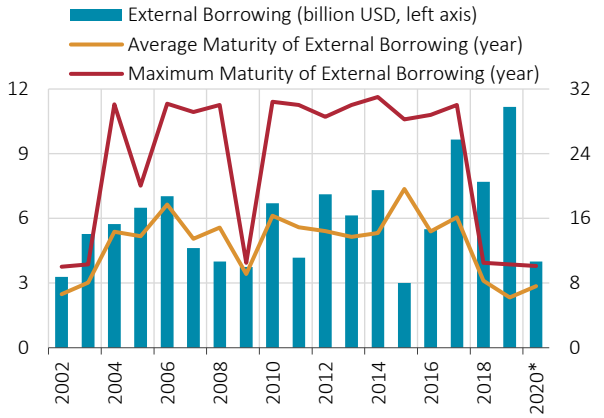
As of June 2020, the share of fixed-rate in the total debt stock decreased compared to 2019, while the shares of floating-rate securities, and FX-denominated and FX-indexed securities increased (Chart 6.2.2). In the first five months of 2020, 53.7% of domestic borrowing was financed by fixed-rate instruments. The share of TL-denominated borrowing in domestic borrowing was 72.9% in that period.

Chart 6.2.3: Average Maturity of Domestic Cash Borrowing and the Average Term-to-Maturity of the Domestic Debt Stock (Month)



Source: Ministry of Treasury and Finance.
* As of June.

Chart 6.2.4: External Borrowing through Bond Issues

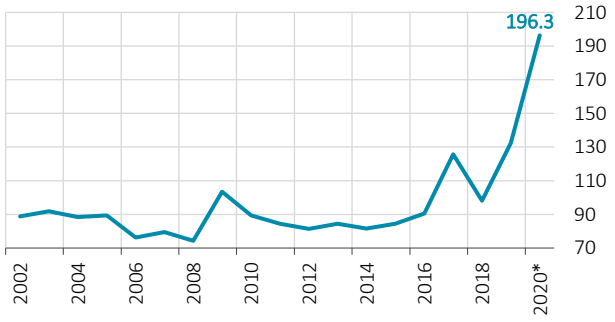


Source: Ministry of Treasury and Finance.
* As of June.

In June 2020, the average term-to-maturity of the domestic debt stock was 35.5 months and that of domestic cash borrowing was approximately 30.4 months (Chart 6.2.3). External borrowing through bond issues amounted to USD 4 billion in the same period, with an average maturity of 7.6 years (Chart 6.2.4). In the first half of 2020, the external debt rollover ratio decreased compared to the overall 2019 ratio (of 106%) to 49.5%.

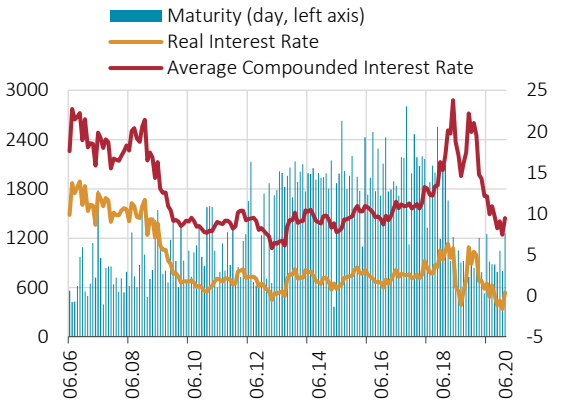
In the January-June 2020 period, the domestic debt rollover ratio increased significantly compared to 2019 (132.4%) to 196.3% (Chart 6.2.5). In this period, the public financing need was met through domestic borrowing. The average domestic borrowing real interest rate has been hovering at quite low levels in recent months (Chart 6.2.6). [1]

Chart 6.2.5: Total Domestic Debt Rollover Ratio (%)



Source: Ministry of Treasury and Finance.
* As of June.

Chart 6.2.6: Treasury Auctions Interest Rate and Maturity Structure



Source: Ministry of Treasury and Finance.

[1] Real interest rates were calculated by adjusting the nominal interest rates at the Treasury auctions for the 12-month forward CPI expectation obtained from the CBRT Survey of Expectations.

7. Medium-Term Projections

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

7.1 Current State, Short-Term Outlook and Assumptions

Changes in Key Forecast Variables

Inflation and Economic Activity: The initial conditions for inflation and economic activity underlying the medium-term forecasts are presented in Table 7.1.1. Consumer inflation, recording 12.6% in the first quarter of 2020, increased compared to the previous quarter-end, and thus overshot the April Inflation Report forecasts. While aggregate demand conditions contained inflation, the trend of core inflation indicators increased due to the pandemic-related rise in unit costs. In this period, energy prices continued to inhibit consumer inflation despite the recovery in oil prices, whereas food inflation rose driven by seasonal and pandemic-related effects.

The weakening that started in economic activity in the second half of March became more apparent in April. Economic recovery, which started in May following the gradual steps towards normalization, strengthened in June and July also due to the credit impulse. Accordingly, the output gap forecasts for the second and third quarter of 2020 were revised slightly upwards considering supply and demand-side effects. With supply-side capacity constraints fading out, it is expected that the disinflationary effect of demand will become more pronounced.

Table 7.1.1: Changes in Key Forecast Variables*

	2020-I	2020-II
Output Gap (%)	-1.5 (-1.5)	-6.4 (-7.8)
Consumer Inflation (Quarter-end, Annual % Change)	11.9 (11.9)	12.6 (10.4)
B** Index Inflation (Quarter-end, Annual % Change)	11.6 (11.6)	11.9 (10.3)

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

Monetary Policy and Financial Conditions:

Considering the effects of the weakening demand conditions on the inflation outlook, the CBRT cut the policy rate by a total of 250 basis points to 8.25% during the March-May period following the pandemic. In June and July, the Bank kept the policy rate constant in line with the inflation outlook. Loans accelerated on the back of the rate cut-led improvement in financial conditions and stimulus packages. The monetary and fiscal measures introduced have made significant contribution to the uninterrupted flow of credit to the real sector and the economic recovery process.

Assumptions for External Variables

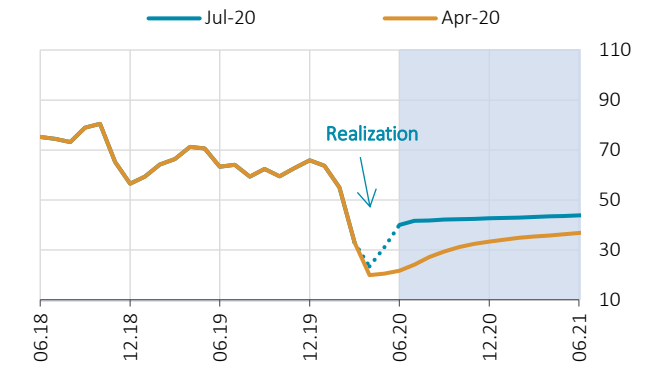
Global Growth and Monetary Policies of Advanced Economies:

Medium-term growth forecasts have been built on a significant downward revision for 2020 and an upward revision for 2021 from the April Inflation Report projections for the growth path implied by the export-weighted global production index, which is used as a measure for external demand. Forecasts have been based on a framework in which global monetary and fiscal actions would continue to support global financial conditions.

