

INFLATION REPORT

2022-IV

October 27, 2022

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1. Overview

The strong growth trend in economic activity observed in the first quarter of 2022 continued in the second quarter as well. In the second quarter, Gross Domestic Product (GDP) increased by 7.6% year-on-year and 2.1% quarter-on-quarter. Similar to the first quarter, the main drivers of annual growth in the second quarter were services and the industrial sector, and private consumption continued to contribute to growth, particularly with the contribution of services items. Meanwhile, alternative indicators show that demand from the expenditure side is fragmented across groups. In this period, as in previous quarters, the uptrend in machinery-equipment investments was maintained, while the decrease in construction investments limited the contribution of total investments to annual growth.

The rising share of sustainable components in the composition of growth supports the rise in employment. The annual rise in machinery-equipment investments, which is one of the drivers of potential growth, has continued for eleven successive quarters since the last quarter of 2019. Moreover, the growth-inducing effect of net exports, which supports the current account balance positively, continued in the second quarter as well. In the second quarter, the contribution of machinery-equipment investments and net exports to annual growth was 2.2 and 2.7 percentage points, respectively. Thus, the shares of these components in national income reached historically high levels. The positive impact of strong growth on employment continued in the second quarter as well. While the seasonally adjusted total unemployment rate decreased to 10.6% in the second quarter, the average for July-August decreased by 0.8 points to 9.8% compared to the previous quarter. In the said period, employment growth lost momentum compared to the uptrend observed in the first half of the year and was recorded at 0.4% (approximately 116 thousand people) on a quarterly basis. On the other hand, the seasonally adjusted participation rate decreased by 0.4 points to 52.8%, contributing to the decrease in the unemployment rate.

Leading indicators show that economic activity, which was strong in the first half of the year, decelerated also due to the weakening in foreign demand. In the July-August period, the seasonally adjusted Industrial Production Index (IPI) decreased by 3.9% compared to the second quarter. In this period, the decrease in production was observed across all sectors, excluding vehicles. While industrial turnover indices point to a decrease in both domestic and foreign demand in the third quarter, the quarterly retail sales volume index continued to increase, albeit at a slower pace. An analysis of demand components suggests that the final domestic demand, which increased on a quarterly basis in the second quarter, decreased slightly in the third quarter. In this period, the decline in foreign demand due to the slowdown in global growth is expected to limit the contribution of net exports to growth. In line with the expected slowdown in economic activity, it is predicted that the rise in total employment will lose momentum in the third quarter, and employment in related industrial sectors may slow down due to the decrease in exports.

Despite the strong contribution of the balance of services, the annualized current account deficit continued to increase due to the limited slowdown in exports and high course of energy and gold imports. While the weakening effect of growing geopolitical risks on economic activity continues globally, leading indicators signal that the risk of a global economic recession has increased. The strong exports trend in the first half of 2022 lost some momentum in the third quarter due to the weakening in foreign demand. Exports to Europe, Turkey's main export market, which were strong in the first half of the year and contributed to the overall export growth, slowed down slightly on an annual basis in the third quarter. However, total exports remained high after the pandemic. Imports, on the other hand, continued to rise because of the high level of energy prices and recently accelerated gold imports. The decrease in international commodity prices led to a limited decline in both export and import prices in the third quarter. Excluding price effects, the quantity of exports decreased, while that of imports increased. The decline in the volume of exports is attributed to the deceleration in economic activities in main export markets. Services revenues maintained its uptrend with the contribution of travel and transportation revenues and continued to support the current account balance. As of August, travel and transportation revenues were above the pre-pandemic levels of 2019. Twelve-month cumulative figures suggest that travel revenues reached USD 31.7 billion, while transportation revenues stood at USD 33.1 billion. Meanwhile, when foreign trade developments are taken into consideration, it is observed that the annualized current account deficit continued to increase in August. Excluding gold and energy, the ongoing rise in the 12-month cumulative current account surplus is important as it shows the impact of energy prices, which are still high compared to 2021 despite some decline, on the current account balance.

The elevated level of global inflation, the increased concerns over a recession in advanced economies and expectations of deceleration in economic activity across countries caused a significant decline in the global risk appetite in the current reporting period. Lingering geopolitical risks and fluctuating commodity prices have weakened the expectations of a recovery in the global risk appetite. The volatility in long-term bond rates in advanced economies and the course of global financial conditions keep the risks to portfolio flows to emerging market economies (EM) alive, and cause outflows from bond markets in particular. In this period, capital flows to Türkiye displayed a trend similar to that of emerging economies.

Loan growth, which showed a rapid acceleration in the second quarter, decelerated in the third quarter on the back of macroprudential measures, but in real terms, it continued to hover above the averages of previous periods. According to the results of the Bank Loans Tendency Survey (BLTS), banks' foreign funding conditions became tighter in the third quarter, while banks' domestic funding costs remained low on the back of the CBRT's policy rate cut by 350 basis points in total during the August-October period. Commercial loan interest rates have declined owing to the implementation obliging banks to hold securities at varying ratios according to the commercial loan interest rates and the difference between commercial loan rates and policy rate has decreased. In the same period, consumer and vehicle loan rates slightly decreased as well. While the rapid acceleration in loans was replaced by a more balanced course with the effect of macroprudential measures introduced in the third quarter, inflation-adjusted loan growth is still above the long-term averages.

Annual consumer inflation, which was 83.45% in the third quarter of 2022, was close to the mid-point of the forecast range presented in the July Inflation Report, while annual inflation decreased in the energy group, remained almost flat in food and increased in other subgroups. In this period, in tandem with the global outlook, commodity prices excluding natural gas, and international transportation costs decreased, and supply constraints eased compared to previous periods while the nominal depreciation in the Turkish lira remained limited. Natural gas prices, which stayed elevated due to geopolitical developments, coupled with electricity prices, have put pressure on inflation both directly and indirectly. Aggregate demand conditions were more moderate compared to the previous quarter, and following the normalization trend in loan supply, they showed a decline in line with the projections in the July Inflation Report. Foreign demand also contributed to this decline. Against this background, monthly changes in B and C indices slightly slowed, while annual inflation continued to increase. Compared to the previous reporting period, there was a limited slowdown in indicators regarding the underlying trend of inflation in this quarter.

1.1 Monetary Policy Decisions

Considering that financial conditions should be supportive to preserve the growth momentum in industrial production and the positive trend in employment in a period of increasing global uncertainties, the CBRT cut the policy rate by 100 basis points in August and September, and by 150 basis points in October. At its meetings of August and September, the Monetary Policy Committee (MPC) emphasized escalating geopolitical risks and weakening global economic activity. Despite the foreign demand-driven strong growth trend in Türkiye in the first half of the year and positive employment developments compared to peer economies, the leading indicators for the third quarter point to a loss of momentum in economic activity caused by external demand. Under the circumstances of increased uncertainties in global growth, the CBRT decided to reduce the policy rate by a total of 350 basis points in August, September and October in order to support financial conditions to sustain the structural gains in domestic economic activity and employment developments.

The CBRT has strengthened its integrated policy framework with macroprudential measures since the second quarter of 2022. Within the framework of its targeted loan policy, the CBRT closely monitors the growth rate, composition and the use of loans to support economic activity, as well as the spread between the policy rate and loan interest rates to increase the effectiveness of the monetary transmission mechanism. Accordingly, macroprudential policies were strengthened and continued to be implemented during the previous reporting period.

In August, the CBRT took new steps to increase the effectiveness of its reserve requirement implementation applied to loans. In this context, the CBRT decided to replace the reserve requirement maintenance applied at 20% by maintenance of securities at 30% for banks, and to make TL commercial loan types, for which maintenance of securities is not required, available against expenditure. Additionally, for commercial loans to be extended from 20 August 2022 until the end of 2022, it was decided that securities would be maintained based on 20% of the loan amount to be extended at an annual compound

interest rate 1.4 times higher than the CBRT’s annual compound reference rate, and 90% of the loan amount to be extended at an annual compound interest rate 1.8 times higher than the CBRT’s annual compound reference rate (Table 1.1.1).

As part of the liraization strategy, the CBRT introduced new regulations in August to increase the share of Turkish lira assets in the collateral system and to ensure maintenance of additional required reserves for foreign currency deposits/participation funds. Effective as of 2 September 2022, the collateral discount rate for indexed securities and assets subject to collateral in foreign currency and gold was increased from 50% to 60%. Effective from the same date, in addition to the real person conversion rate, the legal person conversion rate was included as a target condition for maintaining additional required reserves for foreign currency deposits/participation funds based on the real person conversion rate, and the target values were raised (Table 1.1.1).

In September, the CBRT revised the terms of rediscount credits and lifted the exemption from the requirement of keeping in blocked accounts the rediscount credits for export and foreign exchange earning services utilized via the Turk Eximbank. Additionally, repayments in Turkish lira at the CBRT’s buying rates were allowed for foreign currency rediscount credits. Besides, the CBRT decided to apply the condition of lending against expenditure - a requirement of the securities maintenance facility - to Small and Medium-Sized Enterprises (SME), export and investment loans above TL 50,000 that were previously not subject to the securities maintenance implementation. Accordingly, investment, export and SME loans were excluded from this regulation on condition that they were to be used in the expenditure areas specified.

After the implementation of macroprudential measures, the growth rate and composition of loans showed changes in line with targeted loan policies. The share of consumer loans in TL-denominated loans continued to decrease, while the share of investment and export loans in commercial loans continued to increase. Additionally, as a positive reflection of the CBRT’s targeted loan policy, the amount and share of SME loans in total loans increased. The CBRT closely monitors the balancing between policy rates and loan, bond and deposit rates for the effectiveness of the monetary transmission mechanism. After the measures taken, loan rates receded, especially in commercial loans, while the spread between commercial loan rates and policy rate decreased, and government domestic debt securities (GDDS) yields decreased in all maturities.

In the current reporting period, the CBRT maintained the simple operational framework in its monetary policy, provided funding through Open Market Operations (OMO) and currency swaps, and overnight interest rates hovered around the CBRT policy rate. Owing to the CBRT’s predictable liquidity policy, Borsa Istanbul (BIST) overnight repo rates continued to hover around the CBRT policy rate (Chart 1.1.1). The amount of swap transactions, which was TL 724 billion as of 28 July 2022, increased to TL 875 billion as of 21 October 2022. In the same period, the net OMO funding decreased to TL 256 billion (Chart 1.1.2).

Chart 1.1.1: CBRT Rates and Short-Term Interest Rates (%)

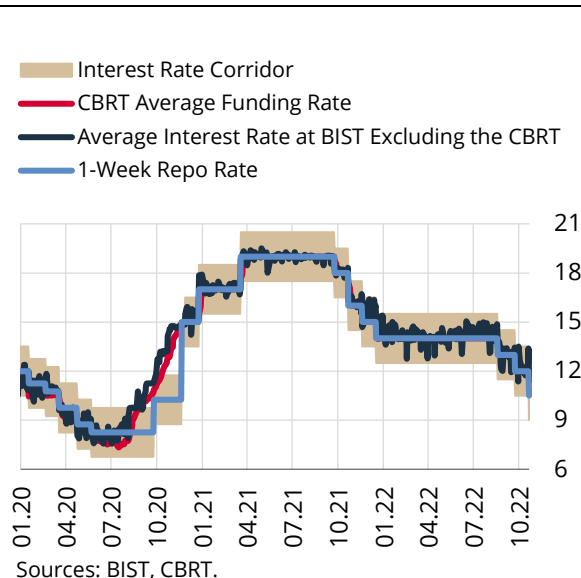


Chart 1.1.2: CBRT OMO and Swap Transactions (One-Week Moving Average, TL Billion)

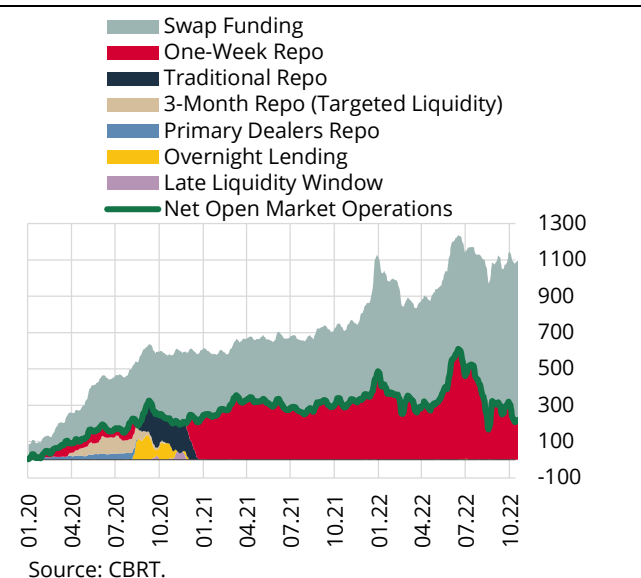


Table 1.1.1: Monetary Policy Implementations

Date	Policy Decision
18 August 2022	<ul style="list-style-type: none"> ▪ The MPC decided to reduce the policy rate (one-week repo auction rate) from 14% to 13%. ▪ For loans subject to reserve requirements stated in the press release of 23 April 2022, the CBRT decided that: <ul style="list-style-type: none"> • The reserve requirement maintenance ratio applied at 20% would be replaced by maintenance of securities at 30% for banks to enhance the efficiency of the implementation. • Securities equaling the loan amount exceeding the loan growth rate of 10% as of 30 December 2022 compared to 29 July 2022 would be maintained for a period of one year. • For TL-denominated commercial loans that are not subject to the securities maintenance implementation, lending would be allowed against expenditures starting from 1 October 2022.
20 August 2022	<ul style="list-style-type: none"> • For all commercial loans to be extended from 20 August 2022 until the end of 2022, securities will be maintained based on: <ul style="list-style-type: none"> • 20% of the loan amount to be extended at an annual compound interest rate 1.4 times higher than the CBRT-released annual compound reference rate, and • 90% of the loan amount to be extended at an annual compound interest rate 1.8 times higher than the CBRT-released annual compound reference rate.
23 August 2022	<ul style="list-style-type: none"> ▪ Effective from 2 September 2022, the collateral discount rate for indexed securities and assets subject to collateral in foreign currency and gold was increased from 50% to 60%.
30 August 2022	<ul style="list-style-type: none"> ▪ Effective from the calculation date of 2 September 2022, an additional 3% commission per annum (over the reserve required amount that should be maintained for FX deposit/participation fund liabilities) would be applied to banks with a TL deposit/participation fund share below 50% in real or legal person deposits.
31 August 2022	<ul style="list-style-type: none"> ▪ Effective from the calculation date of 2 September 2022, in addition to the real person conversion rate, the legal person conversion rate was included as a target condition for maintaining additional required reserves for foreign currency deposits/participation funds based on the real person conversion rate, and the target values were raised. Accordingly, it was decided to apply: <ul style="list-style-type: none"> • an additional 5 points of reserve requirement to banks at which the conversion rate for either real or legal persons (whichever lower) was below 10%, • an additional 3 points of reserve requirement to banks at which the conversion rate for either real or legal persons (whichever lower) was between 10% and 20%.

31 August 2022	<ul style="list-style-type: none"> ▪ Advance Loans against Investment Commitment were revised to include the following interest discount options: <ul style="list-style-type: none"> • SME status • Development level of the region subject to investments • Use of domestically produced machines • External financing to a certain ratio
7 September 2022	<ul style="list-style-type: none"> ▪ The exemption for the condition of keeping in blocked accounts the amount of rediscount credits for export and FX- earning services utilized via the Turk Eximbank was lifted for the purpose of uniformity in implementation. ▪ Repayments for FX-denominated rediscount credits were allowed to be made in Turkish lira at the CBRT's FX buying rates announced one business day before the due date.
22 September 2022	<ul style="list-style-type: none"> ▪ The MPC decided to reduce the policy rate (one-week repo auction rate) from 13% to 12%.
23 September 2022	<ul style="list-style-type: none"> ▪ The Communiqué (No. 2022/26) Amending the Communiqué on the Procedures and Principles Regarding the Fees to be Charged by Banks to Commercial Customers (No. 2020/4) published in the Official Gazette stated that: <ul style="list-style-type: none"> • the maximum loan disbursement fee of 1.1% to be imposed on loans with a maturity of less than one year would take into consideration the term-to-maturity and be reduced proportionally, and • the maximum annual limit of 0.25% on loan allocation fees would be applied at half the rate for limit renewals.
27 September 2022	<ul style="list-style-type: none"> ▪ The lending against expenditure condition for securities maintenance would be applied to SME, export and investment loans above TL 50,000 that are not subject to securities maintenance, and there would be a gradual transition. Accordingly; <ul style="list-style-type: none"> • as of 1 October 2022, investment loans, and • as of 29 October 2002, export and SME loans would be excluded from securities maintenance, provided that they are used in specific areas of spending.
30 September 2022	<ul style="list-style-type: none"> ▪ The first paragraph of Article 4 of the Communiqué on Supporting the Conversion to Turkish Lira Deposits and Participation Accounts (No. 2021/14) published in the Official Gazette was amended as "The foreign currency deposit account and participation account balances denominated in US dollars, euros and British pounds that domestic resident real persons have at banks and domestic resident legal entities have on any date between 31/12/2021 and 30/9/2022 at banks are converted into Turkish lira at the conversion rate upon the request of the account holder."

18 October 2022

- With the revision to foreign currency liabilities in securities maintenance:
 - the securities maintenance ratio was changed to 5% as of 28 October 2022.
 - Starting 30 December 2022, securities will be maintained based on the targets of the Turkish lira deposits share, instead of the conversion rate.
 - There will be a gradual transition of three months for both changes.

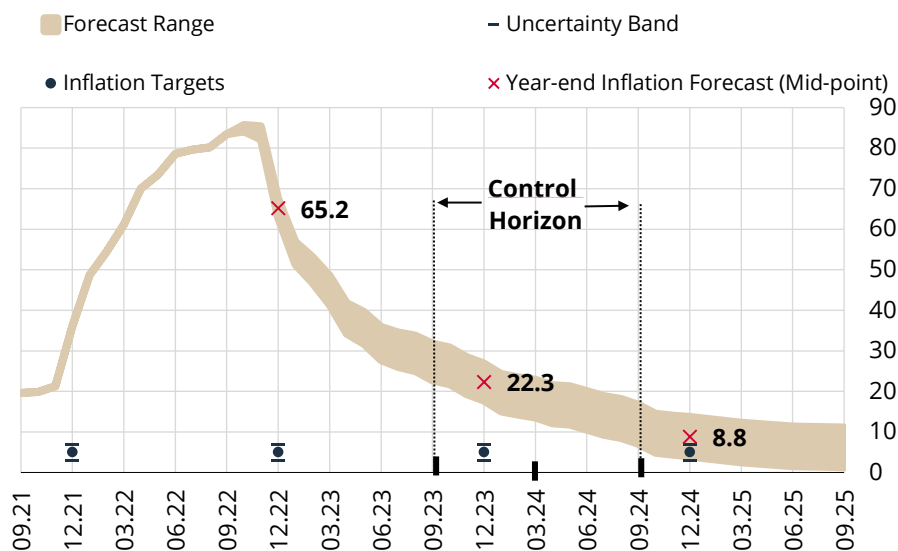
20 October 2022

- The MPC decided to cut the policy rate, i.e. the one-week repo auction rate, from 12% to 10.5%.

1.2 Medium-Term Forecasts

Having ended the third quarter of 2022 at 83.45% and 74.63%, respectively, CPI and B-index inflation remained within the forecast range presented in the July Inflation Report. The third-quarter downtrend in non-energy commodity prices and international transportation costs helped alleviate supply constraints. The effects of the policy measures taken under the liraization strategy were more evident in this period, and the Turkish lira was one of the currencies that diverged positively by remaining relatively stable, whereas many other currencies experienced significant depreciation amid the declining global risk appetite. Moreover, data for the third quarter point to a more moderate course in domestic demand. Thanks to macroprudential measures, credit growth has become more balanced as of the third quarter, and thus, the financing cost channel seems to function more efficiently. Hence, inflation was in line with the July Inflation Report projections.