Import prices

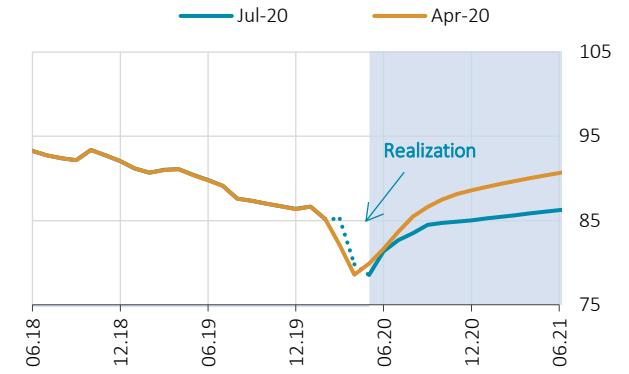
International crude oil prices materialized significantly above the assumptions of the April Inflation Report (Chart 7.1.1). This was mainly driven by the agreement between OPEC+ countries over oil production cuts as well as the expectations that the worst was over on the demand side. Despite the recent recovery in oil prices, forward quotations point to a quite modest increase in the upcoming period. Accordingly, the average crude oil price assumptions presented in the April Inflation Report have been revised upwards to USD 41.6/bbl from USD 32.6/bbl for 2020, and to USD 43.8/bbl from USD 36.8/bbl for 2021 (Table 7.1.2, Chart 7.1.1). The assumption for USD-denominated import prices hovered slightly above the April forecasts (Chart 7.1.2). The assumptions for USD-denominated import prices for 2020 and 2021 were revised downwards compared to those given in the April Inflation Report, considering the recent trends in aluminum and agricultural commodity prices, in addition to the lagged effects of the decline seen in oil prices in the previous quarter (Chart 7.1.2 and Table 7.1.2).

Chart 7.1.1: Revisions to Oil Price Assumptions* (USD/bbl)



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

Chart 7.1.2: Revisions to Import Price Assumptions* (Index, 2010=100)



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

Food Prices

Another exogenous variable underlying the medium-term forecasts is the path of unprocessed food prices, a variable that is considered to be relatively outside the monetary policy domain. Annual inflation in the food and non-alcoholic beverages group increased by 2.88 points to 12.93% in the second quarter. While this increase was mainly driven by the prices of unprocessed food, led by fresh fruits and vegetables, annual inflation in the processed food group declined. The food inflation forecast, which was set at 9.5% for 2020 in the April Inflation Report, was revised upwards to 10.5% in view of the recent trends in unprocessed food prices (Table 7.1.2). The food inflation forecast for 2021 was revised upwards by 1 point to 8%.

Fiscal Policy, Administered Prices and Tax Adjustments

To contain the economic effects of the pandemic, comprehensive fiscal measures have been introduced around the world and in Turkey. Under the current circumstances, it is essential for financial stability to adopt an accommodative fiscal stance; maintain households' consumption habits and their bonds with the labor market; enable firms to sustain their production and employment; and to secure a healthy interaction between the real sector and the financial sector. Ensuring that policy steps taken in this process are designed so as to be targeted and temporary would support policy effectiveness. Medium-term projections rely on an outlook in which the fiscal policy actions along with other monetary and financial measures will support the potential output of the economy and contribute to the recovery in the post-pandemic period. Additionally, it is assumed that adjustments in administered prices and taxes will be set in line with the disinflation path.

Table 7.1.2: Revisions to Assumptions*

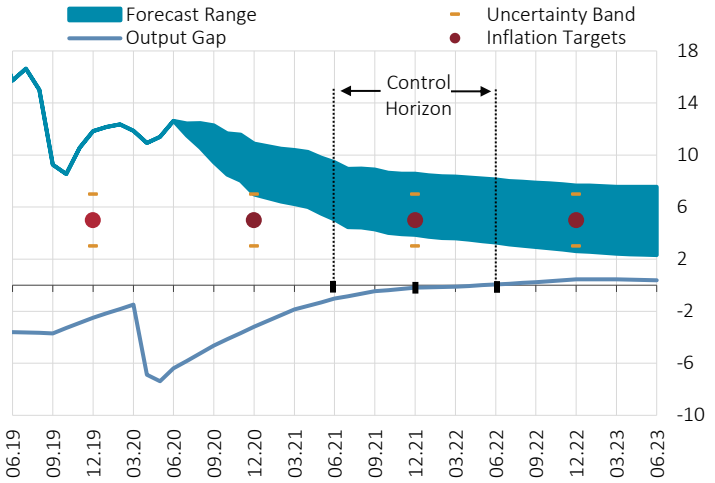
	2020	2021
Export-Weighted Global Production Index (Annual Average % Change)	-7.56 (-4.75)	5.83 (4.38)
Oil Prices (Average, USD)	41.6 (32.6)	43.8 (36.8)
Import Prices (USD, Annual Average % Change)	-6.2 (-5.1)	3.3 (7.3)
Food Price Inflation (Year-end % Change)	10.5 (9.5)	8.0 (7.0)

* Numbers in parentheses denote the values from the April Inflation Report

7.2 Medium-Term Projections

Under the current monetary policy stance and the strong policy coordination, inflation is projected to converge gradually to the targets. Accordingly, inflation is projected to be 8.9% at the end of 2020 and fall to 6.2% at the end of 2021, before stabilizing around 5% over the medium term. With a 70% probability, inflation is expected to be between 6.9% and 10.9% (with a mid-point of 8.9%) at end-2020 and between 3.9% and 8.5% (with a mid-point of 6.2%) at end-2021 (Chart 7.2.1).

Chart 7.2.1: Inflation and Output Gap Forecasts*



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

In the inter-reporting period, inflation rose and materialized above the forecast range on the back of the increase in unit costs driven by the pandemic despite weak aggregate demand conditions. Turkish lira import prices were slightly higher than expected mostly due to recovering oil prices, while food inflation surged due to seasonal and pandemic-related effects. Compared to the projections in the April Inflation Report, it is assessed that the impact of supply-side factors on inflation has slightly gained strength. This was mainly due to supply chain disruptions as well as capacity constraints imposed in certain sectors under gradual normalization. Besides, the stronger credit impulse caused the disinflationary effect of aggregate demand conditions, particularly on core goods groups that are sensitive to financing conditions, to remain relatively limited compared to the projections in the April Inflation Report. Thus, supply and demand-side factors led to an upward revision in output gap forecasts from the second quarter of 2020 onwards. Supply-side factors, which prevailed due to pandemic-related restrictions in the short run, are expected to phase out as normalization continues, and demand-driven disinflationary effects may become more prevalent in the second half of the year, as suggested by negative output gap

forecasts. Nevertheless, in light of the recent inflation figures and all factors affecting the inflation outlook, inflation forecasts for end-2020 and end-2021 have been revised upward (Table 7.2.1).

Table 7.2.1: Revisions to End-2020 and End-2021 Inflation Forecasts and Sources of Revisions

	2020	2021
2020-II (April 2020) Forecast	7.4	5.4
2020-III (July 2020) Forecast	8.9	6.2
Forecast Revision as Compared to the 2020-II Period	+1.5	+0.8
Reasons for Forecast Revisions		
Turkish Lira-Denominated Import Prices (Including the Exchange Rate, Oil and Import Prices)	+0.5	+0.1
Food	+0.2	+0.2
Output Gap	+0.3	+0.2
Unit Labor Cost	+0.2	-
Deviation in the Inflation Forecast/Underlying Inflation	+0.3	+0.3

Source: CBRT.

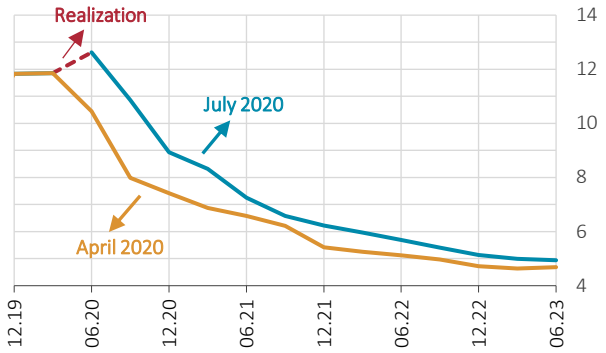
The inflation forecast for end-2020 has been revised upwards by 1.5 points to 8.9% from 7.4% (Chart 7.2.2). Upward revisions to the assumption of oil prices for the rest of the year due to rising international oil prices brought the consumer inflation forecast up by 0.5 points compared to the previous Report; and the increase in the food inflation forecast for end-2020 pushed the inflation forecast up by 0.2 points. The upward revision in the output gap brought the inflation forecast up by 0.3 points.[1] Meanwhile, supply-side factors, which prevailed due to pandemic-related restrictions in the short run, caused unit costs to rise, driving the year-end inflation forecast 0.2 points higher.[2] Moreover, the forecast error for the second quarter and the rise in underlying inflation are judged to add 0.3 points to the year-end inflation forecast.

The inflation forecast for end-2021, on the other hand, was changed from 5.4% to 6.2% (Chart 7.2.2). Of this upward revision of 0.8 points from the April Inflation Report, the oil price-driven rise in the assumption for Turkish lira import prices accounted for 0.1 points and the rise in the food inflation assumption from 7% to 8% accounted for 0.2 points. Meanwhile, the upward output gap revision as a result of the stronger-than-envisaged recovery in aggregate demand conditions increased the year-end forecast by 0.2 points (Chart 7.2.3). Lastly, the most recent realizations in inflation drove the forecast for underlying inflation up by 0.3 points.

[1] The impact of pandemic-led capacity constraints on potential output and output gap estimations is examined in Box 7.1.

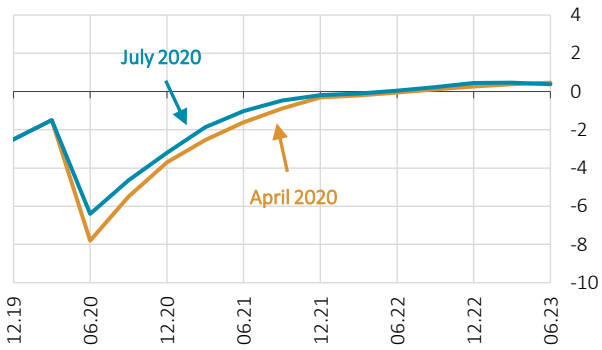
[2] Effects of unit-cost related developments on inflation are discussed in Box 3.1.

Chart 7.2.2: Inflation Forecast



Sources: CBRT, TURKSTAT.

Chart 7.2.3: Output Gap Forecast



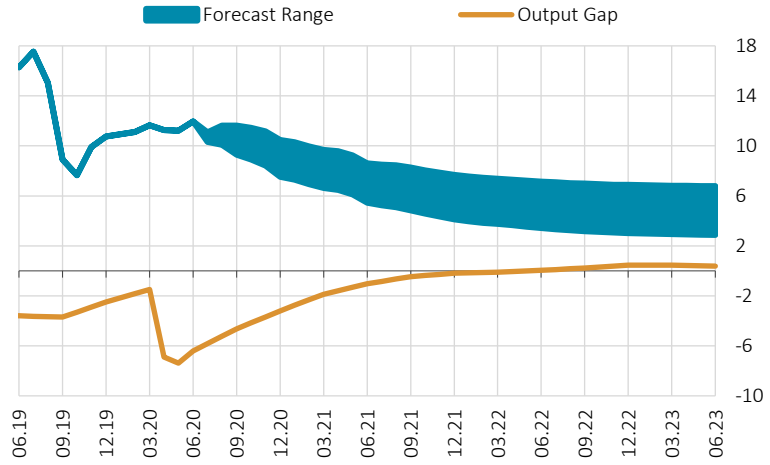
Source: CBRT.

The above projections are based on the assumption that there will be no second wave of the pandemic that will require another round of restrictions on mobility and that the global economy will continue to recover in the second half of the year. Despite expansionary monetary and fiscal measures in advanced and emerging economies, the country risk premium is assumed to improve gradually due to the ongoing uncertainty over the effectiveness of such measures and the recovery. Global uncertainties regarding the course of the pandemic and its economic impact significantly elevate the uncertainty associated with the assumptions and forecasts.

Economic activity strengthens as normalization extends to a broader scale. Assuming that there will be no need for new measures due to the pandemic and that the normalization will remain in place, the economy will likely continue to recover in the second half of 2020. However, the pace of recovery will depend on the course of normalization both in Turkey and abroad. Within a framework in which the monetary stance will be determined based on indicators for the underlying trend and in a way to ensure that the ongoing disinflation is consistent with the medium-term inflation target, it is expected that supply-side factors, which prevailed due to pandemic-related restrictions in the short run, will phase out as normalization continues and the declining trend in inflation will resume starting from July.