Inflation is projected to be 65.2% by the end of 2022, and remain on a downward trend by falling to 22.3% by the end of 2023 and 8.8% by the end of 2024. In line with the main objective of achieving sustainable price stability, the monetary policy stance is determined by considering the continuity of production, the growth rate, composition and utilization purposes of credits, the components of the current account balance and healthy pricing in the foreign exchange market. Forecasts point to a gradual decline in the underlying trend of inflation in 2023 and beyond. The disinflation path implied by the forecasts is based on the assumption that commodity prices will gradually converge to their historical averages due to slowing global demand amid tighter financial conditions, and therefore FX-denominated import prices will decline. On the other hand, a relatively high but moderate course is foreseen in energy prices. Under these external conditions, with the stabilizing effects of the macroprudential measures on credits taken under the liraization strategy and as a result of the implementation of the policy mix, the potential supply will be supported through the financing cost channel while the stable course of the foreign exchange market and the improvement in inflation expectations are expected to bring normalization in the pricing behavior. Accordingly, with 70% probability, inflation is expected to be between 62.8% and 67.6% with a mid-point of 65.2% at end-2022; between 17.7% and 26.9% with a mid-point of 22.3% at end-2023; and between 4.0% and 13.6% with a mid-point of 8.8 % at end-2024 (Chart 1.2.1).

Chart 1.2.1: Inflation Forecast* (%)

Sources: CBRT, TURKSTAT.

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

Forecasts are based on an outlook in which the slowdown in global economic activity becomes more pronounced, global inflation remains elevated and global financial conditions are tighter than in the previous reporting period. Leading indicators suggest that the global economic outlook continues to weaken further. Accordingly, global growth forecasts for 2023 have been revised significantly downwards, and global recession is now considered to have become an important risk factor. In line with this outlook, international commodity prices are projected to decline in the upcoming period. Meanwhile, global inflation is expected to remain elevated, and financial conditions are expected to weigh on global demand.

Credit growth is expected to follow a more balanced course in the upcoming period thanks to credit, collateral and liquidity policies, the evaluation processes of which have been completed, and the strengthened macroprudential policy set. Assuming that public finance developments are in line with the Medium-Term Program (MTP) forecasts and fiscal discipline is maintained, the ongoing stabilizing effects of macroprudential measures on loans are expected to support the recent improvement in pricing behavior. This support will happen both on the supply side, through lower financing costs and targeted loans ensuring continued production and preserving export capacity, and on the demand side, through healthy pricing in FX markets and restricting excessive consumption and import demand. In this regard, the credit growth rate is expected to affect aggregate demand conditions in line with the supply potential of the economy. As the effects of all these factors on the disinflationary process through costs, the supply-demand balance, the current account balance and exchange rate stability become more evident, inflation expectations are expected to contribute further to the decline in the underlying trend of inflation.

In a period of heightened global uncertainties, it is important for the monetary policy strategy that domestic financial conditions support the supply potential. In this context, the use of loans in targeted areas at affordable costs, which will enable them to turn into investments that increase production capacity, contributes to the strengthening of the supply potential. However, macroprudential measures were gradually increased against the sudden acceleration in the consumer and commercial loan growth in the second quarter of 2022. In this context, it is observed that loan growth started to normalize in the third quarter due to the adopted measures. Financing costs, which continue to decline with macroprudential measures that strengthen monetary transmission, will also contribute to the continuity of supply. The more extensive use of credits and the increase in the share of investment and export loans in corporate loans through targeted loans also supports this channel.

Production and investment-oriented policies and the improvement in the current account balance are expected to contribute to the ongoing stability in FX markets and the disinflation process. The projected slowdown in external demand adds to risks to the current account balance, while the moderate course of energy and commodity prices during the forecast period is expected to contribute positively to the current account balance, especially in 2023. Meanwhile, the increased export capacity through targeted credits

incentivizing production and investments in the medium term supports the post-pandemic structural transformation in exports. The stable course of the FX market is expected to continue due to the measures taken under the liraization strategy. Additionally, the expected decline in international energy and commodity prices is expected to contribute further to the disinflation process through the cost and the current account channels.

1.3 Key Risks to Forecasts

The outlook underlying the MTP projections presented in the Inflation Report is based on the MPC's judgments and assumptions. The major downside and upside macroeconomic risks that may lead to a change in baseline projections and the associated monetary policy stance are as follows.¹

In this current reporting period, the key risk factors to economic activity and inflation have been uncertainties regarding the global inflation and growth. Global inflation remains high due to soaring energy prices, and the supply-demand mismatch accompanied by rigidities in the labor market. The likelihood of a slower-than-expected decline in the core inflation trend in advanced economies puts pressure on financial conditions. On the other hand, leading indicators signal an elevated risk of a recession in the global economy. Mounting concerns over energy supply driven by geopolitical risks and the tightening in global financial conditions have led to a downward revision in the global growth forecasts for the upcoming year, for the euro area, in particular. The negative course of the global risk appetite in the current reporting period adds to the volatility in financial markets. Moreover, in the upcoming period, the increased possibility of divergence in economic conditions and problems among advanced economies brings additional risks to global economic activity and financial conditions.

While concerns over the global demand outlook on energy commodity prices keep the downside risks brisk, persisting geopolitical risks as well as the supply-limiting measures taken by OPEC+ countries pose upside pressures. Due to the Russia-Ukraine conflict and the OPEC+ countries' decisions to cut down on oil production, the negative course in energy prices persists. This causes upside risks on inflation forecasts to remain brisk. Although supply chain disruptions have recently been eliminated to some extent, pressures on producer prices are in place due to the supply shock driven by the Russia-Ukraine conflict. Moreover, the pressure on commodity prices led by expectations for a global recession is likely to have positive effects on inflation and the current account balance. However, the increased possibility of a global recession makes the downside risks on foreign demand more pronounced compared to the previous reporting period, posing a risk for the current account balance outlook. There are three factors that potentially balance the risks on the current account balance. The first one is the role that our country can play in regional energy distribution, as is the case in grain supply, and the rise in the share of domestic energy resources. The second is Türkiye's ability to substitute for probable energy-based production losses in Europe, as has been the case for a while, due to the supportive nature of the policy mix regarding the continuity of supply. The third factor is that in case of a deeper slowdown in global demand than anticipated, it entails supportive effects on the current account balance through domestic demand and global commodity prices.

Credit growth rate and the targeted use of accessed funds for economic activity are important to sustainable price stability. In addition, upon sizeable widening, the policy-loan spread has recently been balanced thanks to the announced macroprudential measures, which is closely monitored. Inflation expectations and the underlying trend of inflation remain high. Therefore, a sudden acceleration that may occur in loans despite the measures in effect poses an upside risk to inflation forecasts. Accordingly, the macroprudential policy set will be further strengthened with additional measures when needed.

¹ Evaluations of how and through which channel these risks may affect the inflation forecasts cited in the previous section are summarized in Table 3.3.1.

2. Economic Outlook

2.1 Global Economic Developments

Elevating geopolitical risks coupled with the tightening in financial conditions have weakened global economic activity. Leading indicators signal that the weakening in the global economic outlook continues. After a widespread positive growth outlook in the first quarter of 2022, in the second quarter, the global economic activity was negatively affected by: (i) the conflict between Russia and Ukraine affecting the global economy, particularly the euro area, through commodity prices as well as supply and trade channels, (ii) the course of the pandemic in China creating uncertainties regarding global demand and supply chains, and (iii) concerns over global financial conditions (Table 2.1.1). In this period, contraction continued in the United States (US) economy, which shrank by 0.1% on a quarterly basis, while the Chinese economy contracted by 2.6% for the first time since the pandemic began in the first quarter of 2020. In the same period, positive growth continued in the United Kingdom (UK), albeit with a slight decline, while growth in the euro area remained moderate at 0.8%. In the third quarter of 2022, the negative impact of the aforementioned factors on global economic activity continued. Furthermore, leading indicators issued in September signal that the slowdown in economic activity continued in the third quarter (Chart 2.1.1). According to September data, although the Purchasing Managers Index (PMI) decreased in the manufacturing industry sector in advanced economies, the headline index remained above the threshold value and services PMI dropped below the threshold. Meanwhile, in September, the month-on-month decline continued in PMI indices in advanced economies, particularly in the euro area. Moreover, consumer confidence indices of the United States of America (USA) and European countries are close to historically low levels. Despite all these, economic activity had a limited impact on labor market and wage developments. The number of job postings per unemployed person, which is a measure of tightness of the labor market, remains high. The US unemployment rate, which declined compared to the previous reporting period, remained at 3.5% in September, close to historically low levels, and some wage indicators continued to increase in the same period. Similarly, the unemployment rate in the euro area in August was 6.6%, close to historic lows. In emerging economies, PMI fell below the threshold in the manufacturing industry in September, while it remained above the threshold in the services sector. In China, where PMI data implied that there was a contraction in the manufacturing industry sector during the third quarter and in the services sector in September, the course of the pandemic continues to pose risks to the country's growth outlook.

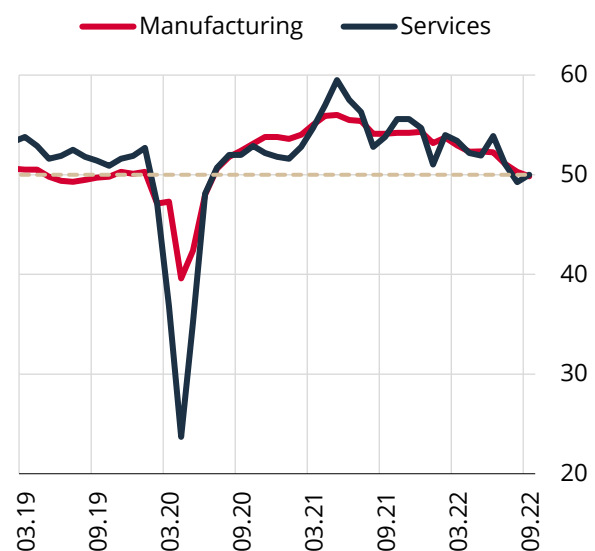
Table 2.1.1: Growth Rates* (2022Q2, %)

	YoY	QoQ
Euro Area	4.1	0.8
Germany	1.7	0.1
US	1.8	-0.1
UK	2.9	-0.1
Italy	4.7	1.1
France	4.2	0.5
China	0.4	-2.6
Canada	4.6	0.8
India	13.5	-1.4
South Korea	3.0	0.7
Japan	1.4	0.9

Source: OECD (Quarterly National Accounts).

* Countries with the highest GDP on a global basis are sorted according to their weight in Türkiye's exports in 2021.

Chart 2.1.1: Global PMI Indices* (Level)



Source: S&P Global.

* Dotted line shows the historical average.

Despite worldwide uncertainty created by geopolitical risks and financial conditions, global growth expectations were revised upwards compared to the previous reporting period on the back of the improvement in growth expectations in all countries, particularly in the euro area. Meanwhile, it is expected that the global growth outlook for 2023, particularly for the euro area, will deteriorate significantly due to elevated risks regarding energy supply and tighter monetary policy across countries. Actually, the growth forecasts for 2023 for Türkiye's main trading partners were significantly revised downwards compared to the previous reporting period (Table 2.1.2). Growth expectations for 2022 for some countries, particularly for the USA and China, have been revised downwards due to geopolitical developments, the course of the pandemic and monetary policy steps of central banks of advanced economies (Table 2.1.2). Meanwhile, with the more optimistic growth expectations for the majority of Türkiye's main trading partners, an upward revision is expected for Türkiye's external demand outlook for 2022. An analysis by subgroups indicates that the contribution to external demand has increased, especially by the euro area. Despite the recent decline, energy prices hover at historically high levels, creating a potential for energy exporting countries Iraq, the United Arab Emirates (UAE), and Egypt, which have a significant share in Türkiye's exports, to increase their revenues and this limits the decline in foreign demand (Chart 2.1.2). Moreover, Türkiye's export structure and market diversification flexibility of exporting companies limit the negative effects on growth. Therefore, foreign demand in 2022 is expected to be less affected than implied by global growth developments.

Table 2.1.2: Growth Forecasts for Türkiye's Main Trading Partners * (%)

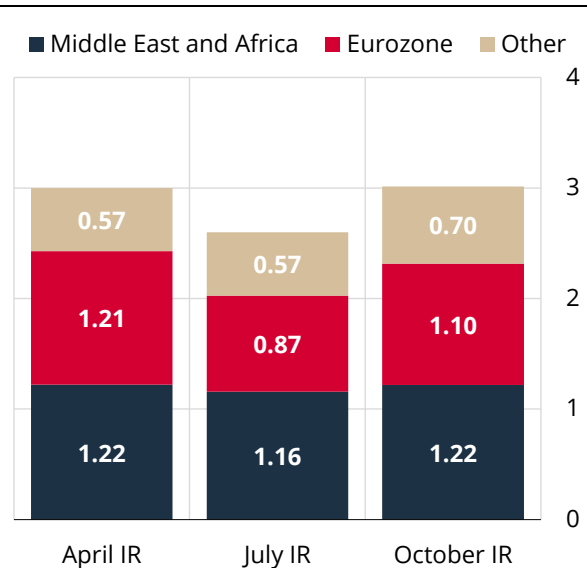
	Forecast for 2022		Forecast for 2023	
	July 2022	October 2022	July 2022	October 2022
Eurozone	2.7	3.0	1.4	0.0
Germany	1.6	1.4	1.6	-0.9
US	2.1	1.7	1.0	0.2
UK	3.3	4.1	0.5	-0.3
Italy	2.7	3.3	1.3	-0.1
Iraq	9.5	9.0	6.3	5.1
Spain	4.2	4.4	2.5	1.2
France	2.3	2.5	1.3	0.3
Netherlands	2.9	4.6	1.1	0.7
Israel	4.7	5.3	3.4	3.2
Russia	-7.7	-4.6	-2.5	-3.1
UAE	5.6	5.3	5.0	3.8
Romania	4.5	5.6	3.3	2.4
Belgium	2.5	2.4	1.6	0.8
Poland	4.8	4.1	2.4	1.1
Egypt	5.3	6.0	4.4	4.2
Bulgaria	2.8	2.9	2.5	1.6
China	4.2	3.2	5.4	4.8

Source: Consensus Economics, S&P Global.

* Countries are sorted according to the size of their share in Türkiye's exports in 2021.

While the global demand outlook continues to affect commodity prices, supply-side problems persist, although indicators regarding disruptions in supply chains suggest an easing. While expectations and demand conditions have been driving energy prices down, developments in energy supply pose a risk of undermining this trend significantly. The downside pressure on commodity prices continues due to the changing outlook in global financial conditions, the elevated level of the dollar index, and concerns over demand, meanwhile, supply-side problems persist as well. Industrial commodity prices, which tend to track the global growth outlook, particularly China's growth, declined in September and remained almost flat in October. Prices of aluminum, iron and copper decreased compared to the previous reporting period. On the other hand, agricultural commodity prices, which posted a significant decline on the back of favorable weather conditions and the activation of the grain corridor in Ukraine, increased in August and September, and posted an almost flat course in October. Wheat prices increased in the last two months, while cotton prices, which display a parallel course with the global growth outlook, decreased in the same period. Supply-side pressures on energy commodity prices persist due to ongoing sanctions on Russia, developments in two important OPEC producers, Libya and Ecuador, and maintenance and repair activities

Chart 2.1.2: Contributions to Export-Weighted Global Growth Index for 2022 (% Points)



Source: CBRT, Consensus Economics, S&P Global.

in some energy facilities. Furthermore, supply-side problems in Brent oil prices have been increasing. Recently, the increasing concerns about global demand play an important role in oil prices. The average Brent oil price per barrel, which was USD 125 in June, fell below USD 100 in August and hovered close to USD 90 in September. However, the decision to reduce daily oil production at the last OPEC+ meeting caused oil prices to rise in October. In the natural gas market, a decline was observed in September and October after the European gas stocks were mostly filled. While prices of natural gas traded in the US stock exchanges decreased by more than 20% in October, Dutch natural gas prices with 1-month maturity, which are indicative for European natural gas prices, decreased by around 30% (Table 2.1.3). Disruptions in the supply chain were recently reduced thanks to the decrease in demand, the increase in freight capacities and easing of pandemic measures in China. The Global Supply Chain Pressure Index (GSCPI), which is compiled by the New York Fed by using various transportation and cost indices, air cargo prices and country-specific supply chain variables, suggests a more positive outlook compared to previous periods, though it is still far from historical averages. A similar outlook is also supported by indicators that provide information about the status of supply chains, such as manufacturing industry supplier lead times, published by S&P Global (Chart 2.1.3).

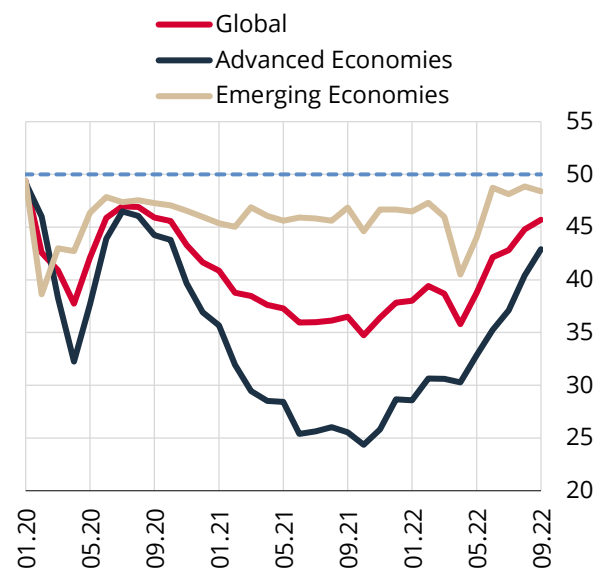
Table 2.1.3: Commodity Price Changes (%)

	July	August	September	October	12-Month Change	Since the 2022 July IR*	Since the Conflict**
Commodity Headline Index	-12.1	-1.5	-5.4	0.9	9.3	-8.4	-6.2
Energy	-12.5	-3.9	-8.1	1.9	14.6	-12.4	-1.2
Agricultural Com.	-15.2	2.8	3.8	-0.5	13.5	1.7	-9.6
Industrial Metals	-12.7	4.6	-5.8	-0.6	-18.3	-5.8	-26.5
Precious Metals	-5.7	2.0	-4.9	-0.5	-6.8	-6.2	-15.0
Non-Energy	-11.3	3.0	-0.6	-0.6	1.4	-1.0	-13.4
Brent Oil	-9.3	-9.5	-8.6	3.0	11.0	-13.4	-6.7
Natural Gas (USA)	-6.0	23.3	-11.1	-20.4	11.5	-36.1	13.8
Natural Gas (Europe)	59.7	35.3	-13.3	-29.4	58.6	-51.5	-15.7
Coal	3.4	-0.8	8.5	-10.4	67.2	-5.2	62.8
Aluminium	-6.6	1.0	-8.3	1.3	-23.2	-12.2	-36.6
Copper	-17.2	5.9	-3.6	-1.4	-22.9	-1.3	-23.0
Iron	-20.4	-0.6	-8.0	-3.7	-21.9	-12.2	-33.6
Wheat	-20.2	-2.9	8.7	2.9	17.7	2.7	-9.4
Soy Beans	-8.1	1.0	-6.8	-5.7	12.1	-14.7	-17.4
Rice	0.4	3.2	1.7	-4.0	22.7	-4.6	7.4
Corn	-12.1	-5.3	7.8	0.7	27.8	10.8	-1.9
Cotton	-25.0	13.1	-10.1	-15.3	-21.6	-25.6	-37.9
Sugar	-2.4	-1.5	0.7	1.4	-6.0	2.3	-1.0

Source: Bloomberg.