Unpredictable price fluctuations in items beyond the monetary policy domain, such as unprocessed food, energy and tobacco products, constitute a major factor causing deviation in inflation forecasts. Core inflation indicators obtained by excluding these items are relatively less volatile and contain more information as to the underlying trend of inflation. Therefore, forecasts for inflation excluding unprocessed food, energy, alcoholic beverages, tobacco products and gold (the B index) are also shared with the public (Chart 7.2.4). In this context, annual inflation in the B index, despite having shown a rise in the recent period, is projected to assume a downtrend as of July and gradually converge to the 5% target in the medium term.

Chart 7.2.4: Annual Inflation Forecast for the B Index*



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

Comparison of the CBRT's Forecasts with Inflation Expectations

Improved pricing behavior and inflation expectations are critical for a sustained disinflation process. Currently, 12 and 24-month ahead expectations of the respondents of the Survey of Expectations hover above the CBRT's forecasts (Table 7.2.2). With medium-term expectations lying outside the uncertainty band around the inflation target, all macroeconomic policies should be well-coordinated with the monetary policy to bring inflation down. To better manage expectations, it is necessary that monetary policy remain prudent and government-controlled prices and taxes be set in line with inflation targets to reduce backward indexation.

Table 7.2.2: CBRT Inflation Forecasts and Expectations

	CBRT Forecast	CBRT Survey of Expectations*	Inflation Target
End-2020	8.9	10.2	5.0
12-Month Ahead	6.7	9.3	5.0
24-Month Ahead	5.6	8.4	5.0

Source: CBRT.
* Data from the July Survey of Expectations.

Key Risks to Inflation Forecasts and Possible Impact Channels

The macroeconomic risks that may lead to a change the outlook underlying the inflation forecasts and the associated monetary policy stance are detailed in Chapter 1.2. Evaluations of the channels through which these risks may change inflation forecasts and the direction of this change are summarized in Table 7.2.3.

Table 7.2.3: Key Risks to Inflation Forecasts and Possible Impact Channels*

Risk	Assessment of Risks as against the Baseline Scenario and Possible Impact on Inflation (↑ | ↔ | ↓)	Indicators Monitored
Uncertainties regarding the course of the pandemic and normalization steps	**Uncertainties Regarding the Course of the Pandemic:** • The course of the normalization phase that started with the gradual easing of measures to contain the spread of the pandemic will determine the pace and durability of the recovery. ↔ • In line with the ongoing global and domestic spread of the pandemic and the probability of a second wave, uncertainties regarding the recovery remain high. ↔	• Global and domestic course of the pandemic • Pandemic curves • News flows regarding the measures to contain the pandemic and normalization steps
Uncertainties over the global growth outlook and capital flows towards emerging markets	**External Demand and Global Financial Conditions:** • Ongoing uncertainties regarding the course of the pandemic and its economic implications affect the global growth outlook negatively and keep the downside risks to domestic activity alive through both the foreign trade and capital flows channels. ↓ **Global Risk Appetite:** • Uncertainties regarding the global economic activity outlook and the effectiveness of policy measures reduce the global risk appetite, and the increased demand for safe haven assets poses a downside risk to capital flows towards emerging markets. ↑ • Depending on the course of the pandemic, expansionary monetary and fiscal measures taken by advanced economies may increase the risk appetite and support portfolio flows to emerging markets. ↓	• Course of the spread of the pandemic on a global scale • Global inflation and growth indicators and related forecasts • Export-weighted global production index • Indicators of activity in manufacturing and services sectors • Global economic and trade policies • Global risk appetite indicators • Trend and composition of global capital flows,Turkey's share
Uncertainties over demand and growth outlook	**Demand Channel:** • If the normalization takes longer, the recovery in economic activity may be slower in certain sectors due to supply-side factors (domestic and international supply chains, such as capacity constraints, and social distancing measures applied during the normalization). ↓ • Uncertainties regarding the possible effects of the pandemic and health measures on consumption habits and general spending behavior persist. The income and confidence channel will determine the pace of recovery in expenditures. ↔ • In addition to demand-side factors, the effect of the pandemic on the supply conditions may be different at the sectoral level which may also increase sectoral heterogeneity in pricing behavior. ↔	• Course of demand and growth components • Aggregate demand and credit composition • Tendency surveys • Confidence indices • Unemployment gap, credit gap and output gap indicators • Various demand and inflation indicators by sectors and subsectors

Table 7.2.3: Key Risks to Inflation Forecasts and Possible Impact Channels*

Risks regarding credit supply and composition	**Balance Sheet and Bank Lending Channel:** • Recent monetary, financial and fiscal measures as well as the increase in credit supply largely driven by state banks limit the downside risks to the pace of recovery. **Credit Composition and Financial Stability:** • The recent acceleration in consumer loans is closely monitored for its effects on growth, inflation, current account deficit, and risk premium. In this context, the effects of credit growth on internal and external balances, portfolio choices of domestic and international investors and developments in external financing conditions are monitored for their potential impact on financial stability and price stability.	↔ ↑	• Credit use by firms • Loan and deposit rates • Stage 2 loans and NPL breakdown by sectors and loan types, bad cheques and protested bills • Credit conditions (Bank Loans Tendency Survey) • Indicators of credit demand • Financial sector and real sector balance sheets, cash flows • Residential and commercial real estate prices • Roll-over ratios of external debt and borrowing costs of Turkish banks • Firms' roll-over ratios of external debt and developments in external borrowing • Data on the composition of loans by borrowers (retail/commercial), maturities, sectors and firm size • Banks based loans, credit to deposit ratios, liquidity ratios, assets and liabilities • External balance, inflation and risk premium
Risks regarding food prices	**Food Prices:** • Unprocessed food prices may be volatile due to weather conditions and supply-side factors, which may cause risks to inflation forecasts in either direction. • The course of prices of pulses, which have a large import share in total supply, and the secondary effects of current increases pose upside risks. The rise in wheat prices is also closely monitored. • The slowdown in exports and tourism poses downside risks to food prices.	↔ ↑ ↓	• Supply-side developments in agricultural production • Factors which affect supply share to domestic market such as exports and tourism • Agricultural commodity prices • Deviation of unprocessed food prices from historical trend • Food Committee measures and their implications

Table 7.2.3: Key Risks to Inflation Forecasts and Possible Impact Channels*

Elevated levels of medium-term inflation expectations	**Pricing Behavior and Expectations Channel:** • Elevated levels of medium-term inflation expectations indicate that upward risks to pricing behavior remain. ↑ • High sensitivity of inflation expectations to inflation realizations and inflation surprises poses risk in terms of managing expectations. ↑	• Key inflation indicators • Diffusion indices • Indicators pertaining to backward indexation behavior in inflation expectations • Distribution of inflation expectations • Inflation uncertainty indicators • Inflation indicators by sectors and subsectors • Survey and market-based expectations of inflation and exchange rates
Risks to labor market	**Income and Demand Channel:** • Likely loss of household income and increasing unemployment may pull demand domestic conditions down. Impact of economic recovery on the labor market and effectiveness of the measures to maintain employment will have a determinant role. ↓ **Productivity and Cost Channel:** • Though the effect of unit wages on inflation is expected to wane due to easing supply-side contraints in the normalization phase, possible secondary effects are closely monitored. ↓	• Real unit labor costs • Partial labor and total factor productivity • Employment and participation rate developments • Measures to maintain employment
Fluctuations in the country risk premium	**Pricing Behavior and Expectations Channel:** • The country risk premium and the exchange rate volatility that increased due to the pandemic remain relatively high despite some decline in the period after the April Inflation Report. This may pose upside risks to inflation forecasts through the exchange rate volatility and expectations channels. ↑ **Financial Conditions and Demand Channel:** • Upward movements in country risk premium and exchange rate volatility may exert a downward pressure on economic activity through the financial conditions channel. ↓	• Risk premium indicators • Global risk appetite indicators • Expectations of inflation and exchange rates • Exchange rate pass-through estimates • Implied volatility of exchange rates • Domestic macroeconomic indicators • Financial conditions • Credit market indicators • Output gap indicators • Leading indicators of demand and economic activity • Financial and real sector balance sheets • Capital flows • News flows regarding geopolitical developments

Table 7.2.3: Key Risks to Inflation Forecasts and Possible Impact Channels*

Risks to effectiveness of monetary and fiscal policy coordination	**Administered Price and Tax Adjustments:** • The disinflation process may be delayed, should the path of administered prices and tax adjustments significantly exceed the path envisaged in this Report due to the increase in public financing needs in relation to measures to contain the effects of the pandemic. ↑ **Risk Premium:** • Medium-term course of the budget balance and debt stock may affect the country risk premium. ↑	• Administered price and tax adjustments • Developments in tax revenues and public expenditures • Fiscal policy measures • Government budget and public debt stock indicators • Estimates of the structural budget balance
Fluctuations in crude oil and import prices	**Import Prices:** • Despite the recent recovery in oil prices, uncertainties over global economic activity keep the downside risks to crude oil prices alive. ↓ • The unpredictable course and consequences of the pandemic, volatilities in global financial markets, and the ongoing economic and geopolitical uncertainties on a global scale pose upside risks to precious metal prices. ↑	• Course of the global spread of the pandemic • Crude oil and other commodity prices and supply-demand balance • Global trade policies • OPEC+ decisions • Adjustments in domestic fuel oil prices • Imports and current account balance

* Each risk row of the table presents evaluations on the channel through which inflation forecasts may change, along with the direction of that change, if the respective risk materializes. The signs ↑, ↓ indicate the direction in which the risks influence the inflation forecast (upside and downside, respectively). The sign ↔ denotes circumstances where the net effect on the inflation forecast is not clear. Indicators used in monitoring the risks are listed in the right column.

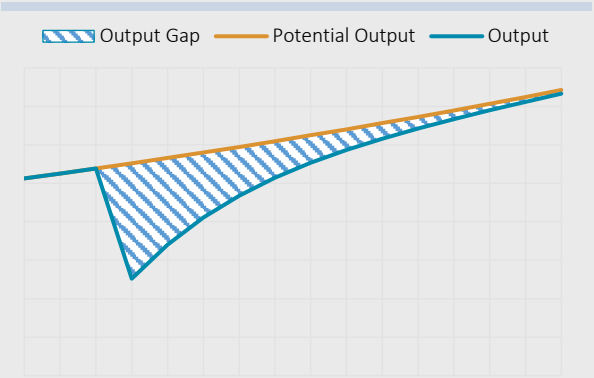
Box 7.1

Pandemic-Driven Supply and Demand Shocks and Their Impact on Potential Output and Output Gap

The coronavirus pandemic poses a great health risk for the entire world, and has strong repercussions for economies. Measures to contain the spread of the coronavirus have changed consumption behavior, affected supply chains and had a significant impact on production and employment. Simultaneous supply and demand shocks, and the interplay between them, imply a great uncertainty in estimating the effect that the deep contraction in the second quarter and the recovery in the following quarter have on the output gap and inflation. This box provides a conceptual perspective on the pandemic-driven supply and demand shocks' impact on potential output and the output gap.

Potential output is defined as the largest amount of output achievable by the factors of production, labor and capital, given the level of technology. The output gap is, therefore, defined as the gap between actual output and potential output (Chart 1). Actual output being lower (larger) than its potential, i.e. the output gap being negative (positive), implies that demand conditions in the economy are disinflationary (inflationary).

Chart 1: Potential Output and Output Gap

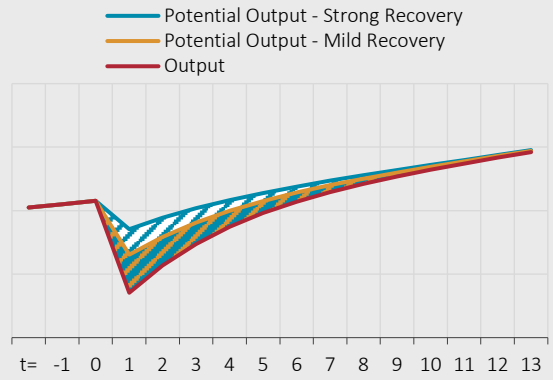


Considering that productivity along with labor and capital do not usually change sharply in the short run, potential output should not be very volatile. However, factors of production might experience severe drops in events such as natural catastrophes and pandemics, and so might potential output. Due to both the direct impact of the coronavirus pandemic and the measures taken against it, part of the population has withdrawn from consumption and production networks. This, acting as a negative supply shock, reduced both labor productivity and labor, leading to a contraction in potential output in the short run. Pandemic-related restrictions disrupted production and supply chains, and at the same time, led to lower mobility and income losses. Moreover, the distortion in international supply chains affected production negatively, and the suspension of export channels reduced aggregate demand. Lower confidence and higher uncertainty tightened domestic demand. Decomposing the decline in output into supply and demand shocks is critical to estimating the output gap reliably and understanding the (dis)inflationary impact of demand conditions.