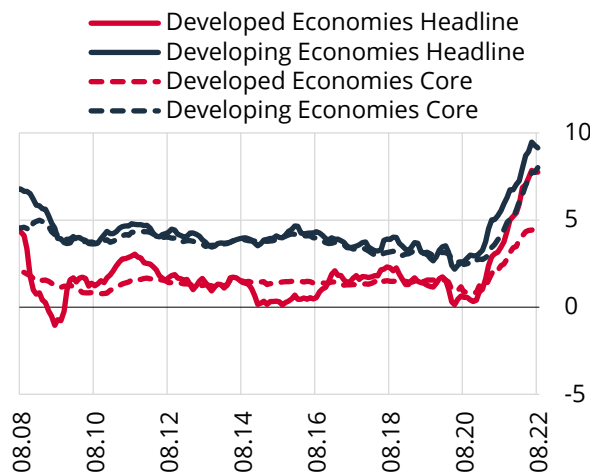
* Percentage changes on 24 October and 28 July.

** Percentage changes on 24 October and 24 February.

Chart 2.1.3: PMI Manufacturing Industry Suppliers' Delivery Times (Level)


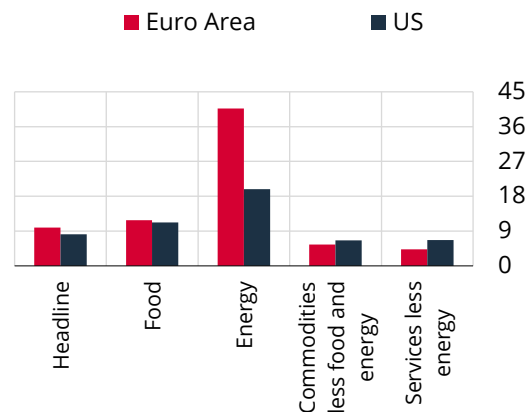
Source: S&P Global.

Global inflation maintains its high level. Thanks to the strategic solution tools developed by Türkiye, the negative effects of supply constraints on some sectors, particularly on basic food, decreased, commodity prices in general followed a more moderate course compared to the previous reporting period, and transportation costs decreased, and thus, producer and consumer prices decelerated on an international scale. Meanwhile, inflation remains at historically high levels in both headline and core indicators, particularly in advanced economies (Chart 2.1.4). In addition, central banks of advanced economies emphasize that inflation may remain high longer than expected due to rising energy prices and the supply-demand mismatch.

Chart 2.1.4: Global Inflation* (Annual, %)

Source: Bloomberg.

* Advanced Economies: The US, the euro area, Japan, the UK, Canada, S. Korea, Switzerland, Sweden, Norway, and Israel. Emerging Economies: Brazil, Mexico, Poland, Indonesia, South Africa, Thailand, Czechia, Colombia, Hungary, Romania, and the Philippines.

Chart 2.1.5: Inflation Rates (September 2022, %)

Source: Eurostat and the U.S. Bureau of Labor Statistics.

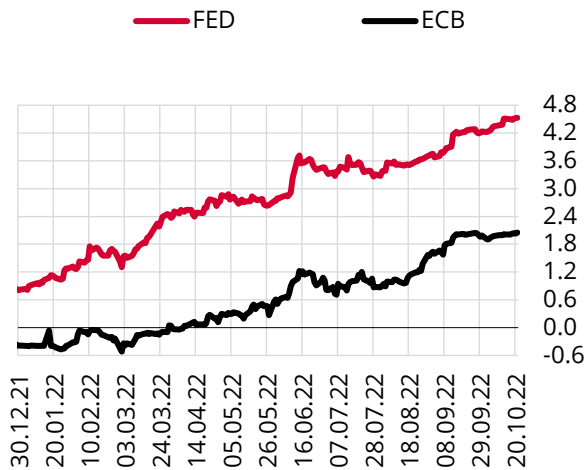
The divergence in monetary policy steps and communications of central banks continues due to their diverse economic outlooks.

Central banks have increased their efforts to develop new supportive measures and tools to cope with increasing uncertainties in financial markets. At its September meeting, the US Federal Reserve (Fed), hiked the policy rate by 75 basis points as in its July meeting and announced that it would continue reducing the size of its balance sheet as planned. In addition, at the meeting, Federal Open Markets Committee (FOMC) members revised their projections for the US economy to lower growth and higher inflation and unemployment. Meanwhile, the European Central Bank (ECB) raised the policy rate by 75 basis points at its September meeting, under its assessment of the high course of price increases and the continuation of inflationary risks. In the MPC decision, the ECB retained its statement that the Transmission Protection Instrument (TPI) was available to counter unwarranted, disorderly market dynamics that posed a serious threat to the transmission of monetary policy and thus deliver a more effective policy aimed at achieving its price stability mandate.

While inflation rates are slightly higher in the euro area than in the US (Chart 2.1.5), the Fed, which has increased interest rates by 75 basis points in total since the previous reporting period, has higher policy rates than the ECB, which has increased interest rates at the same level. Interest rates implied by options also indicate that the divergence is expected to continue (Chart 2.1.6). The Bank of Japan continues with expansionary policy steps; while it does not change the policy rate, it continues its bond buying programs. The Bank of Japan's share in Japanese bond markets continues to rise. In addition, the Bank of Japan, which intervened in the FX market to support the currency, which is at the lowest level in the last 24 years against the US dollar, also signaled that it would continue to intervene to ensure financial stability. Similarly, in order to prevent fluctuations in bond rates and to achieve stability in the bond market, the Bank of England announced a time-limited bond purchase program. In this context, in their communications, central banks highlight the uncertainty factor and reiterate their desire to maintain policy flexibility against changing conditions. Across many emerging economies, consumer inflation has further increased since the previous reporting period when it was already outside the tolerance range around the target (Chart 2.1.7). Accordingly, the majority of central banks of emerging economies continued to raise policy rates. Nevertheless, policy rates in many emerging economies are still below the inflation rate. In China, economic activity contracted in the second quarter, and it was announced that a monetary policy that would support stable and reasonable growth would be implemented in the economic program announced for 2022. In this regard, the Bank of China announced that it aimed to continue taking policy steps to achieve price stability and to provide more effective and efficient support to the real economy. Finally, China announced a new

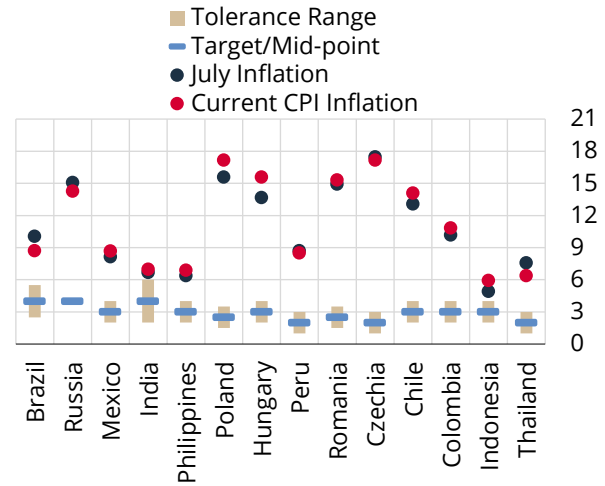
financing package of more than 1 trillion yuan (approximately USD 146 billion) in the scope of measures to support growth and stated that the package was aimed at increasing investment and consumption and further supporting the real estate sector. Moreover, in order to achieve policy coordination, lending interest rates, which is one of the monetary policy instruments, continued to be lowered throughout the year and changes were made in line with the target policy set out for required reserves.

Chart 2.1.6: Policy Rate Implied by Options for End-2022 (Effective, %)



Source: Bloomberg.

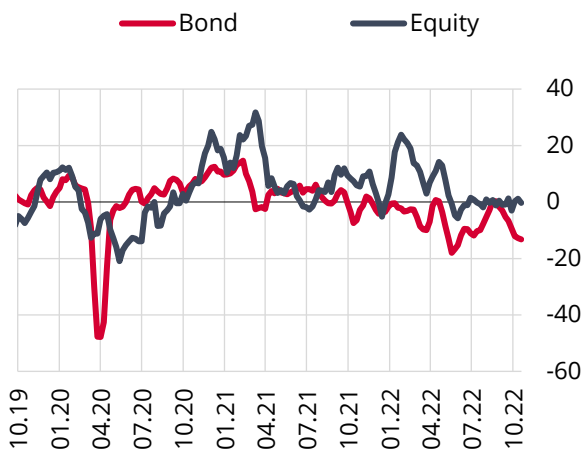
Chart 2.1.7: Consumer Inflation in Emerging Economies (Target, Tolerance Range and Current Inflation, %)



Source: Bloomberg.

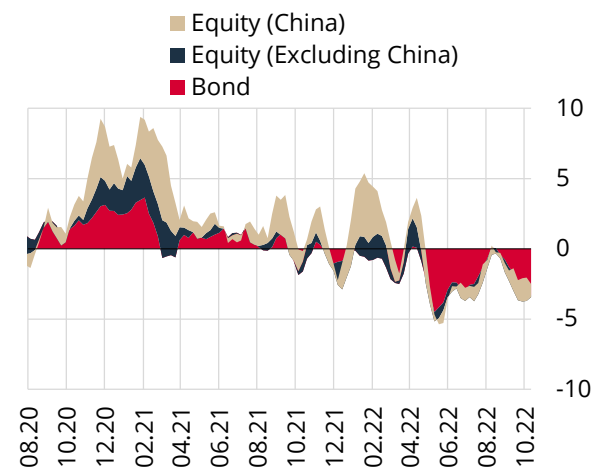
Due to the outlook of global financial conditions, emerging economies see outflows of funds from their equity and debt securities markets. The volatility in long-term bond rates of advanced economies and the course of global financial conditions keep the risks to portfolio flows to emerging economies alive, leading to outflows from debt securities markets in particular (Chart 2.1.8). Equity market funds (excluding China's) have worsened while the course of the pandemic poses a risk to portfolio flows to China (Chart 2.1.9). The course of the pandemic and geopolitical developments, and the expectations regarding the monetary policies of central banks in advanced economies will continue to affect the global risk appetite and portfolio movements in the upcoming period.

Chart 2.1.8: Portfolio Flows to Emerging Economies (4-Week Cumulative, USD Billion)



Source: EPFR.

Chart 2.1.9: Portfolio Flows to Emerging Economies (4-Week Moving Average, USD Billion)

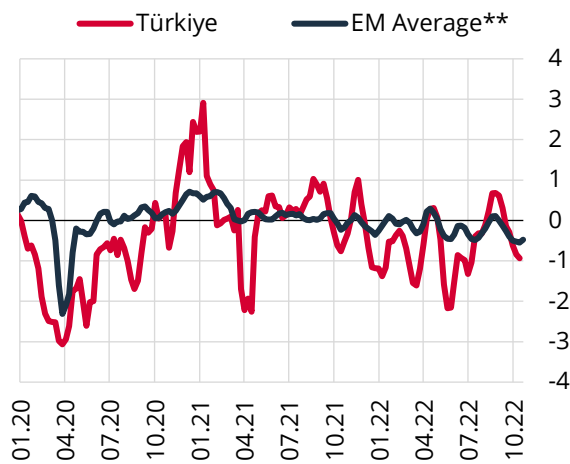


Source: EPFR.

2.2 Financial Conditions

While the weakening in economic activity in advanced economies persisted, the tightening in global financial conditions and geopolitical risks weakened the global risk appetite. As the Fed tightened monetary policy to contain rising inflation, the global demand for US assets caused other advanced economy currencies to depreciate against the US dollar. The ongoing conflict between Russia and Ukraine led to heightened concerns over energy supply in the euro area, at the same time as accelerating cost-driven inflation. The decline in risk appetite caused the global wave of selling to persist and led to portfolio outflows from EM stock markets and debt securities. Capital flows to Türkiye also declined, while the country's risk premium decreased slightly (Charts 2.2.1 and 2.2.2). In the current reporting period, the Turkish GDDS market posted a net outflow of USD 0.3 billion, while the equity market received a net inflow of USD 0.1 billion. In this period, portfolio outflows through currency swaps continued to have a negative impact on total portfolio movements.

Chart 2.2.1: Portfolio Flows to Türkiye and EM* (4-Week Cumulative, USD Billion)

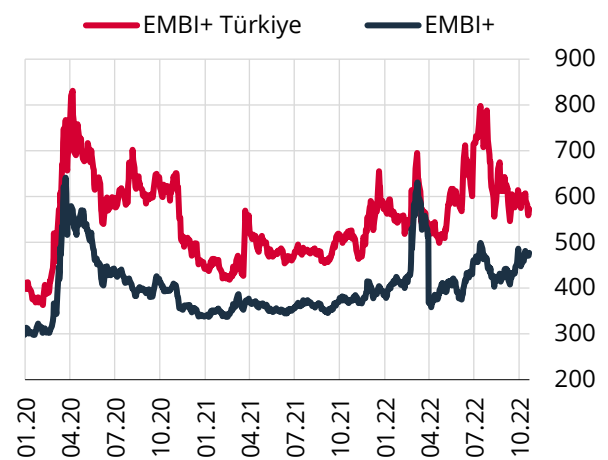


Source: CBRT, EPFR.

* Türkiye data includes portfolio flows to equity and GDDS markets. Repo is included in the GDDS data.

** EM Average data is taken from the EPFR database and has been calculated as the average of all the database-covered funds' weekly net investments in equity and bond markets in Brazil, Chile, Colombia, Mexico, Poland, the Philippines, Malaysia, South Africa, Indonesia, Romania, Russia, and Hungary.

Chart 2.2.2: Risk Premiums of Türkiye and EM* (EMBI+ Indices, Basis Point)

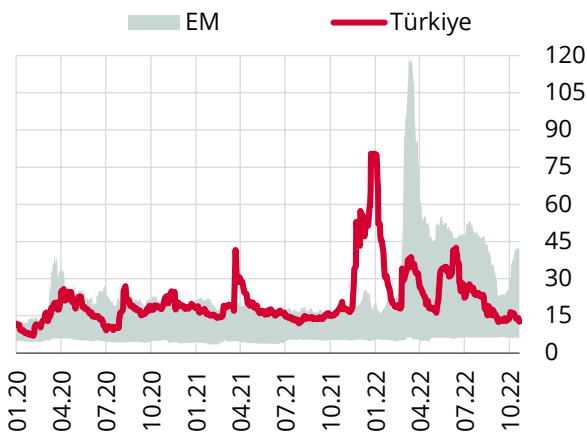


Source: Bloomberg.

* The JP Morgan Emerging Market Bond Index+ (EMBI+) is calculated as the difference between the average yield of USD-denominated bonds of emerging economies and the US Treasury bond yield. EMBI+ Türkiye is calculated by using Turkish Eurobonds instead of all EM bonds.

The implied volatility of emerging market currencies increased, while that of the Turkish lira declined slightly. The exchange rate volatility in emerging economies increased due to the rapid appreciation of the US dollar and the decline in the global risk appetite, while the exchange rate volatility of the Turkish lira posted a decline in both short and long terms in the current reporting period, during which the currency was relatively stable (Charts 2.2.3 and 2.2.4).

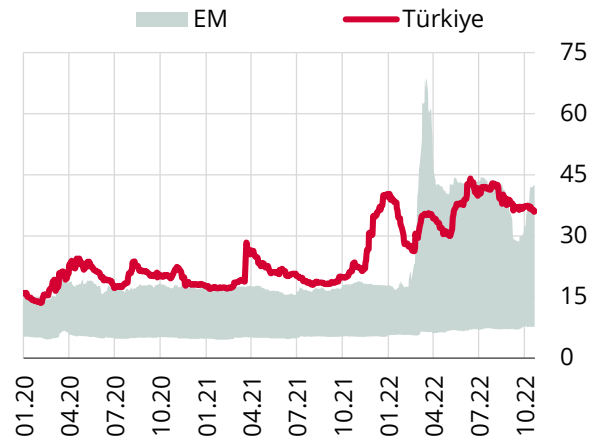
Chart 2.2.3: Exchange Rate Volatility Implied by Options* (against USD, 1-Month Forward, %)



Source: Bloomberg.

* EM: Brazil, Chile, Colombia, Mexico, Poland, the Philippines, Malaysia, South Africa, Indonesia, Romania, Russia, and Hungary.

Chart 2.2.4: Exchange Rate Volatility Implied by Options * (against USD, 12-Month Forward, %)

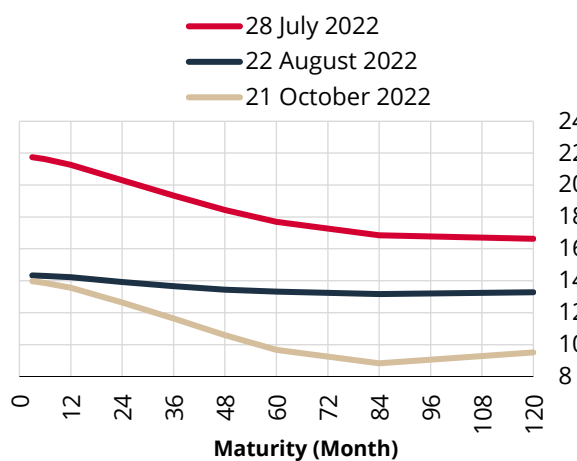


Source: Bloomberg.

* EM: Brazil, Chile, Colombia, Mexico, Poland, the Philippines, Malaysia, South Africa, Indonesia, Romania, Russia, and Hungary.

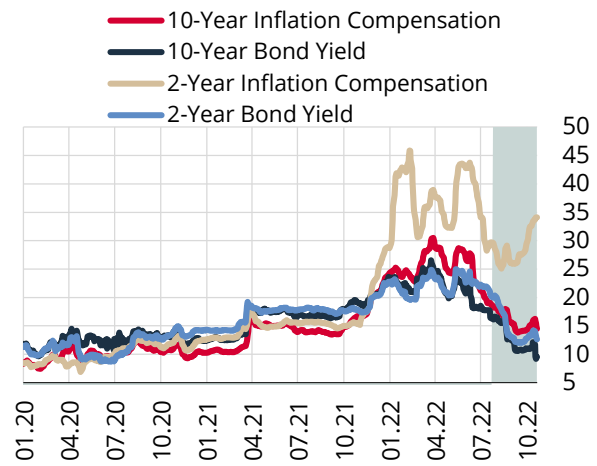
GDDS yields declined across all maturities on the back of macroprudential measures, and inflation compensation posted a rapid decrease in long terms. In the period from the July Inflation Report to 19 August, yields on government securities dropped by up to 500 basis points on the back of the CBRT's securities maintenance facility, liquidity and collateral management measures. The CBRT announced measures on 20 August to enable a balanced credit growth and allocation of funds for real economic activity purposes, as well as to reduce the loan rate-policy rate spread, which reduces the effectiveness of the monetary transmission. Following this announcement, banks' demand for GDDS increased. All yields declined by more than 200 basis points on the next trading day, and the trading volume in the TL-denominated fixed coupon securities market increased by 113%. In the following period, medium and long-term GDDS yields declined further due to these arrangements as well as the increase in the collateral discount rates of indexed securities, gold and FX-denominated assets (Chart 2.2.5). In line with the loss of momentum in actual inflation and the fall in year-end inflation expectations, inflation compensation, a market-based indicator of inflation expectations, also declined in long maturities. While GDDS yields fell across all maturities, the short and medium-term inflation compensation increased slightly in response to the decline in inflation-indexed bond yields (Chart 2.2.6).