For the second quarter of 2020, potential output is estimated to be contracting in the short term as a result of supply shocks driven by pandemic-related measures such as social distancing and mobility restrictions, while the magnitude of the contraction is highly uncertain. Given the

sharp fall in GDP, if potential output remained the same, the output gap would rapidly widen, implying strong disinflationary pressures on prices. However, depending on the size of the potential output contraction, output gap estimates differ (Barba Navaretti et al., 2020; World Bank, 2020). To illustrate the supply-side factors, Chart 2 compares the output gap in two scenarios in which potential output contractions differ in magnitude but the fall in GDP is kept fixed. The blue line depicts an economy where there is a mild contraction in potential output, whereas the orange line depicts an economy where there is a stronger contraction in potential output, at time t = 1 when the shock hits the economy. A comparison of output gaps denoted by the patterned areas reveals that the economy with stronger potential output contraction experiences a smaller output gap (Chart 3). In other words, depending on the size of supply shocks, the disinflationary impact of demand conditions may remain weaker.

Chart 2: Different Potential Output Contractions and Resulting Output Gaps



Blue patterned area denotes the output gap that corresponds to a mildly contracting potential output, while the orange patterned area denotes the output gap that corresponds to a strongly contracting potential output.

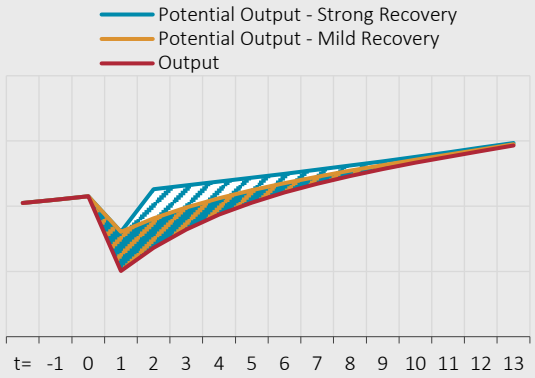
Chart 3: Output Gaps Under Different Potential Output Contractions (Period t = 1)

Blue patterned column denotes the output gap that corresponds to a mildly contracting potential output at time t = 1 (and to the blue patterned area in the Chart 2), while the orange patterned column denotes the output gap that corresponds to a strongly contracting potential output (and to the orange patterned area in the Chart 4).

In the third quarter of 2020, as part of the normalization policy, restrictions taken against the pandemic began to ease gradually. As firms opened up and factors of production recovered, potential output started converging back to pre-pandemic levels. As in the contraction period, the question of how much of the output recovery will be attributed to supply-side factors (return to activity under capacity constraints, social distancing rules applied at workplaces, etc.) is important to evaluating the demand and inflation relationship. To visualize this, Chart 4 compares the levels of the output gap occurring at period t = 2 in two different economies. Both economies roll back the restrictions, but potential output recovers at different speeds.

In period t = 2 when normalization begins, the economy indicated by the blue line experiences a sharp recovery in potential output, driven by the complete reversal of supply-side factors. In the economy depicted by the orange line, however, supply-side factors die out gradually, and potential output thus recovers in a slower manner. When there is a sharp recovery in potential output, the output gap is deeper in the negative territory, implying that demand conditions pose stronger deflationary pressures on prices (Chart 5). In this regard, large output growth figures that may materialize in the third quarter do not necessarily imply a large recovery in demand conditions. Implications of the third quarter's output growth for inflation depend on how strong the reversal of supply-side factors is. Medium-term forecasts are conditioned on output gap forecasts, which are produced under the assumption that the contraction and the expansion in the second and third quarters, respectively, are largely attributed to supply-side factors (i.e. potential output).

Chart 4: Different Potential Output Recoveries and Resulting Output Gaps in the Normalization Period



Blue patterned area denotes the output gap that corresponds to a sharply recovering potential output, while the orange patterned area denotes the output gap that corresponds to a mildly recovering potential output.

Chart 5: Output Gaps Under Different Potential Output Recoveries in the Normalization Period (Period t = 2)

Blue patterned column denotes the output gap that corresponds to a sharply recovering potential output at time t = 2 (and to the blue patterned area in the Chart 4), while the orange patterned column denotes the output gap that corresponds to a mildly recovering potential output (and to the orange patterned area in the Chart 4).

Pandemic-related restrictions work as a supply-side shock on the unit costs channel. If production costs and quantities such as wages, rents and energy were adjusted flexibly, production/sales and inputs would be reduced proportionately to contain unit cost pressures. However, as a result of fixed costs and rigidities, unit costs rise. For instance, pandemic-related social distancing rules brought along capacity constraints in certain services such as restaurants-hotels, retail industry and hairdressing, increasing unit costs significantly in these services. Furthermore, these sectors experienced a shutdown in April, and prices were updated once they opened up during the normalization in June. This justifies taking both supply and demand-side factors into account when evaluating inflationary pressures. As pandemic-related measures are rolled back as part of normalization, supply-side factors that have been dominant in the short term are expected to revert back to pre-pandemic levels. As a result, as potential output recovers, increases in unit costs should be curbed and disinflationary demand-side factors should weigh more on inflation.