Chart 2.2.5: GDDS Yield Curve (%)



Source: Bloomberg.

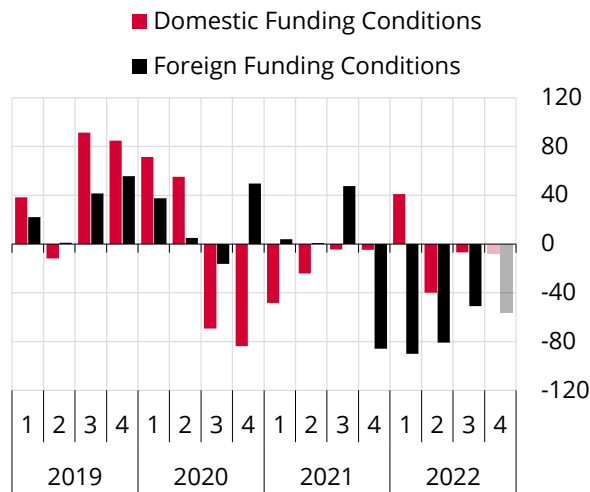
Chart 2.2.6: Long-Term GDDS Yields and Inflation Compensation (%)



Source: Bloomberg.

The third quarter results of the BLTS indicate that external funding conditions of the sector continued to tighten, while domestic funding conditions have not seen a significant additional tightening since the second quarter (Chart 2.2.7). In the third quarter, CBRT's rate cut by a total of 200 basis points allowed banks' domestic funding costs to remain low (Chart 2.2.8). Meanwhile, due to the rate hikes by advanced economy central banks as well as Turkey's high-risk premium, borrowing from abroad became more difficult for banks. The sector's expectations for the last quarter suggest that the current trend in funding conditions will remain in place (Chart 2.2.7).

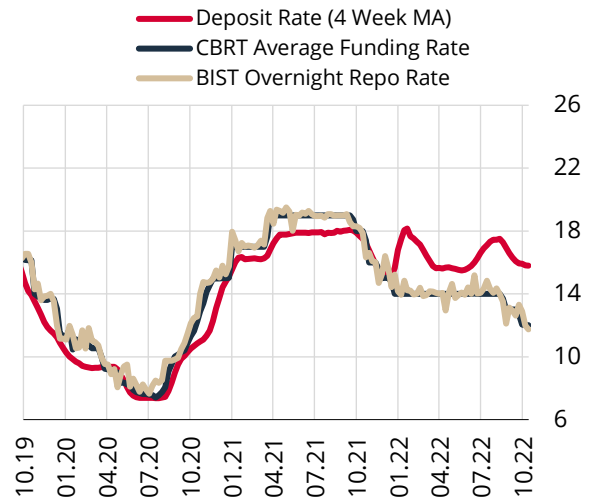
Chart 2.2.7: Indicators for Banks' Funding Conditions* (%)



Source: CBRT BLTS.

* Indicates banks' expectations. The indicator for funding conditions shows the ratio of net percentage change. This ratio is calculated by subtracting the ratio of banks that reported tightening in funding conditions from the ratio of banks that reported easing compared to the previous quarter.

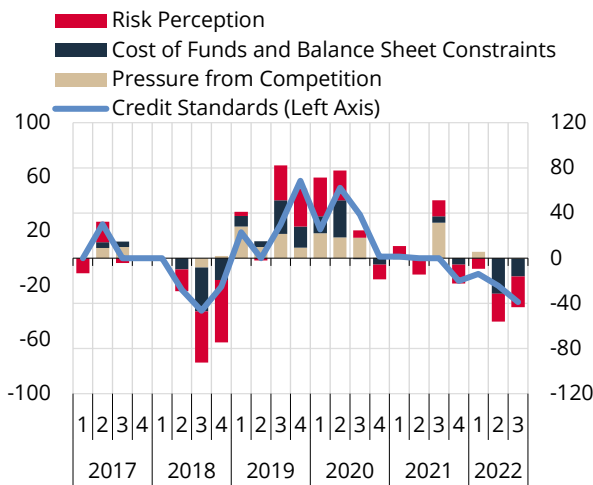
Chart 2.2.8: Banks' Domestic Funding Costs (%)



Source: Bloomberg, CBRT.

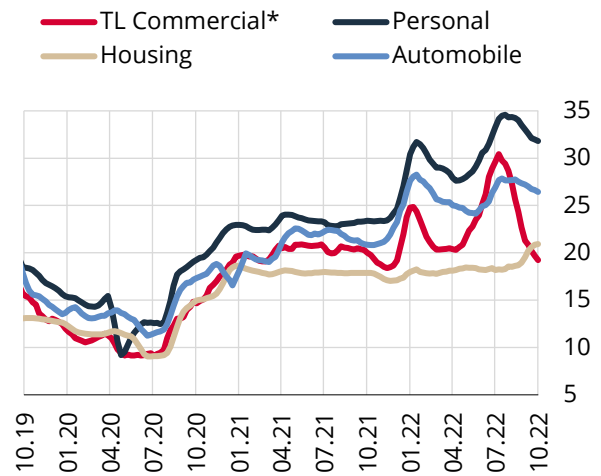
The set of macroprudential measures for commercial loans expanded in the third quarter. As a result of the macroprudential measures introduced since April and changes in collateral management, funding conditions gradually tightened in the second quarter. Due to balance sheet constraints imposed by these measures, strong loan demand and risk perceptions, loan rates increased and started to diverge from the policy rate (Charts 2.2.9 2.2.10). In order to support the effectiveness of the monetary transmission mechanism, banks were required to maintain securities at varying ratios based on loan rates. With the CBRT regulation announced on 20 August 2022, banks were required to maintain securities based on (i) 20% of the loan amount to be extended at an annual compound interest rate 1.4 times higher than the CBRT-released annual compound reference rate, and (ii) 90% of the loan amount to be extended at an annual compound interest rate 1.8 times higher than the CBRT-released annual compound reference rate. Moreover, it was decided that the types of loans covered by the selective credit policy would be subject to the securities maintenance arrangement unless they were extended against expenditure. As a result of these measures, the average commercial loan rate declined significantly (Chart 2.2.10). In the same period, personal and automobile loan rates also declined slightly, yet remained above the second quarter levels.

Chart 2.2.9: Factors Affecting Credit Standards for Businesses



Source: CBRT BLTS.
Note: See the note under Chart 2.2.14.

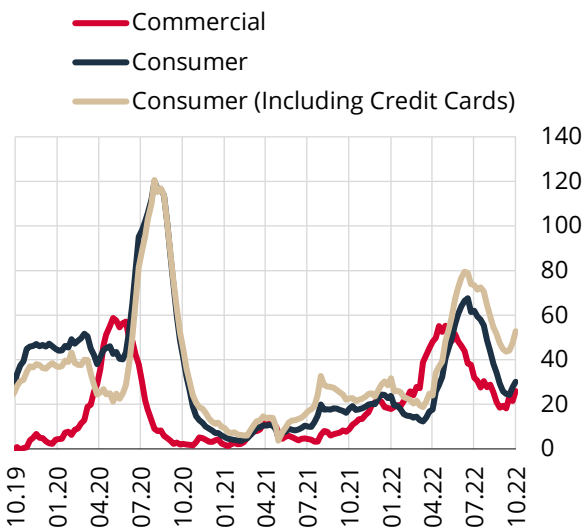
Chart 2.2.10: Interest Rates by Types of Loans
(Flow Data, Annual Rates, 4-Week Moving Average, %)



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

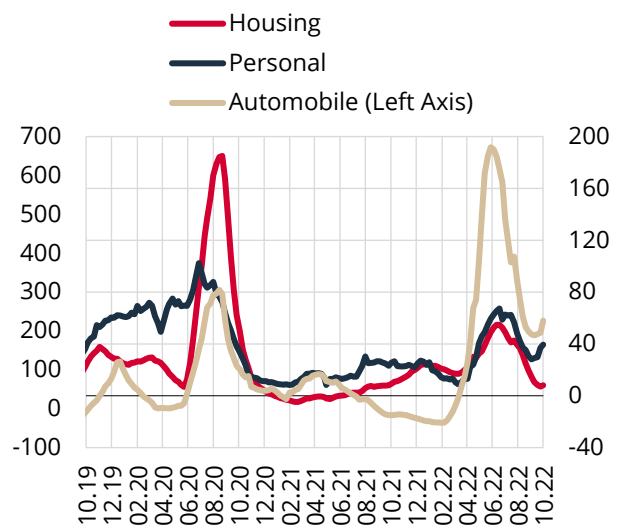
In the second quarter of 2022, the loan growth accelerated sharply but lost pace in the third quarter due to macroprudential measures and converged to historical averages in real terms. The measures for commercial loans taken as of April and the loan-to-value ratio cuts for housing loans at the end of June curbed the pace of loan growth (Chart 2.2.11). On the consumer side, automobile loans and credit cards experienced relatively stronger growth. Automobile loan growth accelerated following the BRSA's regulation on limits and maturities for such loans at the end of February, and remained strong in the third quarter, despite a slowdown (Chart 2.2.12). Credit card utilization, on the other hand, has increased further, pushing the loan growth rate upwards (Chart 2.2.11). Although macroprudential measures reduced the pace of loan growth, inflation-adjusted change in loans shows that the four-week average change in corporate loans at the end of the quarter stood more than +0.5 standard deviations above the long-term average (Chart 2.2.13). While the change in retail loans was +0.5 standard deviations above the long-run average, this difference widens to +1.2 standard deviations when credit cards are included. This outlook indicates that the consumer loan demand is not weak.

Chart 2.2.11: Loan Growth (13-Week Annualized Growth, Adjusted for Exchange Rate, %)



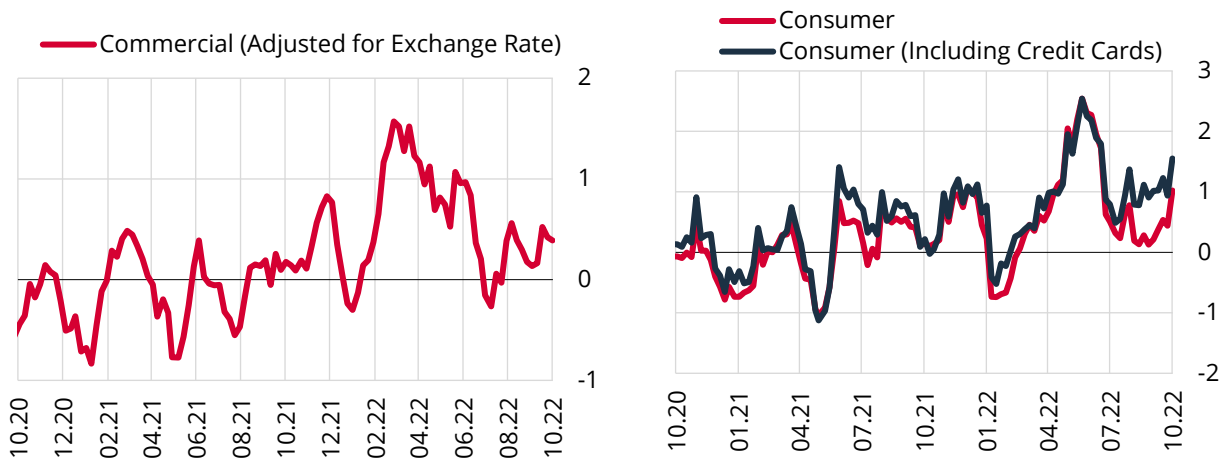
Source: CBRT.

Chart 2.2.12: Consumer Loans Growth Rates
(13-Week Annualized Growth, Adjusted for Exchange Rate, %)



Source: CBRT.

Chart 2.2.13: Credit Change* (4-Week Average, Real, Standard Value)

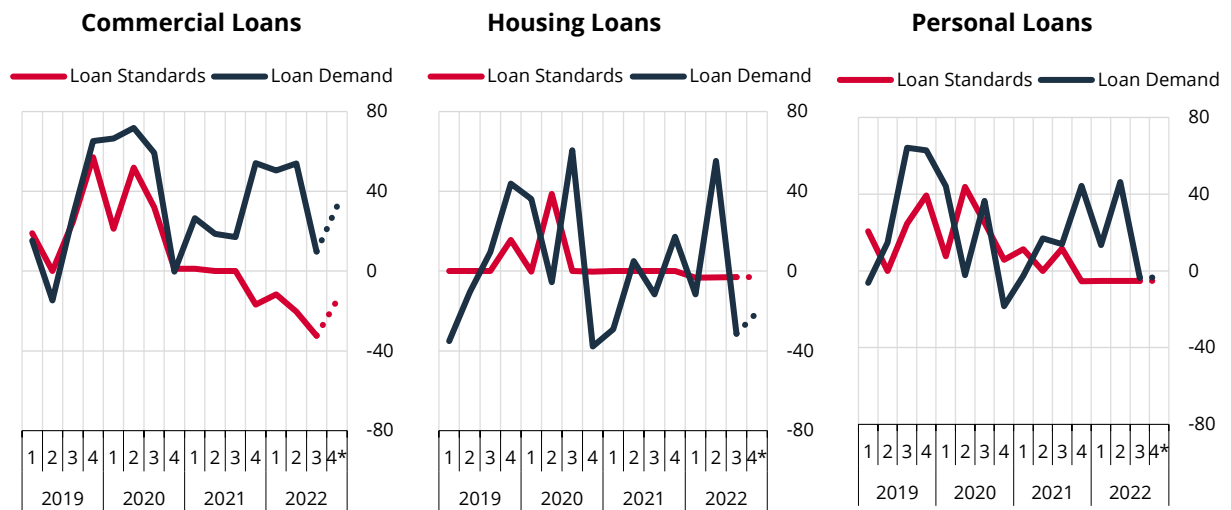


Source: CBRT.

* Seasonally adjusted weekly credit changes are deflated by D-PPI for commercial loans and by CPI for consumer loans. The four-week average is taken after weekly real changes are standardized. The mean and standard deviations of the series are calculated based on the 2006-2019 period.

The third quarter results of the BLTS suggest that loan standards continued to tighten on the commercial loans side, and loan demand contributed to loan growth, albeit at a slower pace (Chart 2.2.14). In the third quarter, housing and personal loan standards remained almost unchanged, while the demand for these loans weakened. The supply-side macroprudential measures introduced for housing loan growth at the end of June are considered to have affected loan demand. According to the BLTS, in the last quarter of 2022, credit standards are expected to remain broadly unchanged for housing and personal loans, while the previous quarter's tightening trend is expected to continue for commercial loans. In the same period, the commercial loan demand is expected to strengthen, as opposed to the housing loan demand, which is anticipated to weaken.

Chart 2.2.14: Loan Standards and Loan Demand



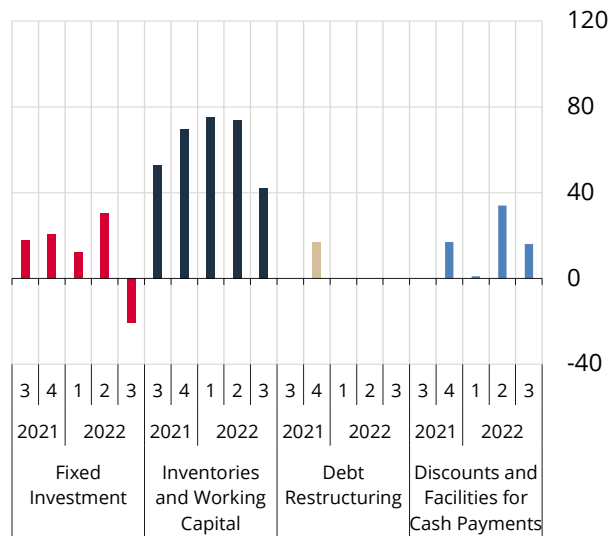
Source: CBRT BLTS.

*Expectations of banks.

Note: To calculate Loan Standards and Loan Demand indices, banks are asked how their loan standards (loan demand) have changed over the past three months. Net tendencies calculated based on response percentages indicate the direction of the change in loan supply (demand). Index values above 0 indicate easing in loan standards (increase in loan demand).

In the third quarter, inventories and working capital needs remained major drivers for commercial loan demand. In that period, inventories and working capital needs were the major contributors to the commercial loan demand (Chart 2.2.15). However, according to survey results, cash purchase facilities increased, while fixed investments decreased the loan demand.

Chart 2.2.15: Leading Factors Affecting Firms' Loan Demand* (%)



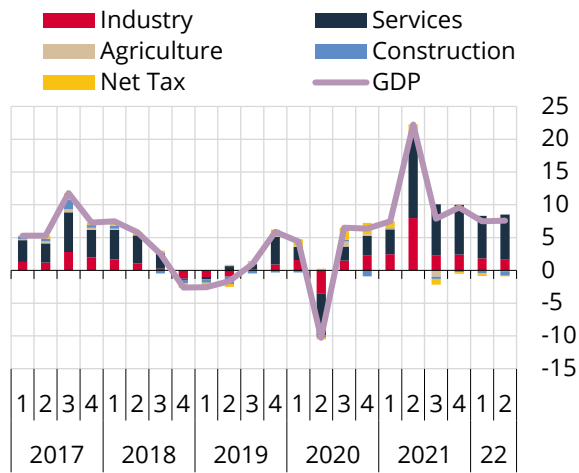
Source: CBRT BLTS.

*Net percentage changes in factors are the difference between the percentage ratio of the banks reporting that this factor increased the loan demand and those reporting that it decreased the loan demand.

2.3 Economic Activity

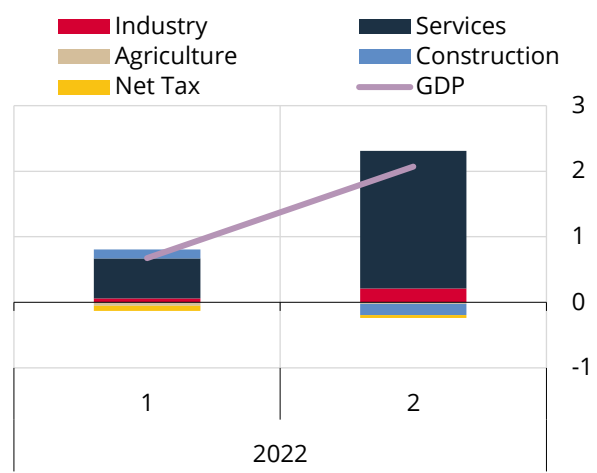
The strong trend in economic activity continued in the second quarter of 2022. In this period, Gross Domestic Product (GDP) increased by 7.6% year-on-year, and 2.1% quarter-on-quarter adjusted for seasonal and calendar effects (Chart 2.3.1). Thus, the robust long-term growth trend of Türkiye continued (Zoom-in 2.1, Box 2.1). On the production side, annual growth in the second quarter was mainly driven by services and the industrial sector, while it was confined by the construction sector. The ongoing strong growth in tourism activities, despite the adverse impacts of the war, had a great role in the rise in the value added of the services sector. In addition to the strong domestic demand in the second quarter, the robust course in exports were the drivers of the increase in the industrial sector value added. Quarterly growth was pushed upwards primarily by the services sector and to a limited extent by the industrial sector, but pulled downwards by the construction sector (Chart 2.3.2). On the expenditures side, the main driver of annual growth was final domestic demand led by private consumption, while the contribution of net exports to annual growth was 2.7 points (Chart 2.3.3, Zoom-in 2.2). The annual and quarterly growth trend in machinery-equipment investments continued in this period. Thus, the share of sustainable components such as net exports and machinery-equipment investments in the composition of growth has hit the highest level of recent years. However, the persisting weak course of construction investments limited the contribution of total investments to growth. The seasonally adjusted data suggest that the largest contribution to quarterly growth came from final domestic demand with 2.4 points, while net exports contributed by 0.9 points. Stocks had a dampening effect of 1.2 points on quarterly growth (Chart 2.3.4).

Chart 2.3.1: Annual GDP Growth and Contributions from Production Side (% Points)



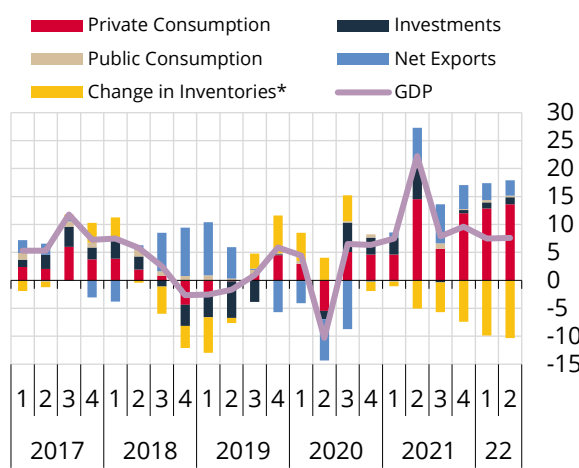
Source: CBRT, TURKSTAT.

Chart 2.3.2: Quarterly GDP Growth and Contributions from Production Side (% Points)



Source: CBRT, TURKSTAT.

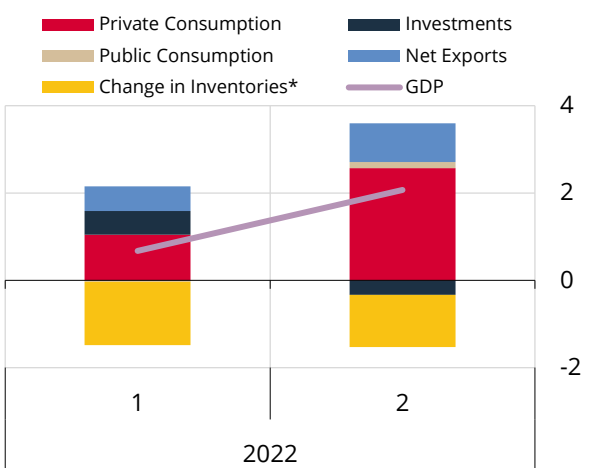
Chart 2.3.3: Annual GDP Growth and Contributions from Expenditures Side (% Points)



Source: CBRT, TURKSTAT.

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

Chart 2.3.4: Quarterly GDP Growth and Contributions from Expenditures Side (% Points)



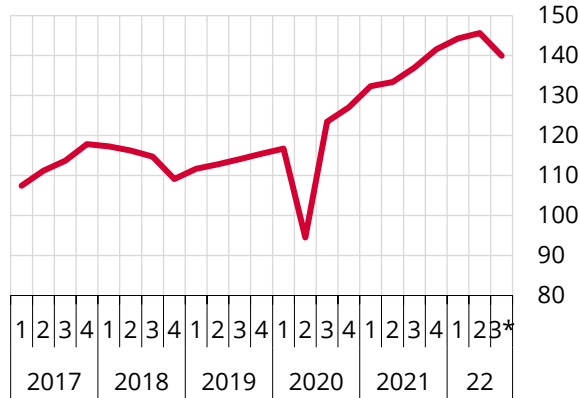
Source: CBRT, TURKSTAT.

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

Data for the third quarter of 2022 show that economic activity decelerated also due to the weakening in foreign demand. After rising by 1.9% and 0.9% in the first and second quarters, respectively, the seasonally adjusted Industrial Production Index (IPI) fell by 3.9% in the July-August period compared to the second quarter. (Chart 2.3.5). The fall in industrial production was led by the fall in the number of days worked due to bridge days in July attached to festive holidays and factory days off. These production losses were partially compensated for by the monthly increase in industrial production in August. Developments in industrial production in the July-August period reveal that production in all sectors decreased on a quarterly basis except vehicles and main goods groups. It is considered that the deceleration in exports caused by the slowdown in foreign demand in the third quarter also contributed to the decline in production. Industrial turnover indices point to a sustained decrease in domestic demand and an accelerated fall in foreign demand in the July-August period (Chart 2.3.6). While the average of the retail sales volume index for July-August increased compared to the previous quarter, the quarterly growth rate lost pace (Chart 2.3.7). Although expenditures by cards increased in the third quarter, the rate of increase stood below that of the previous quarter (Chart 2.3.8). In addition to these indicators, survey-based

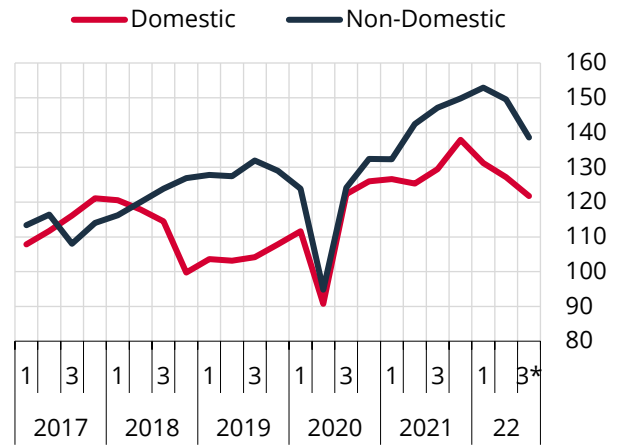
indicators such as the Business Tendency Survey (BTS), PMI and sectoral confidence indices and other high-frequency data confirm the quarterly slowdown in economic activity in the third quarter. Registered domestic and foreign market orders and expected future orders of manufacturing industry companies exhibit some weakening in total demand (Charts 2.3.9 and 2.3.10). The information obtained from field interviews made in this period also confirms the outlook for economic activity (Box 2.2).

Chart 2.3.5: Industrial Production Index
(Seasonally and Calendar Adjusted, 2015=100)



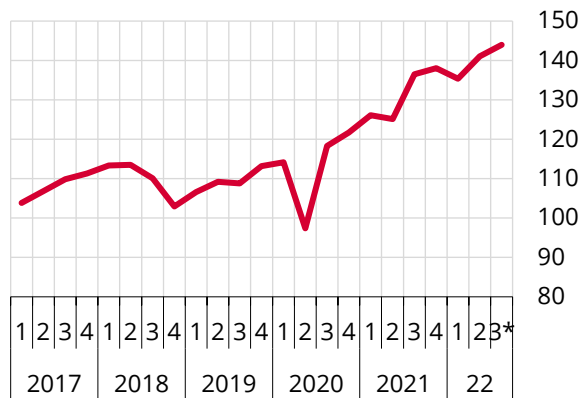
Source: TURKSTAT.
* Average of July-August.

Chart 2.3.6: Industrial Turnover Indices
(Seasonally and Calendar Adjusted, Real, 2015=100)



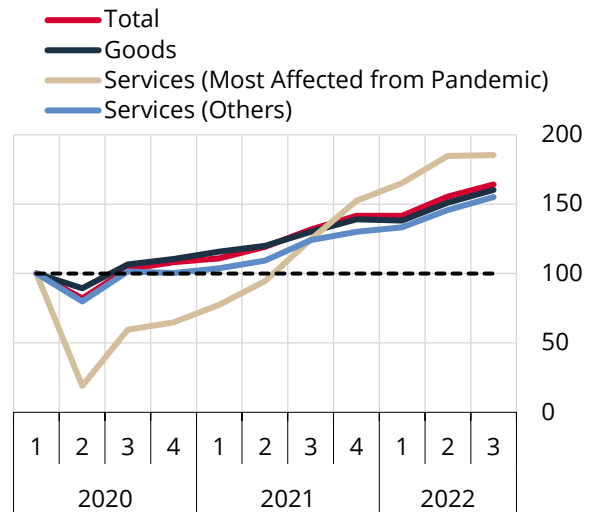
Source: CBRT, TURKSTAT.
* Average of July-August.

Chart 2.3.7: Retail Sales Volume Indices
(Seasonally and Calendar Adjusted, 2015=100)



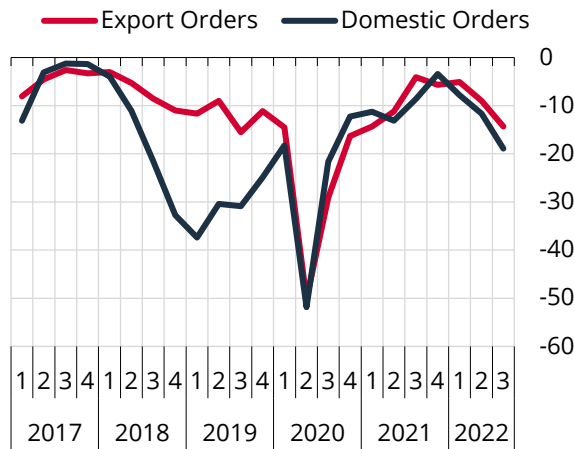
Source: CBRT.
* Average of July-August.

Chart 2.3.8: Expenditures by Cards
(Seasonally- Adjusted, Real, 2020Q1=100)



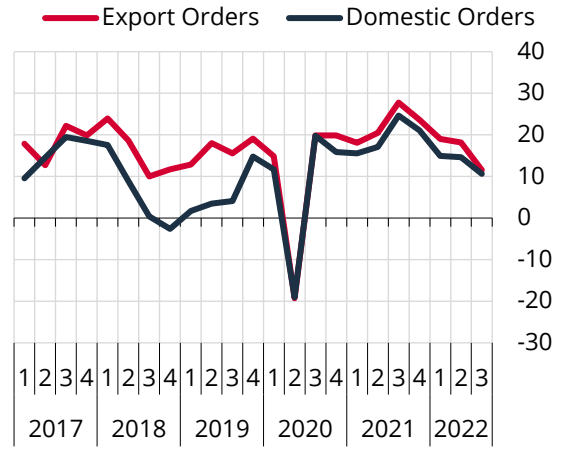
Source: CBRT.

Chart 2.3.9: BTS Registered Orders
(Above Normal-Below Normal, Seasonally Adjusted, %)



Source: CBRT.

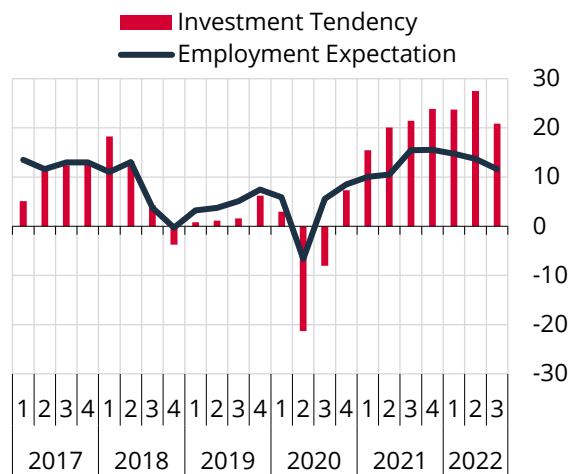
Chart 2.3.10: BTS Expected Orders (3-Month Ahead, Up-Down, Seasonally Adjusted, %)



Source: CBRT.

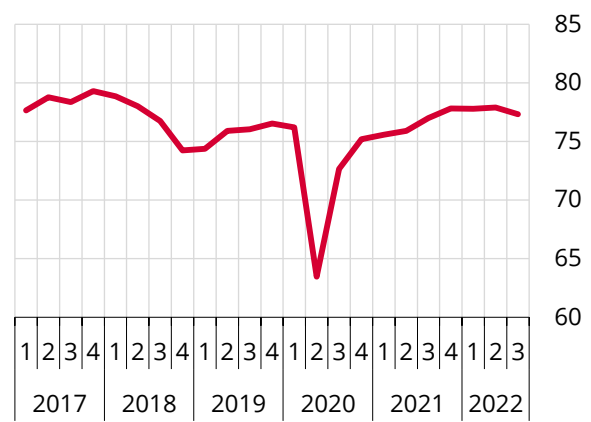
The investment tendency of manufacturing industry firms for the next twelve months remained high in the third quarter, yet declined on a quarterly basis (Chart 2.3.11). Having spread across all scales of firms, the decline in investment tendency was stronger in large-scale firms. In this period, the seasonally adjusted capacity utilization rate edged down in tandem with investment tendency developments (Chart 2.3.12). In the third quarter, production and foreign trade data also remained in line with the decline in investment tendency of manufacturing industry firms. A breakdown of IPI by main industrial groups reveals that production of capital goods fell by 3.3% on a quarterly basis in August. An analysis of import quantity indices reveals that imports of capital goods excluding transportation recorded a limited quarter-on-quarter increase of 1.8% in this period. However, imports of investment goods including transportation surged by 14.0% quarter-on-quarter. In this period, the investment tendency of the vehicle sector, which has a significant share in exports, did not change, while the capacity utilization rate increased. All these indicate that the vehicle sector has been affected relatively less negatively by the slowdown in foreign demand.

Chart 2.3.11: BTS Expectations for Fixed Capital Investment Spending and Employment (Up-Down, Seasonally Adjusted, %)



Source: CBRT.

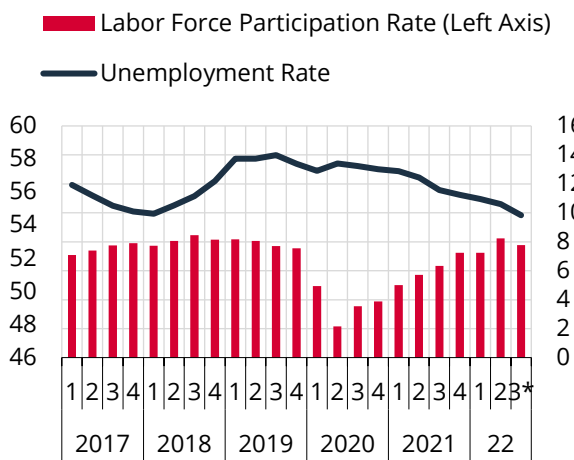
Chart 2.3.12: Capacity Utilization Rate (Seasonally Adjusted, %)



Source: CBRT.

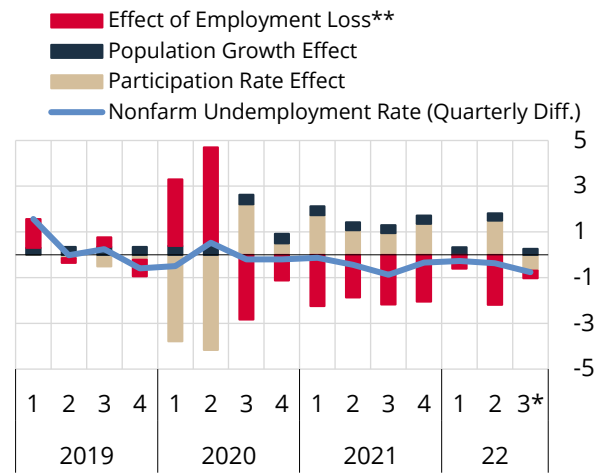
Labor market developments are in line with economic activity. Employment rose further on an annual basis, while the rate of increase slowed down somewhat in the July-August period compared to the first half of the year. On a quarterly basis, seasonally adjusted employment increased by 0.4% with 116,000 people as of August compared to the previous quarter. In this period, the seasonally adjusted labor force participation rate edged down by 0.4 points compared to the previous quarter to 52.8%, while it is still approximately 2 points above the pre-pandemic (February 2020) level. As of August, the downward trend in the total unemployment rate accelerated in the third quarter and decreased by 0.8 points to 9.8% (Chart 2.3.13). In line with the deceleration in economic activity, employment developments limited the decline in the unemployment rate in this period, while the decrease in the participation rate supported the fall in the unemployment rate (Charts 2.3.14 and 2.3.15).

Chart 2.3.13: Unemployment Rates and Labor Force Participation Rate
(Seasonally Adjusted, %)



Source: TURKSTAT.
* Average of July-August.

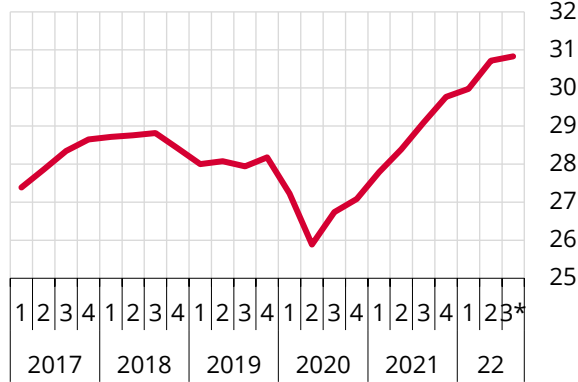
Chart 2.3.14: Contributions to Change in Total Unemployment Rate
(Seasonally Adjusted, % Points)



Source: CBRT, TURKSTAT.
* Average of July-August.
** Negative value indicates an increase in employment.

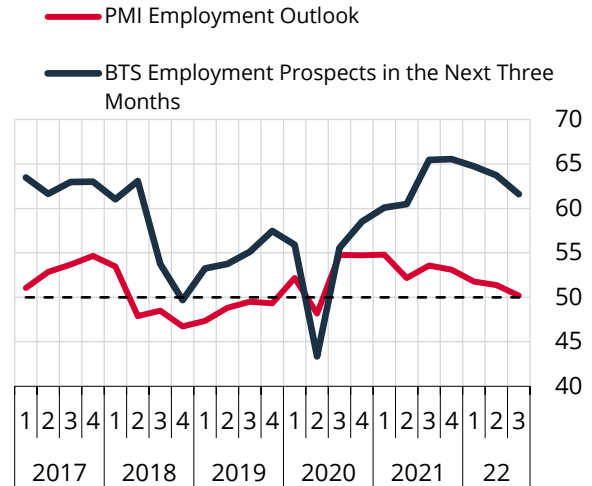
Leading indicators and high-frequency data indicate that the upward trend in employment has lost momentum (Chart 2.3.16). Accordingly, it is projected that the rise in employment will lose pace in the remainder of the year due to the decline in foreign demand. On account of the Russia-Ukraine war and various geopolitical risks, the global growth outlook for 2023 was revised downwards compared to the July Report. It is considered that the slowdown in global growth will pull exports down through the foreign demand channel, which may affect the industrial sector employment adversely. In fact, BTS indicators show that the decline in employment expectations for the next three months spread across sectors, while the decline is more evident in sectors such as clothing, textiles and electrical equipment, which have a significant share in exports (Box 2.3). Similarly, there is a decline in the three-month forward employment expectations of the trade sector, which is sensitive to demand developments. Nevertheless, the possible fall in labor participation rates in the upcoming period may limit the impact of the deceleration in the employment growth on unemployment ratios.

Chart 2.3.15: Total Employment
(Seasonally Adjusted, Million People)



Source: TURKSTAT.
* Average of July-August.

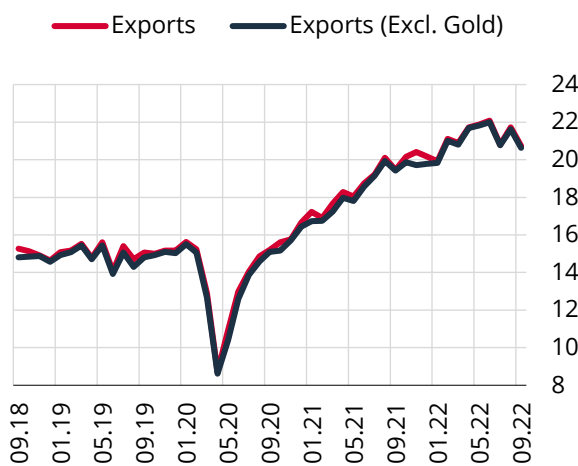
Chart 2.3.16: Employment Outlook and Expectation in the Industrial Sector *
(Seasonally-Adjusted, Up-Down) **



Source: S&P Global, CBRT.
* BTS indicator is adjusted so that its neutral level will be 50-in line with the PMI.