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Charts

1.	OVERVIEW	
Chart 1.1	Global PMI	1
Chart 1.2	Weekly Portfolio Flows to Emerging Economies	1
Chart 1.3	Implied FX Volatility	2
Chart 1.4	Loan Growth	2
Chart 1.5	Weekly Economic Conditions Index	2
Chart 1.6	Current Account Balance	2
Chart 1.7	April Inflation Forecast and Actual Inflation	3
Chart 1.8	April Forecast and Actual Rates for Inflation Excl. Unprocessed Food, Energy, Alcohol-Tobacco and Gold	3
Chart 1.9	CBRT Rates and Short-Term Rates	3
Chart 1.10	CBRT Open Market Operations	3
Chart 1.1.1	Revisions to Oil Price Assumptions	4
Chart 1.1.2	Revisions to Import Price Assumptions	4
Chart 1.1.3	Inflation and Output Gap Forecasts	5
2.	INTERNATIONAL ECONOMIC DEVELOPMENTS	
Chart 2.1.1	Global Growth Rates	9
Chart 2.1.2	Regional Growth Rates for Emerging Economies	9
Chart 2.1.3	Global PMI	10
Chart 2.1.4	Emerging Markets PMI	10
Chart 2.1.5	Export-Weighted Global Production Index	11
Chart 2.2.1	S&P Goldman Sachs Commodity Index	12
Chart 2.2.2	Crude Oil Prices	12
Chart 2.2.3	CPI Inflation in Advanced and Emerging Economies	12
Chart 2.2.4	Core CPI Inflation in Advanced and Emerging Economies	12
Chart 2.3.1	Policy Rates of Advanced Economies	13
Chart 2.3.2	Policy Rates of Emerging Economies	13
Chart 2.3.3	Advanced Economies Average Policy Rate and Expectations	14
Chart 2.3.4	Emerging Economies Average Policy Rate and Expectations	14
Chart 2.4.1	10-Year Bond Yields	14
Chart 2.4.2	MSCI Indices	14
Chart 2.4.3	JP Morgan Exchange Rate Volatility Indices	15
Chart 2.4.4	Weekly Fund Flows to Emerging Economies	15
3.	INFLATION DEVELOPMENTS	
Chart 3.1	CPI and D Index	19
Chart 3.2	Contribution to Annual CPI	19
Chart 3.1.1	Prices of Core Goods and Services	19
Chart 3.1.2	Prices of Core Goods	19
Chart 3.1.3	Selected Durable Goods Prices	20
Chart 3.1.4	Prices of Core Goods	20
Chart 3.1.5	Prices of Services by Sub-Categories	21
Chart 3.1.6	Prices of Services	21
Chart 3.1.7	Indices B and C	21
Chart 3.1.8	Indices B and C	21
Chart 3.1.9	CPI and B Diffusion Indices	22
Chart 3.1.10	Core Inflation Indicators SATRIM and Median	22
Chart 3.2.1	Food and Energy Prices	22
Chart 3.2.2	Food Prices	22
Chart 3.2.3	Prices of Fresh Fruits and Vegetables and Other Food	23
Chart 3.2.4	Selected Food Items	23
Chart 3.2.5	Domestic Energy Prices	23
Chart 3.2.6	Energy Prices	23
Chart 3.3.1	Domestic Producer and Consumer Prices	24
Chart 3.3.2	Manufacturing Prices excl. Petroleum and Base Metals	24

Chart 3.4.1	Prices of Agricultural Products and Unprocessed Food	25
Chart 3.4.2	Prices of Agricultural Products and Unprocessed Food	25
Chart 3.5.1	CPI Inflation Expectations	25
Chart 3.5.2	Medium-Term Inflation Expectations Curve	25
Chart 3.5.3	Probability Distribution of 12-Month-Ahead Inflation Expectations	26
Chart 3.5.4	Probability Distribution of 24-Month-Ahead Inflation Expectations	26
4.	SUPPLY AND DEMAND DEVELOPMENTS	
Chart 4.1.1	Contributions to Annual GDP Growth from the Production Side	29
Chart 4.1.2	Contributions to Quarterly GDP Growth from the Production Side	29
Chart 4.1.3	Industrial Production Index	30
Chart 4.1.4	Sectoral Turnover Indices	30
Chart 4.2.1	Contributions to Annual Growth from the Expenditure Side	30
Chart 4.2.2	Contributions to Quarterly Growth from the Expenditure Side	30
Chart 4.2.3	Exports and Imports	31
Chart 4.2.4	Current Account Balance	31
Chart 4.3.1	Unemployment and Labor Force Participation Rates	32
Chart 4.3.2	Nonfarm and Services Employment	32
Chart 4.3.3	Industrial and Construction Employment	32
Chart 4.3.4	Nonfarm Employment in Formal vs. Informal Breakdown	32
Chart 4.4.1	Nonfarm Gross Wage Salary Index and Net Minimum Wage	33
Chart 4.4.2	Nonfarm Hourly Earnings Index and Minimum Wage	33
Chart 4.4.3	Sectoral Partial Labor Productivity	33
Chart 4.4.4	Nonfarm Partial Labor Productivity, Per Capita Real Wage and Real Unit Wage	33
Chart 4.5.1	Output Gap Indicators	34
Chart 4.5.2	Breakdown of Output Gap by Demand Components	34

5. FINANCIAL CONDITIONS AND MONETARY POLICY

Chart 5.1.1	Change in Regional Risk Premiums	43
Chart 5.1.2	Portfolio Flows in Emerging Economies	43
Chart 5.1.3	Turkish Lira and Emerging Market Currencies against US Dollar	44
Chart 5.1.4	Exchange Rate Basket and EMBI Index of Turkey	44
Chart 5.1.5	Exchange Rate Volatilities Implied by Options	44
Chart 5.1.6	Exchange Rate Volatilities Implied by Options	44
Chart 5.1.7	Short - Term Rates	45
Chart 5.1.8	CBRT Open Market Operations	45
Chart 5.1.9	Recent GDDS Yield Curve	45
Chart 5.1.10	Bond Yields and Inflation Compensation	45
Chart 5.2.1	Indicators of Banks' Funding Costs	46
Chart 5.2.2	Banks' Domestic Funding Conditions	46
Chart 5.2.3	TL Commercial Loan and TL Deposit Rates	46
Chart 5.2.4	Consumer Loan Rates	46
Chart 5.2.5	Credit Standards and Credit Demand and Annual Credit Growth	47
Chart 5.2.6	Loan Growth	47
Chart 5.2.7	TL and FX Commercial Loan Growth	47
Chart 5.2.8	Leading Sub-factors of Firms' Loan Demand	48
Chart 5.2.9	Effect of Fixed Investments on Credit Demand and Fixed Capital Formation	48

6. PUBLIC FINANCE

Chart 6.1.1	Central Government Budget Balances	54
Chart 6.1.2	Central Government Budget Revenues and Primary Expenditures	54
Chart 6.1.3	Real Tax Revenues	55
Chart 6.1.4	Real VAT and SCT Revenues	55
Chart 6.2.1	Public Debt Stock Indicators	55
Chart 6.2.2	Composition of the Central Government Debt Stock	55
Chart 6.2.3	Average Maturity of Domestic Cash Borrowing and the Average Term-to-Maturity of the Domestic Debt Stock	56
Chart 6.2.4	External Borrowing through Bond Issues	56
Chart 6.2.5	Total Domestic Debt Rollover Ratio	56
Chart 6.2.6	Treasury Auctions Interest Rate and Maturity Structure	56

7. MEDIUM-TERM PROJECTIONS

Chart 7.1.1	Revisions to Oil Price Assumptions	58
Chart 7.1.2	Revisions to Import Price Assumptions	58
Chart 7.2.1	Inflation and Output Gap Forecasts	59
Chart 7.2.2	Inflation Forecast	61
Chart 7.2.3	Output Gap Forecast	61
Chart 7.2.4	Annual Inflation Forecast for the B Index	62