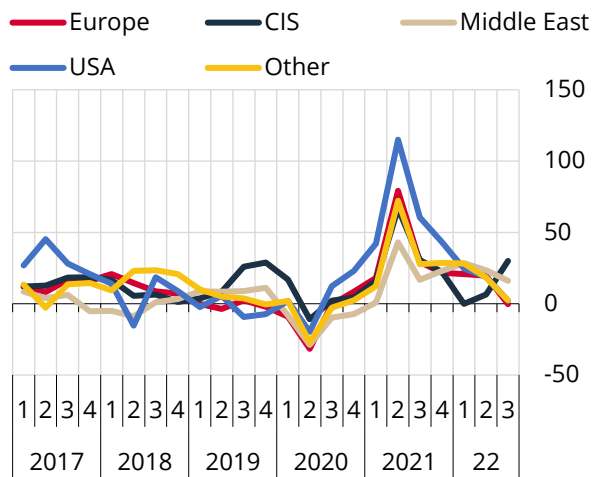
Having increased steadily in the post-pandemic period, exports lost momentum in the third quarter of 2022 amid the weakening in foreign demand. The upward trend in exports in the first half of the year was replaced by a limited fall in the third quarter (Chart 2.3.17). It is considered rather than the firms' competitiveness, the culprit for this fall in the said period is the deceleration in foreign demand as demonstrated by the decline in the manufacturing industry PMI indicators of European countries, which are Turkey's main exporting partners. In fact, exports to Europe, which remained strong in the first half of the year and supported the overall export growth, slowed down in the third quarter compared to the same period of the previous year (Chart 2.3.18). As the weakening effect of geopolitical risks on global economic activity grew in the related period, the rise in the probability of a recession in the main export markets increased the downside risks for foreign demand compared to the previous Report period.

Chart 2.3.17: Exports* (Adjusted for Seasonal and Calendar Effects, Billion USD)



Source: CBRT, Ministry of Trade, TURKSTAT.
* Provisional data for September.

Chart 2.3.18: Exports by Regions (Excl. Gold, Annual % Change)

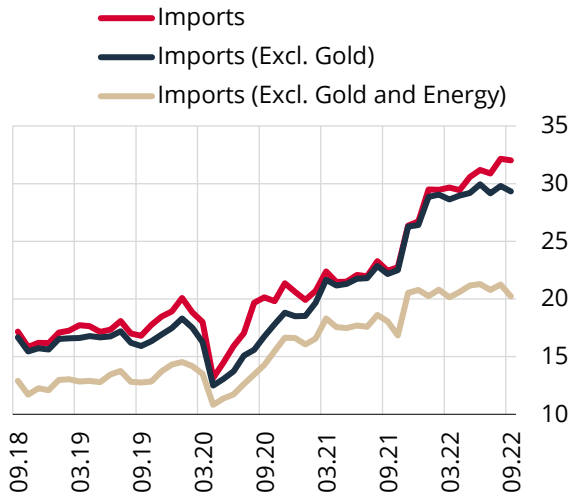


Source: TEA.

Imports continued to increase due to the high course of energy imports coupled with gold imports, which have recently assumed an upward trend. Imports exhibited a surge in the third quarter due to the high level of energy prices and the increase in gold imports (Chart 2.3.19). Provisional foreign trade data for September indicate that the gold trade balance may run a deficit of around USD 11 billion in the first nine

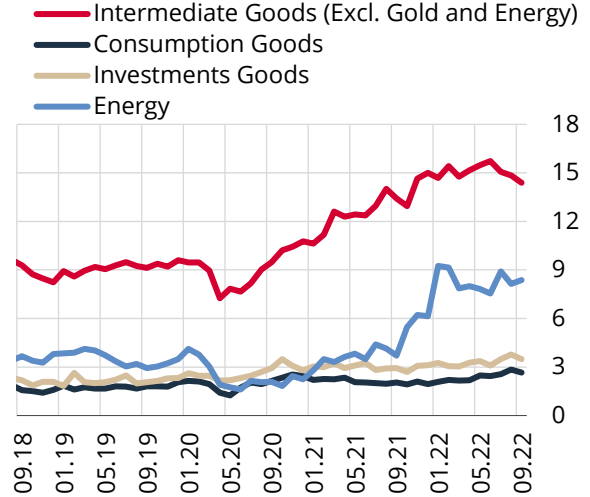
months of the year. In the third quarter, seasonally adjusted imports of intermediate goods excluding gold and energy decreased, while energy imports remained high (Chart 2.3.20). Accordingly, the foreign trade deficit rose in the third quarter of the year on a quarterly basis, and the export-import coverage ratio fell to 67%. The export-import coverage ratio excluding gold and energy, on the other hand, was 94%, which was relatively higher than the headline rate, despite a quarter-on-quarter decline.

Chart 2.3.19: Imports* (Seasonal and Calendar Adjusted, Billion USD)



Source: CBRT, Ministry of Treasury, TURKSTAT.
* Provisional data for September.

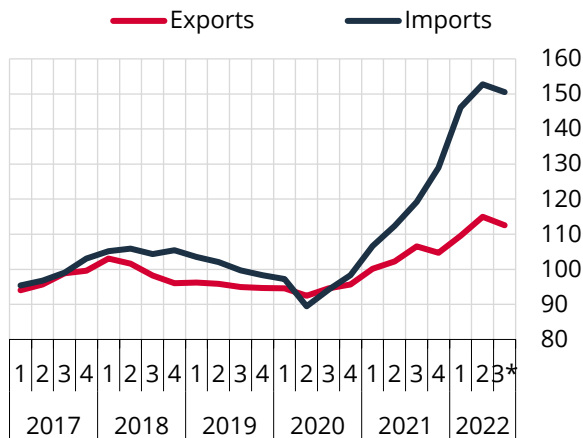
Chart 2.3.20: Imports by Goods Groups* (Seasonal and Calendar Adjusted, Billion USD)



Source: CBRT, Ministry of Treasury, TURKSTAT.
* Provisional data for September.

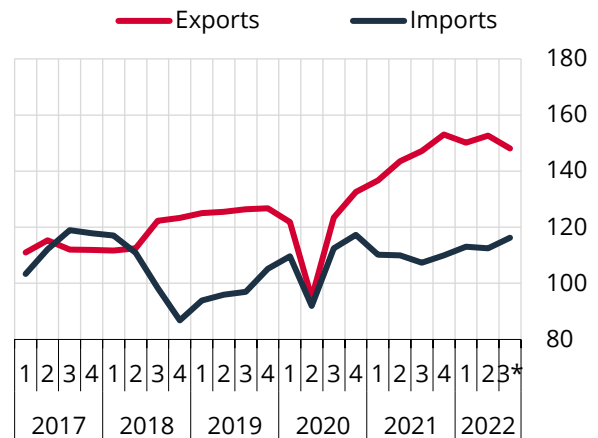
In the third quarter, export and import prices edged down on a quarterly basis due to the decline in international commodity prices. These price developments caused a slowdown in the decline in terms of trade, which has persisted since the second half of 2020 (Chart 2.3.21). Adjusted for price effects, as of August, the amount of exports decreased while that of imports increased in the third quarter in seasonally adjusted terms (Chart 2.3.22, Box 2.4). The quarterly fall in the export volume is attributed to the weakening foreign demand led by the loss of momentum in the economic activities of export markets. While import prices decline, import volume increase on a quarterly basis, which limited the fall in import value in USD terms.

Chart 2.3.21: Foreign Trade Unit Value Indices (2015=100)



Source: TURKSTAT.
* Average of July-August.

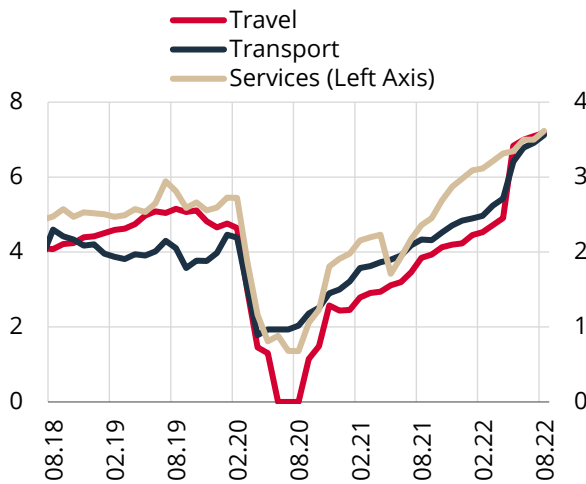
Chart 2.3.22: Foreign Trade Volume Indices (Excl. Gold, Seasonally Adjusted, 2015=100)



Source: TURKSTAT.
* Average of July-August.

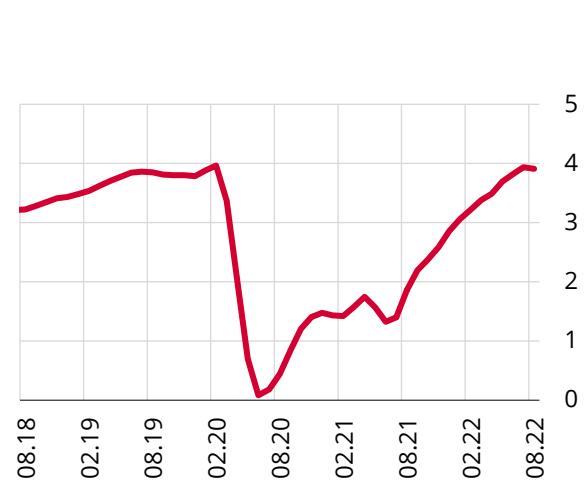
The contribution of the services balance to the current account balance continues. Services revenues continued to accelerate in the third quarter, supported by travel and transportation revenues (Chart 2.3.23). As of August 2022, travel and transportation revenues hovered well above 2019 levels. In this period, the number of foreign visitors also remained high. The largest contributor to the robust course of the number of visitors was European countries. While the contribution of CIS (Commonwealth of Independent States) countries declined, the number of European tourists reached a historical high. On the other hand, high levels were sustained in average per capita expenditures and overnight accommodation compared to the pre-pandemic period supported travel revenues, while the recent rise in passenger transportation costs had a positive impact on the revenues obtained from that business. Accordingly, despite the risks stemming from regional conflicts, the stronger-than-expected contribution of tourism to the current account balance continued in the third quarter due also to the increase in per capita expenditures (Chart 2.3.24). What is more, considering the global energy problems and Türkiye's relatively advantageous position in terms of supply, the demand for tourism activities in winter may exceed the average this year. On the back of the strong course in tourism, travel and passenger transportation revenues are expected to offer further positive contribution to the current account balance in the remainder of the year.

Chart 2.3.23: Services Revenues
(Adjusted for Seasonal and Calendar Effects,
3-Month Moving Average, Billion USD)



Source: CBRT.

Chart 2.3.24: Number of Tourists
(Adjusted for Seasonal and Calendar Effects,
3-Month Moving Average, Million People)

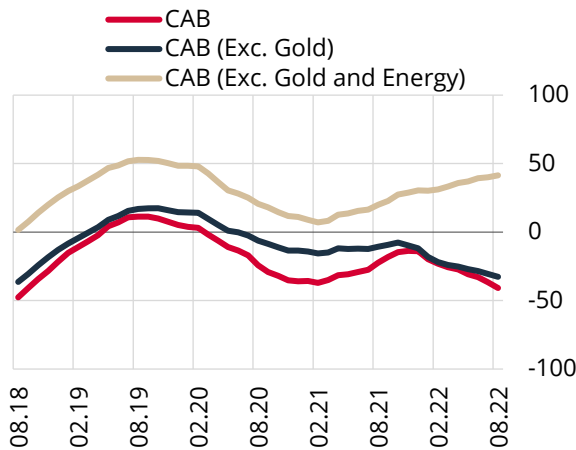


Source: CBRT.

Despite the strong contribution of the balance of services, the slight loss of momentum in exports and the strong course of energy and gold imports led the annualized current account deficit to widen further.

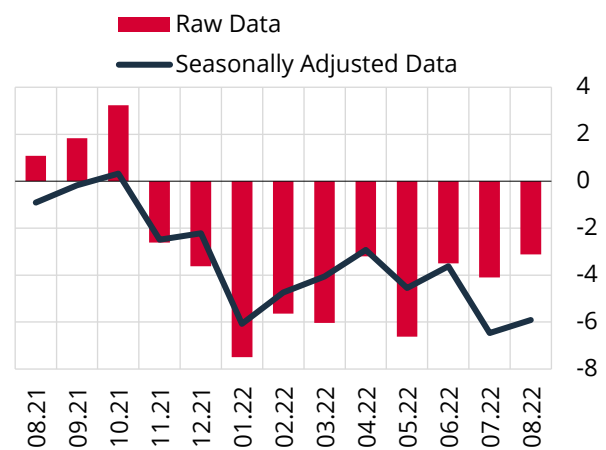
Accordingly, the 12-month cumulative current account deficit stood at USD 40.9 billion in August (Chart 2.3.25). Meanwhile, the seasonally adjusted current account deficit rose in July, but fell in August (Chart 2.3.26). Although war-driven export losses were compensated for by the flexible structure of exporting companies and Turkey's export market diversity, the weakening in foreign demand stemming from the main trading markets caused seasonally adjusted exports, which had hit historical highs in the post-pandemic period, to lose some pace. On the other hand, despite the stable and strong increase in services revenues, the high level of energy and gold imports continued to increase the annualized current account deficit. Excluding gold and energy, the ongoing strong figures in the 12-month cumulative current account surplus is noteworthy as they show the effect of energy prices on the current account balance. Although energy prices have declined recently compared to the last year, they still hover at high levels (Box 2.5).

Chart 2.3.25: Current Account Balance (12-Month Cumulative, Billion USD)



Source: CBRT.

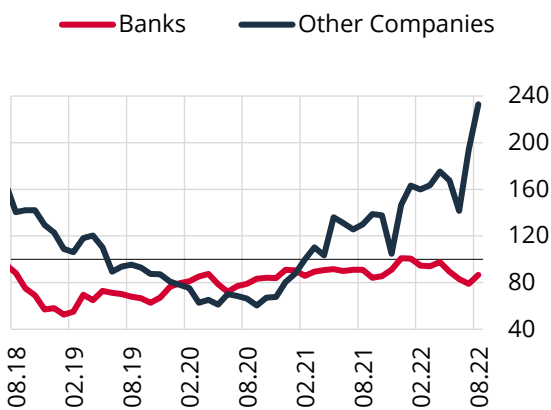
Chart 2.3.26: Current Account Balance (12-Month Cumulative, Billion USD)



Source: CBRT.

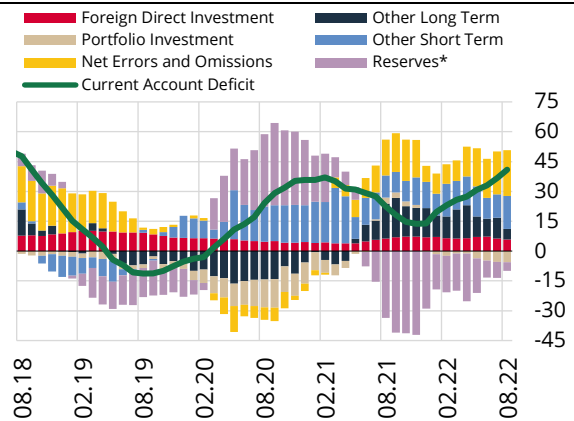
The upward trend in the current account deficit keeps the need for external financing high. In the first eight months of the year, direct investments and domestic deposits of banks abroad shaped capital inflows, while portfolio investments of residents and stocks and GDDS sales by non-residents affected capital outflows. The long-term external debt rollover ratio of the private sector remains above 100%. The debt rollover ratio of the banking sector was around 87% (Chart 2.3.27). While the share of short-term investments in financing the current account deficit has recently increased, capital outflows from portfolio investments continued. In this period, the upward trend in the net errors and omissions item continued. The 12-month cumulative increase in reserves declined to USD 4.3 billion in line with the rise in the current account deficit (Chart 2.3.28).

Chart 2.3.27: Debt Rollover Ratios (Long-Term Loans, 6-Month Moving Average, %)



Source: CBRT.

Chart 2.3.28: Financing of the Current Account Deficit (12-Month Cumulative, Billion USD)



Source: CBRT.

* Shows the CBRT reserves plus the cash and deposits at banks abroad. A negative value indicates an increase in reserves.

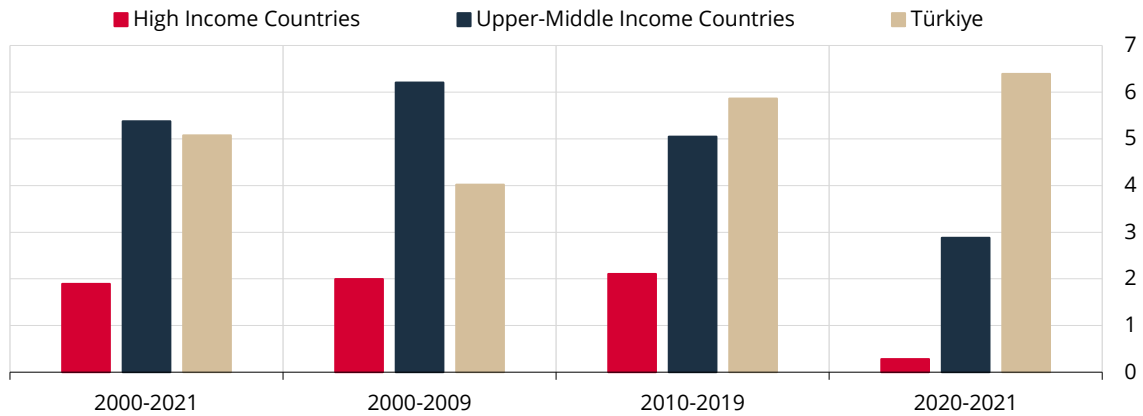
In the third quarter of the year, budget expenditures accelerated, while the quarterly rise in revenues continued. In the January-September period, total expenditures and primary expenditures increased by 92.2% and 99.4% respectively, compared to the same period of the previous year, while total revenues rose by 99.4%. Thus, the central government budget ran a deficit of TL 45.5 billion, while the primary surplus was TL 161.6 billion. According to the MTP announced in September, the budget deficit is expected to increase in the last quarter (Zoom-in 2.3). The annualized budget deficit and primary surplus to GDP ratios for September are estimated to be 1.6% and 0.5%, respectively.

Zoom-In 2.1

Long-Term Growth Trends in the Turkish Economy

The Turkish economy presented a more positive growth outlook compared to other countries both during and after the Covid-19 pandemic period. Moreover, the post-pandemic recovery in exports and employment was faster and higher than in G20 countries and peer economies (Chart 1).

Chart 1: GDP Growth by Periods* (%)



Source: World Bank.

* Based on real GDP series, calculated according to purchasing power parity (PPP) in 2017 USD prices. The PPP-based GDP eliminates price differences between countries and expresses GDP in all countries with the same price set, thereby allowing a comparison between the real sizes of economies. Türkiye's GDP is not included in the middle-upper income group GDP. Country grouping is from the World Bank classification.

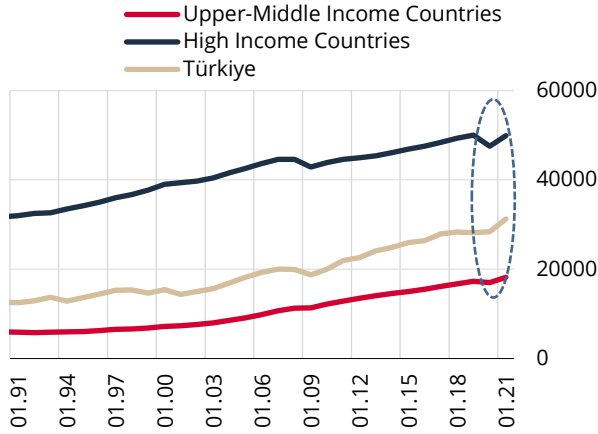
The Turkish economy grew by an average of 5% annually in the 2000-2021 period, and performed close to the average growth rate of the World Bank's middle-upper income group countries that can be considered peers. However, an analysis of the sub-periods making up this stretch suggests that Türkiye's growth rate has increased significantly over time compared to peer countries and its GDP per capita converged to that of developed countries (Charts 1 and 2).

The average growth rate of Türkiye remained lower than the peer country group in the 10-year period between 2000 and 2009. Undoubtedly, the contraction of the economy during the crisis years of 2001 and 2009 played a role in this. In the 2010-2019 period, while the average growth rate of Türkiye increased, it decreased in the peer country group, and the growth performance of the Turkish economy posted a significant divergence in the positive direction compared to these countries. The positive trend in the growth outlook continued at a higher pace in the pandemic and post-pandemic periods, and the growth rate increased strikingly compared to peer countries. During 2020 and 2021, the Turkish economy grew at an average growth rate of 6.4%, twice as fast as the peer country group, while high-income countries did not grow significantly in this period when adjusted by purchasing power parity.

According to an assessment of the growth outlook in terms of GDP per capita, which is a good indicator of the average welfare level as well as partly of economic productivity, and calculated according to purchasing power parity, the Turkish economy seems to have widened the gap between the middle-upper income group countries after the pandemic and converged to the high-income country average (Chart 2). As seen in Chart 3, compared to 2010, the value added per capita increased by 56% in Türkiye, 49% in the middle-upper income group and 14% in the upper income group in 2021. The positive divergence between Türkiye and the middle-upper income group entirely took place in 2021.

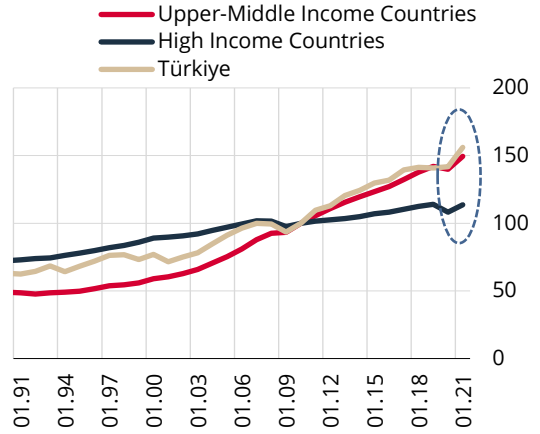
Recent growth developments show that this divergence continues in 2022. This is clearly evident from a comparison made with G20 countries, including Türkiye (Chart 4). As a result of the geopolitical risks that emerged in the first half of the year, along with disruptions in the global supply chain, economic activity decelerated significantly in G20 countries, while Türkiye continued to grow rapidly.

Chart 2: GDP per Capita* (USD)



Source: World Bank.

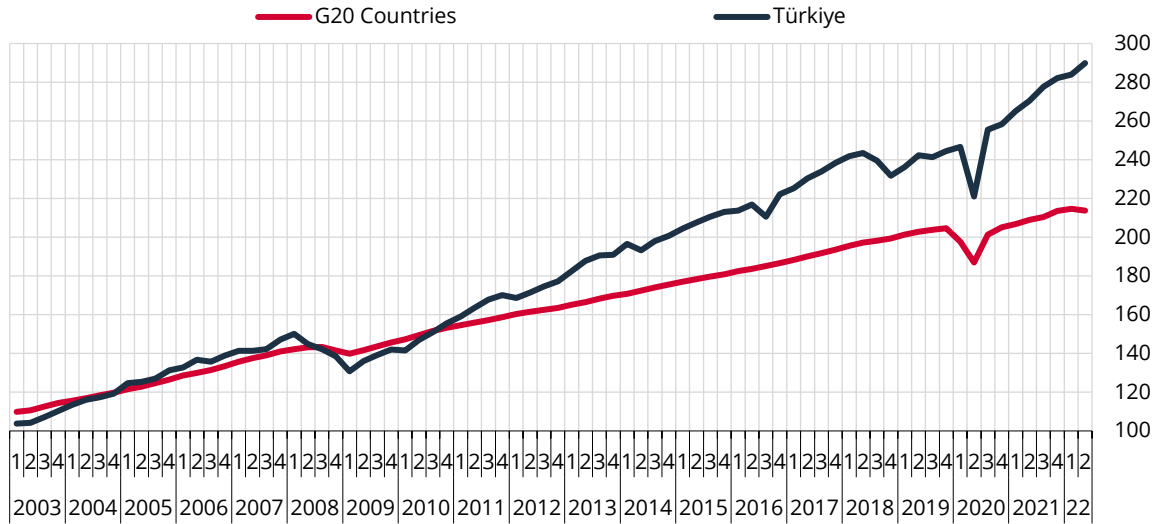
Chart 3: GDP per Capita Indices* (2010=100)



Source: World Bank.

* Based on real GDP series, calculated according to purchasing power parity (PPP) in 2017 USD prices. The PPP-based GDP eliminates price differences between countries and expresses GDP in all countries with the same price set, thereby allowing a comparison between the real sizes of economies. Türkiye's GDP is not included in the middle-upper income group GDP. Country grouping is from the World Bank classification.

Chart 4: Türkiye and G20 Countries GDP Comparison* (Seasonally Adjusted, 2003Q1=100)

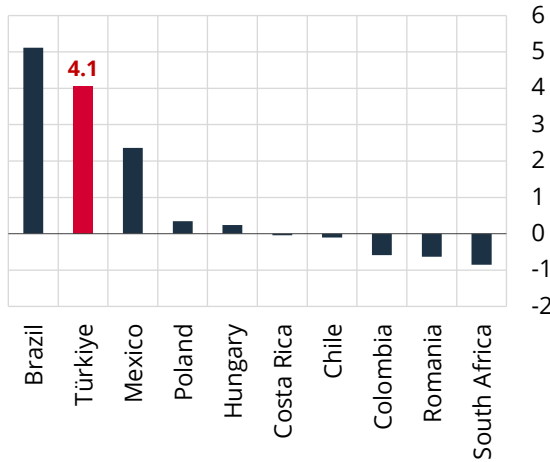


Source: Bloomberg, S&P Global, CBRT.

* G20 countries consist of Türkiye, the US, Germany, Argentina, Australia, Brazil, People's Republic of China, Indonesia, France, South Africa, South Korea, India, the UK, Italy, Japan, Canada, Mexico, the Russian Federation and Saudi Arabia. The growth rates of the G20 countries are weighted by their 2021 US dollar-based national incomes.

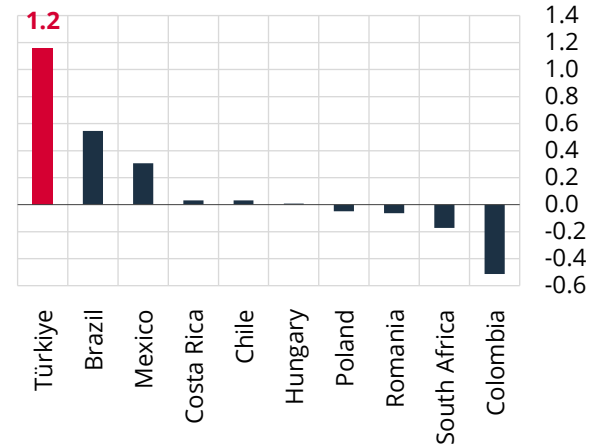
The recent rapid growth performance of the Turkish economy has also been mirrored in the labor market. In the post-pandemic period, Türkiye recorded a rapid recovery in employment and quickly regained its pre-pandemic level. In the period between the first quarter of 2020, the onset of the pandemic, and the second quarter of this year, total employment increased by 4.1 million, distinguishing Türkiye from its peers in terms of job creation capacity (Chart 5). The sectoral nature of employment makes this distinction more discernible. Industrial employment increased by 1.2 million people in the said period, indicative of the strength of the structural transformation that has been in place since the pandemic (Chart 6).

Chart 5: Employment (2020Q1-2022Q2, Million People)



Source: ILO, TURKSTAT.

Chart 6: Industrial Employment (2020Q1-2022Q2, Million People)



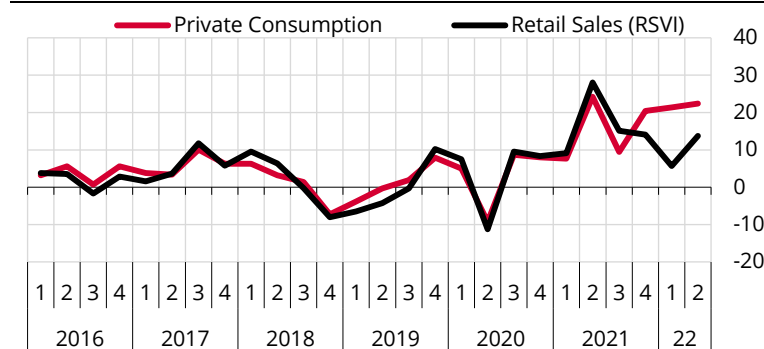
Source: ILO, TURKSTAT.

Zoom-In 2.2

Observations on Special Consumption and the Course of Stocks

Private consumption has recently posted a stronger increase, diverging from the retail sales volume index, with which it has historically been highly correlated (Chart 1). It is noteworthy that the divergence began in the first half of 2021, as the post-pandemic normalization became widespread. The relatively stronger performance of the services subgroup, which is not included in the retail sales volume index, was also influential in this divergence.

Chart 1: Private Consumption and Retail Sales Volume Index (Annual % Change)



Source: TURKSTAT.

High-frequency indicators for private consumption expenditures in the second quarter of the year present a relatively fragmented pattern among expenditure items. Contrary to what the increasingly common interpretation of the strong increase in private consumption says, private consumption does not seem to be caused by a sudden acceleration in the demand for goods. As the increasing number and per capita spending of visitors reflected on the related services sectors in that period, annual growth in the services group exceeded its historical rates of increase (Table 1). On the other hand, while domestic sales of white goods and automobile sales are relatively weaker, the performance of card expenditures and imports of consumer goods is relatively stronger. According to Table 1 illustrating a detailed structure of private consumption, looking at the second quarter of 2021, when annual growth in private consumption value added and retail sales volume index is measured very high, it is observed that almost all items are homogeneously high and point to a stronger growth compared to the second quarter of 2022.

Table 1: Heatmap-High Frequency Indicators for Private Consumption Expenditures*

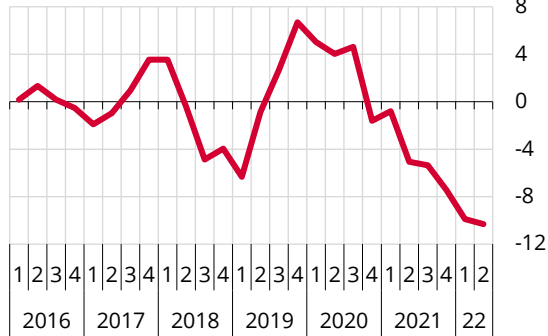
	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
Domestic Sales of White Goods	Yellow	Red	Green	Green	Green	Yellow	Red	Red	Red	Red
Domestic Sales of Automobiles	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Red	Red	Red	Yellow
Spending by Domestic Cards (Real)	Yellow	Red	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Green
Goods	Red	Red	Yellow	Yellow	Yellow	Green	Yellow	Green	Red	Yellow
Durable Goods	Yellow	Yellow	Green	Green	Yellow	Yellow	Orange	Yellow	Red	Red
Semi-Durables	Yellow	Red	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Green
Non-Durables	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow	Green	Red	Orange
Services	Yellow	Red	Orange	Orange	Orange	Green	Green	Green	Yellow	Green
Imports of Consumption Goods (Quantity)	Green	Red	Green	Green	Yellow	Green	Red	Red	Orange	Yellow
Durable Consumption Goods	Orange	Red	Red	Orange	Yellow	Green	Green	Yellow	Yellow	Green
Semi-Durable Consumption Goods	Green	Red	Orange	Orange	Orange	Green	Yellow	Yellow	Yellow	Green
Non-Durable Consumption Goods	Green	Yellow	Yellow	Yellow	Green	Green	Yellow	Red	Red	Yellow
Retail Sales Volume Index	Yellow	Red	Yellow	Yellow	Yellow	Green	Green	Yellow	Yellow	Yellow
Food, Beverage and Tobacco	Green	Yellow	Green	Green	Yellow	Green	Yellow	Orange	Red	Red
Non-Food (excluding automotive fuel)	Yellow	Red	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Green
Domestic Industrial Turnover Index (Deflated)	Yellow	Red	Yellow	Yellow	Yellow	Green	Orange	Yellow	Orange	Orange
Durable Consumption Goods	Orange	Red	Green	Yellow	Yellow	Green	Orange	Yellow	Yellow	Yellow
Non-Durable Consumption Goods	Yellow	Red	Yellow	Yellow	Orange	Green	Orange	Green	Green	Green
Services Turnover Index (Real)	Yellow	Red	Red	Orange	Orange	Green	Green	Green	Green	Green

Source: TURKSTAT, CBRT.

* Coloring in the table is based on the average values of annual changes on a quarterly basis for post-2020. The minimum and maximum values of each indicator are shown in red and green, while median values are in yellow. Values were deflated by the CBRT's relevant price indices.

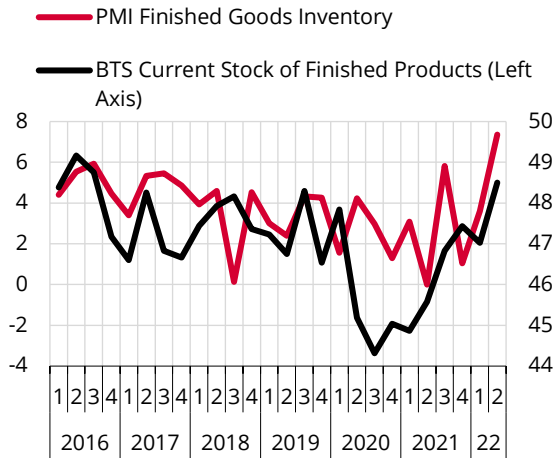
In the same period, the divergence between the annual growth of private consumption and the contribution of stock changes to annual growth increased. Accordingly, the stock change, including the statistical discrepancy between the estimation of national income based on expenditures and production, diverges from the survey indicators implying that manufacturing industry companies have tended to increase their stock of finished goods in the last few quarters (Charts 2 and 3).

Chart 2: GDP Annual Stock Contribution (% Points)



Source: TURKSTAT, CBRT.

Chart 3: BTS and PMI Finished Goods Stock (Seasonally Adjusted)

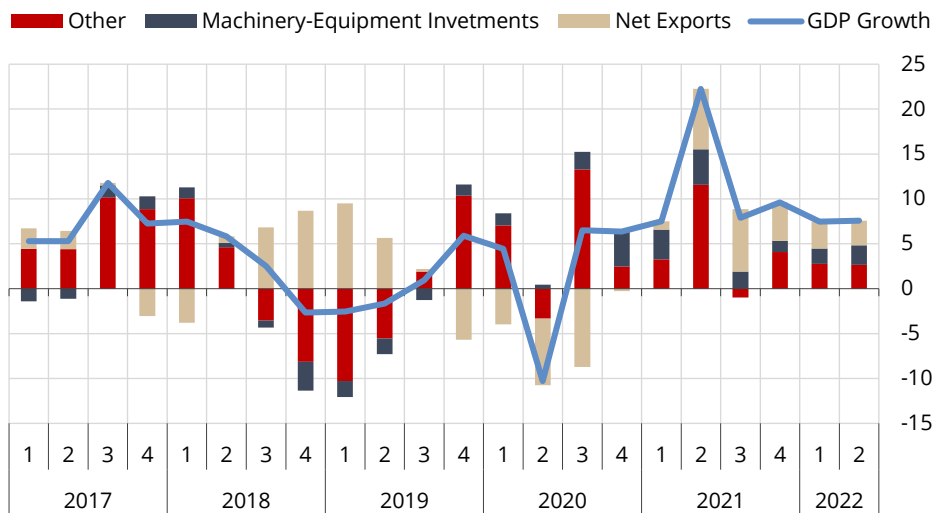


Source: S&P Global, CBRT.

Chart 4 shows the contribution¹ of sustainable components to annual growth from expenditure side.

An analysis of growth composition based on a distinction of the machinery-equipment investments and net exports, which are supported by targeted loans as they have the greatest short-term impact on potential supply and the current account balance reveals that 4.9 points of the annual growth (7.6%) in the second quarter was driven by these two items, and the total annual contribution of the remaining expenditures (private consumption, construction investments, other investments and stock changes) remained relatively flat compared to the previous quarter.

Chart 4: Contributions to Annual GDP Growth from Expenditure Side (% Points)



Source: CBRT, TURKSTAT.

¹ Gökcü, M. and Kazdal, A. (2022). "The Share of Sustainable Growth Components (in Turkish)". CBRT Research Notes in Economics, No: 2022-03.

Zoom-In 2.3

Fiscal Stance in the MTP

The MTP covering the 2023-2025 period was announced on 4 September 2022. The MTP provides forecasts for main macroeconomic indicators throughout the program period. The program envisages improvement in the budget balance and the primary budget balance and a gradual decrease in the debt stock to GDP ratio. The MTP foresees the budget deficit to GDP ratio falling from 3.4% in 2022 to 1.5% in 2025. The MTP also forecasts the expenditures to GDP ratio to gradually fall starting from 2024 and tax revenues (as a ratio of GDP) are expected to increase in 2023 and stabilize around 17% in the program period (Table 1). Because the envisaged improvement in the budget balance will be achieved by decreasing expenditures rather than tax increases, the implication is that fiscal policy will support the disinflation process.

Table 1: Central Government Budget

	TL Billion					Ratio to GDP %				
	2021	2022 ^(RE)	2023 ^(P)	2024 ^(P)	2025 ^(P)	2021	2022 ^(RE)	2023 ^(P)	2024 ^(P)	2025 ^(P)
Expenditures	1,603.5	3,133.7	4,469.6	5,361	6,003.5	22.1	23.3	24	22.9	21.9
Primary Expenditures	1,422.7	2,803.9	3,904	4,663.1	5,229	19.6	20.9	20.9	19.9	19.1
Interest Payments	180.9	329.8	5,65.6	697.8	774.5	2.5	2.5	3	3	2.8
Revenues	1,402	2,672.5	3,810.1	4,778.3	5,594.5	19.3	19.9	20.4	20.4	20.4
Tax Revenues	1,165	2,269.6	3,199.5	4,031.3	4,719.7	16.1	16.9	17.2	17.2	17.2
Non-Tax Revenues	237	402.9	610.6	747	874.8	3.3	3	3.3	3.2	3.2
Budget Balance	-201.5	-461.2	-659.4	-582.7	-409	-2.8	-3.4	-3.5	-2.5	-1.5
Primary Budget Balance	-20.7	-131.4	-93.8	115.2	365.5	-0.3	-1	-0.5	0.5	1.3

Source: MTP (2023-2025).

(RE): MTP (2023-2025) Realization Estimate. (P): (2023-2025) Program.