Tables

2.	**INTERNATIONAL ECONOMIC DEVELOPMENTS**	
Table 2.1.1	Growth Forecasts for 2020 and 2021	11
Table 2.2.1	Inflation Forecasts for 2020 and 2021	13
Table 2.4.1	Composition of Fund Flows to Emerging Economies	15
3.	**INFLATION DEVELOPMENTS**	
Table 3.1.1	Prices of Goods and Services	20
Table 3.3.1	D-PPI and Sub-Categories	24
6.	**PUBLIC FINANCE**	
Table 6.1.1	Central Government Budget Aggregates	53
Table 6.1.2	Central Government Primary Expenditures	54
Table 6.1.3	Central Government General Budget Revenues	55
7.	**MEDIUM-TERM PROJECTIONS**	
Table 7.1.1	Change in Key Forecast Variables	57
Table 7.1.2	Revisions to Assumptions	59
Table 7.2.1	Revisions to End-2020 and End-2021 Inflation Forecasts and Sources of Revisions	60
Table 7.2.2	CBRT Inflation Forecasts and Expectations	62
Table 7.2.3	Key Risks to Inflation Forecasts and Possible Impact Channels	63

Boxes in Previous Inflation Reports

2020-II

Box 1.1 Effects of the Pandemic on the Turkish Economy: Transmission Channels and Macro Policy Mix
Box 2.1 Global Economic Prospects and External Demand Outlook
Box 2.2 Global Economic Policies Against the Pandemic
Box 3.1 Possible Effects of the Pandemic on Inflation Outlook
Box 4.1 Possible Impact of the Pandemic through External Demand and Tourism Channels
Box 4.2 Revisions in Balance of Payments Statistics
Box 5.1 Monetary and Macroprudential Measures Taken Against the Pandemic in Turkey
Box 6.1 Fiscal Measures Taken Against the Pandemic in Turkey

2020-I

Box 2.1 A Closer Look at Global Trade Interventions
Box 3.1 Main Macro Drivers of the Disinflation in 2019
Box 3.2 An Analysis of Turkish Firms' Cost Structure
Box 4.1 Nowcasting for Labor Market Data
Box 4.2 Exchange Rate Pass-Through to Export Prices
Box 5.1 The Direct and Indirect Effect of Credit Market Conditions on Investment: Evidence from a Reversal in International Capital Flows
Box 5.2 Effects of Macroeconomic Indicators on Turkey's Risk Premium
Box 7.1 An Evaluation of End-2019 Inflation Forecasts

2019-IV

Box 2.1 Foreign Investor Position Index for Bond Markets in Emerging Economies
Box 3.1 An Evaluation of the Impact of Output Gap on Inflation
Box 4.1 Effect of Bridge Days on Economic Activity
Box 4.2 Cyclically Adjusted Current Account Balance
Box 4.3 Average Travel Expenditures per Visitor: Developments in Nominal and Real Terms
Box 5.1 Determinants of Turkey's External Borrowing Rate
Box 6.1 Fiscal Stance in the New Economic Program

2019-III

Box 2.1 Observations on the Debt Structure of Emerging Economies
Box 3.1 Indirect Effects of Electricity and Natural Gas Price Increases on Consumer Prices
Box 4.1 The Relation Between Manufacturing Output and PMI Indicators
Box 4.2 The Position of Turkey in Global Value Chains
Box 7.1 Central Bank's Inflation Forecasts and Monetary Policy Stance

2019-II

Box 2.1 Euro Area Economic Outlook
Box 3.1 Drivers of Inflation Dynamics in the Recent Period
Box 3.2 Reflections of Base Effects on Consumer Price Inflation
Box 4.1 Sources of the Rapid Improvement in the Current Account Balance
Box 4.2 Short-Term Forecasts of Domestic Demand
Box 4.3 Heat Map for Economic Activity in Turkey
Box 4.4 A Regional Breakdown of the Determinants of Exports
Box 5.1 A Comparative Analysis of the Slope of the Yield Curve
Box 5.2 Developments Regarding the CBRT's International Reserves

Abbreviations

A-PPI	Agricultural Producer Price Index
AMA	Automobile Manufacturers Association
bbl	Barrel
BIST	Borsa İstanbul
BTS	Business Tendency Survey
CBRT	Central Bank of the Republic of Turkey
CGF	Credit Guarantee Fund
CPI	Consumer Price Index
D-PPI	Domestic Producer Price Index
ECB	European Central Bank
EMBI	Emerging Markets Bond Index
EPFR	Emerging Portfolio Fund Research
EU	European Union
EUR	Euro
FCI	Financial Conditions Index
FOMC	Federal Open Markets Committee
Fed	Federal Reserve Bank
FX	Foreign Exchange
G20	The Group of Twenty
GDP	Gross Domestic Product
IHS	Information Handling Services
IMF	International Monetary Fund
JPMVXEM	JPMorgan Emerging Market Volatility Index
JPMVXG7	JPMorgan G7 Volatility Index
LLW	Late Liquidity Window
MEDIAN	Median Inflation for Seasonally Adjusted 5-Digit Sub-Price Index
MSCI	Morgan Stanley Capital International
MTP	Medium-Term Program
OECD	Organization for Economic Cooperation and Development
OMO	Open Market Operations
OPEC	Organization of the Petroleum Exporting Countries
PMI	Purchasing Managers Index
PPI	Producer Price Index
PTT	The National Post and Telegraph Directorate of Turkey
Q-o-Q	Quarter-on-quarter
S&P	Standard and Poor's
SATRIM	Seasonally Adjusted Trimmed Mean Inflation
SCT	Special Consumption Tax
SME	Small and Medium-Sized Enterprises
SMEs	Small and Medium-Sized Enterprises
SSI	Social Security Institution
TCDD	The State Railways of the Turkish Republic
TL	Turkish Lira
TRY	Turkish Lira
TURKSTAT	Turkish Statistical Institute
UK	United Kingdom
ULC	Unit Labor Cost
US	United States
USA	United States of America

USD	United States Dollar
VAT	Value Added Tax
VIX	Volatility Index
WGMA	White Goods Manufacturers Association
Y-o-Y	Year-on-year

2020 Calendar for MPC Meetings, Inflation Report and Financial Stability Report

MPC Meetings	Summary of the MPC Meeting	Inflation Report	Financial Stability Report
16 January 2020	23 January 2020	30 January 2020	
19 February 2020	26 February 2020		
19 March 2020	26 March 2020		
22 April 2020	30 April 2020	30 April 2020	
21 May 2020	1 June 2020		29 May 2020
25 June 2020	2 July 2020		
23 July 2020	29 July 2020	29 July 2020	
20 August 2020	27 August 2020		
24 September 2020	1 October 2020		
22 October 2020	28 October 2020	28 October 2020	
19 November 2020	26 November 2020		27 November 2020
24 December 2020	31 December 2020		
21 January 2021	28 January 2021	28 January 2021	
18 February 2021	25 February 2021		
18 March 2021	25 March 2021		

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