The economic developments in 2022 led to a change in nominal budget revenues and expenditures and hence a supplementary budget was released in June 2022. Compared to the supplementary budget, the MTP forecasts imply an upward revision of expenditures and revenues in 2022 by TL 300 billion and TL 120 billion, respectively (Table 2). Considering the realizations in the first nine months, the MTP indicates that expenditures will accelerate and the budget balance will record an additional deficit of TL 415.7 billion in the last quarter (Table 2).

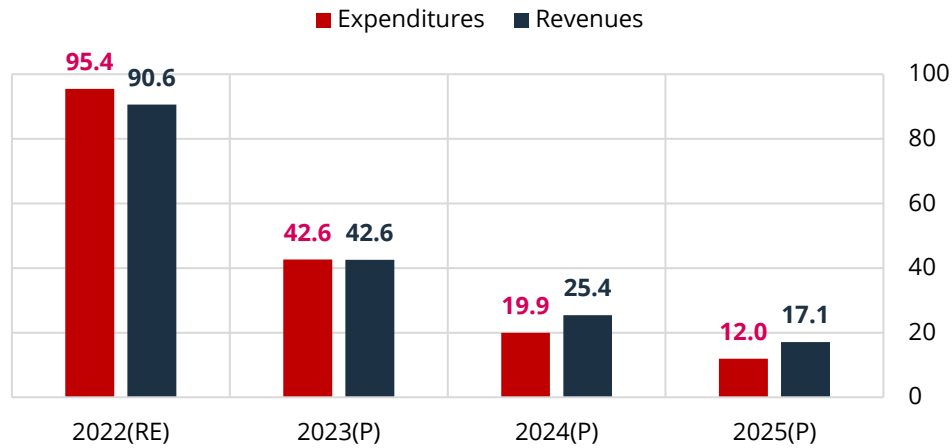
Table 2: Central Government Budget Forecasts for 2022 (TL Billion)

	Supplementary Budget (I)	MTP (II)	Difference (II-I)	January-September 2022 Realizations	2022Q4 Forecast
Expenditures	2,831.5	3,133.7	302.2	2,020.8	1,112.9
Primary Expenditures	2,501.7	2,803.9	302.2	1,813.6	990.3
Interest Payments	329.8	329.8	0.0	207.1	122.7
Revenues	2,553.1	2,672.5	119.4	1,975.3	697.2
Tax Revenues	2,186.0	2,269.6	83.6	1,648.0	621.6
Non-Tax Revenues	367.1	402.9	35.8	327.3	75.6
Budget Balance	-278.4	-461.2	-182.8	-45.5	-415.7
Primary Budget Balance	51.4	-131.4	-182.8	161.6	-293.0

Source: Ministry of Treasury and Finance, MTP (2023-2025).

In 2022 geopolitical risks and high inflation both resulted in an increase in budget expenditures to mitigate the adverse impacts of these developments and to continue the structural transformation program. Besides, a year-on-year increase of 90.6% is expected in budget revenues. The annual increase in expenditures is expected to slow from 2023 onwards and the annual increase in revenues is expected to exceed that of expenditures at the end of the program period (Chart 1).

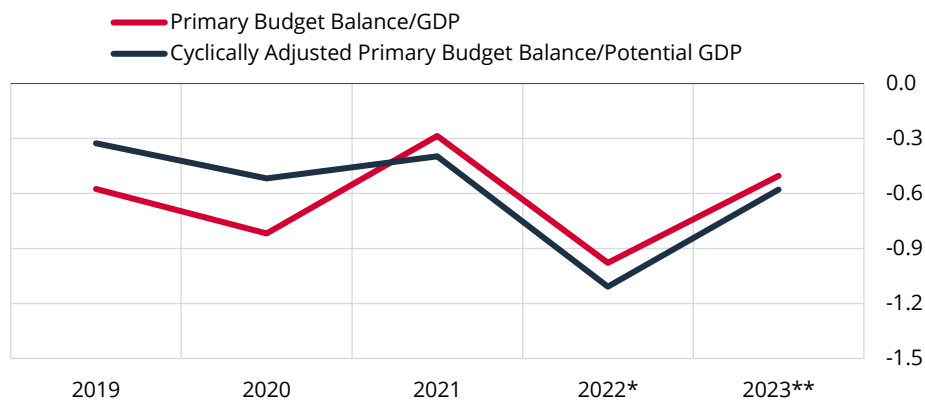
Chart 1: MTP Forecasts of Central Government Budget (Annual Change, %)



Source: Ministry of Treasury and Finance.
 (RE): MTP (2023-2025) Realization Estimate. (P): (2023-2025) Program.

Some tax and expenditure items are highly sensitive to cyclical fluctuations. Therefore, when assessing the fiscal policy stance, it is important to eliminate the cyclical effects that economic fluctuations have on the budget balance through automatic stabilizers. In this regard, the cyclically adjusted primary budget balance as implied by the MTP is presented to offer a clearer understanding of the future stance of fiscal policy.² It reveals that fiscal policy pursued a counter-cyclical stance in 2020 to mitigate the adverse impacts of the pandemic on economic activity and was slightly more expansionary compared to the previous year. The cyclically adjusted primary budget balance began to improve in 2021, in line with the post-pandemic economic recovery. Currently, the fiscal policy stance seems to be slightly more expansionary compared to the previous year due to the increased expenditures to support economic activity. In 2023, the cyclically adjusted primary budget balance is expected to improve within the context of the program that aims to sustain fiscal discipline and to decrease the ratio of primary expenditures to GDP (Chart 2).

Chart 2: Primary Budget Balance and Cyclically Adjusted Primary Budget Balance (%)



Source: Ministry of Treasury and Finance, CBRT calculations.
 * MTP (2023-2025) realization estimate ** MTP (2023-2025) program estimate.

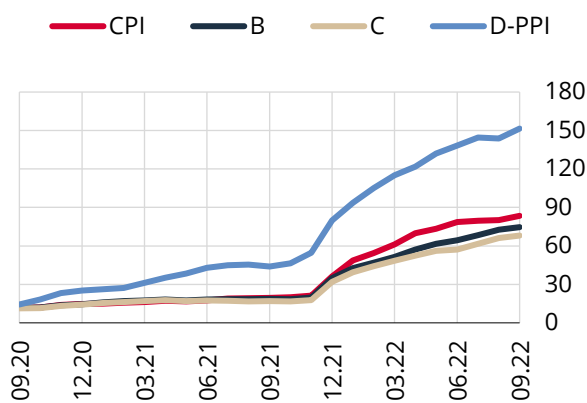
² For details see Inflation Report 2019 Box 6.1: Fiscal Stance in the New Economic Program

2.4 Inflation

In the third quarter of 2022, consumer inflation stood at 83.45%, close to the mid-point of the forecast range presented in the July Inflation Report while B inflation was recorded at 74.63%, close to the lower bound of the forecast range (Chart 2.4.1). In this quarter, consistent with the global demand outlook, international commodity prices excluding natural gas retreated, international transport costs decreased and thus, supply constraints eased compared to previous periods (Box 2.6). Non-energy commodity prices declined to levels seen prior to the Russia-Ukraine conflict. While agricultural commodity prices posted a sharp decline in July, industrial metal prices dropped significantly below their pre-conflict levels as of the end of the quarter. On the other hand, natural gas prices, which stayed elevated due to geopolitical developments, coupled with electricity prices, had both direct and indirect effects on inflation. Despite the negative outlook of global risk appetite, the nominal depreciation in the Turkish lira was relatively limited. Data for the third quarter of 2022 suggested a loss of momentum in economic activity due to weakening external demand. Meanwhile, inflation expectations remained elevated despite a decline as of September. In this period, the impact of administered prices on headline inflation increased somewhat, driven by energy items such as natural gas, electricity, and municipal water. Against this background, the seasonally adjusted quarterly increase in consumer prices was milder at 6.99% compared to the last three quarters (Table 2.4.1). Although producer prices decelerated somewhat in August in line with the decline in international commodity prices, they picked up again in September led by electricity production and gas manufacturing as natural gas prices affected domestic energy prices. In the third quarter by and large, producer prices-driven pressures weakened compared to the previous period (Zoom-In 2.4).

While core goods and services groups stand out in the rise in consumer inflation from 78.62% in the second quarter to 83.45% in the third quarter, the energy group had a restraining effect due to the decline in international oil prices. In this period, the contribution of the core goods group to annual inflation rose by 3.06 points quarter-on-quarter to 22.36 points while that of the services group increased by 2.69 points to 16.36 points. Meanwhile, the contribution of the gold-tobacco-alcohol group edged up by 0.39 points to 4.48 points, followed by the food group the contribution of which increased by 0.14 points to 23.55 points. The contribution of the energy group to annual inflation decreased by 1.44 points to 16.71 points, thereby limiting consumer inflation (Chart 2.4.2).

Chart 2.4.1: CPI, D-PPI, B Index* and C Index**
(Annual % Change)

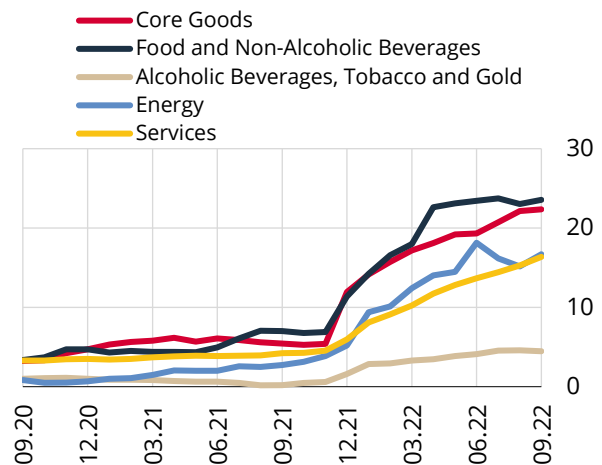


Source: TURKSTAT.

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

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

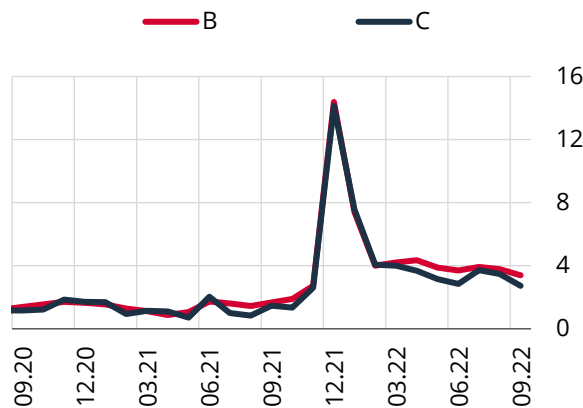
Chart 2.4.2: Contributions to Annual CPI
(% Points)



Source: CBRT, TURKSTAT.

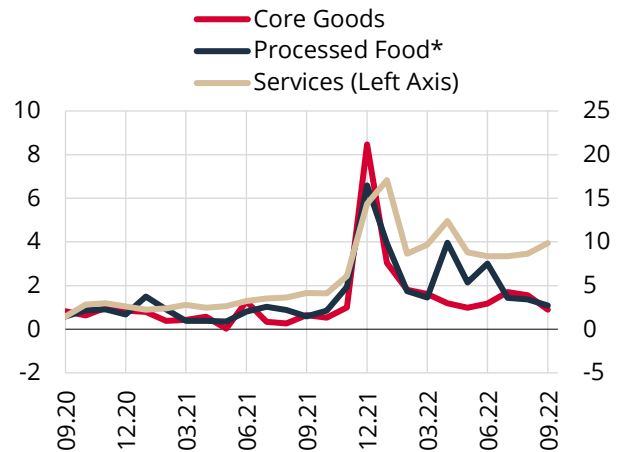
While the monthly rates of increase in core indicators decelerated, their annual inflation rose compared to the previous quarter (Chart 2.4.3, Zoom-In 2.4). Seasonally adjusted data indicate that the monthly increases in the B and C indices tended to decelerate. An analysis of subgroups of the B index suggests that the monthly price increases strengthened in services but lost pace in core goods and processed food (Chart 2.4.4). The price increase in core goods was reflected across the subgroups (Table 2.4.1). Durable goods increased quarterly by 9.15%, and the role of effects arising from import prices and credits weakened compared to the previous quarter while exchange rate-driven effects continued. A look at the sub-items of durable goods reveals that the price hikes decelerated in furniture but accelerated in electric and non-electric appliances in the third quarter. Prices in the other core goods group gained pace compared to the previous quarter, and price increases spread across the group, with the most significant effects coming from the subgroups of medicines, personal care products, household cleaning materials, and products for the maintenance and repair of the dwelling. Prices in the clothing and footwear group, which decelerated on a quarterly basis in the first half of 2022, registered an upward trend in the third quarter contrary to seasonal norms particularly in July and August. Although processed food prices lost some pace in this period, they continued to post substantial increases. External sunflower seed oil prices, which had been negatively affected by geopolitical developments, declined in the third quarter due also to the opening of the grain corridor. Despite the favorable implications of this development, the effects of cumulative input costs were observed on processed food prices. Price hikes in the services sector continued from the end of 2021 into the third quarter. Transport prices rose, led by school bus fares that increased with the opening of schools as well as by passenger transport by air that was affected by energy costs. In the other services group, education fees increased substantially following the opening of universities. Other significant sub-items in this group were the maintenance and repair of personal transport equipment that also covers costs of materials and labor, and health and education services in which the backward-indexation behavior is prevalent. Parallel to the consumer inflation outlook and housing market developments, the upward trend in rents continued in the third quarter (Table 2.4.1).

Chart 2.4.3: Indices B and C (Seasonally Adjusted, Monthly % Change)



Source: CBRT, TURKSTAT.

Chart 2.4.4: Subgroups of Index B (Seasonally Adjusted, Monthly % Change)



Source: CBRT, TURKSTAT.

* No seasonality detected for processed food.

Table 2.4.1: Consumer Prices

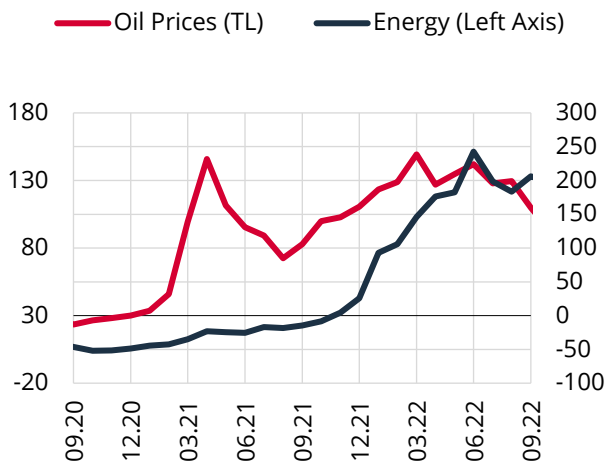
	Quarterly % Change (Seasonally Adjusted)				Annual % Change			
	2021	2022			2021	2022		
	IV	I	II	III	IV	I	II	III
CPI	19.11	24.39	15.60	6.99	36.08	61.14	78.62	83.45
1. Goods	22.99	24.38	17.49	7.41	41.10	70.38	89.94	93.07
Energy*	21.61	47.10	28.65	1.24	42.93	102.94	151.33	132.98
Food and Non-Alcoholic Beverages	21.06	20.04	22.64	8.30	43.80	70.33	93.93	93.05
Unprocessed Food	15.15	22.22	20.52	7.55	39.83	77.52	91.65	82.39
Processed Food *	24.67	18.77	24.49	10.07	47.57	63.64	96.04	102.90
Core Goods	25.79	16.96	8.60	10.75	40.55	59.19	64.86	77.49
Clothing and Footwear	11.38	7.75	4.71	9.62	19.92	26.54	26.35	39.62
Durable Goods (Excl. Gold)	35.88	15.45	10.86	9.15	48.93	68.54	77.90	89.96
Furniture	23.77	25.12	24.01	4.35	46.35	70.29	101.79	100.53
Automobile	47.82	10.81	8.04	8.95	57.04	69.13	75.43	93.07
Electrical and Non-Electrical Appliances*	26.55	20.72	6.44	10.32	38.00	66.64	68.91	79.40
Other Durable Goods*	23.74	16.70	10.13	9.39	41.50	57.50	64.71	73.98
Other Core Goods*	19.99	23.85	9.21	12.60	40.26	65.85	70.64	82.74
Alcoholic Beverages, Tobacco Products and Gold*	24.58	24.39	12.94	5.81	27.90	59.40	74.36	85.19
2. Services	10.09	14.80	12.28	11.15	22.33	36.72	48.69	57.76
Rent	3.66	6.81	8.24	13.64	12.20	16.70	22.80	36.18
Restaurants and Hotels	17.77	17.78	17.83	10.73	40.85	60.40	79.55	81.34
Transport	9.43	37.08	17.10	12.58	21.99	60.35	81.83	97.98
Communication	2.68	5.20	6.54	5.78	6.32	9.77	17.64	23.44
Other Services	11.31	13.93	8.99	10.09	22.61	35.65	42.84	52.85

Source: CBRT, TURKSTAT.

* No seasonality detected.

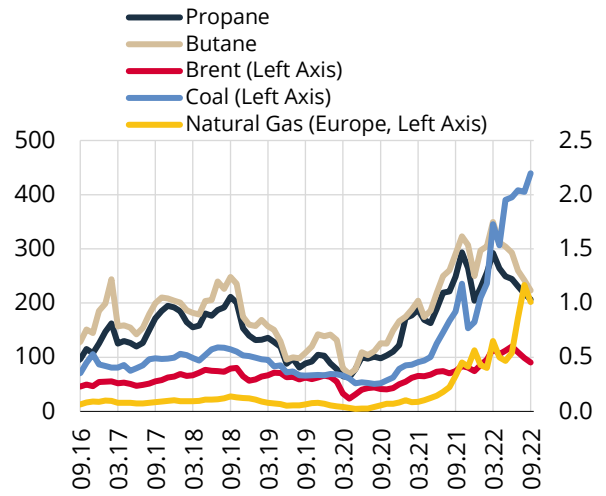
In the third quarter, annual energy inflation decelerated as fuel prices tracked the decline in international crude oil prices (Chart 2.4.5). Recorded at 1.24%, the rise in energy prices significantly lost pace in the third quarter compared to previous periods (Table 2.4.1). International Brent crude oil prices, which were around USD 120 on average at the end of the second quarter, receded throughout the third quarter and were at USD 90 on average by the end of September. Following these international oil price developments, fuel prices decreased by 16.46% in this quarter. A similar decrease was also observed in bottled gas prices driven by propane and butane prices. International energy prices maintained their high level in the third quarter despite a decline compared to the previous quarter, and varied across subcategories in line with geopolitical developments. While natural gas prices traded on US markets increased to a limited extent in this period, Dutch natural gas prices with one-month maturity which serve as a benchmark for natural gas prices in Europe, posted a very significant quarterly increase (87.28%). Following the rise in natural gas prices, coal prices also posted a quarterly increase of approximately 11% on a USD basis in the same quarter (Chart 2.4.6). Pressures of the rise in international natural gas and coal prices were closely observed on domestic electricity and natural gas prices. As a result of adjustments in both residential and industrial tariffs in September, electricity and natural gas prices rose. Consumer inflation was also affected by price adjustments in the industrial group indirectly through the production costs channel. BOTAS introduced a tariff change as of 1 October, and indexed the natural gas selling prices in energy-intensive sectors to the daily market reference price (DRP). In tap water, the price of which is set by municipalities, the backward inflation indexation trend as well as the effects of increasing energy costs continued.

Chart 2.4.5: Energy Prices (Annual % Change)



Source: Bloomberg, CBRT, TURKSTAT.

Chart 2.4.6: Energy Commodity Prices* (USD, Euro)

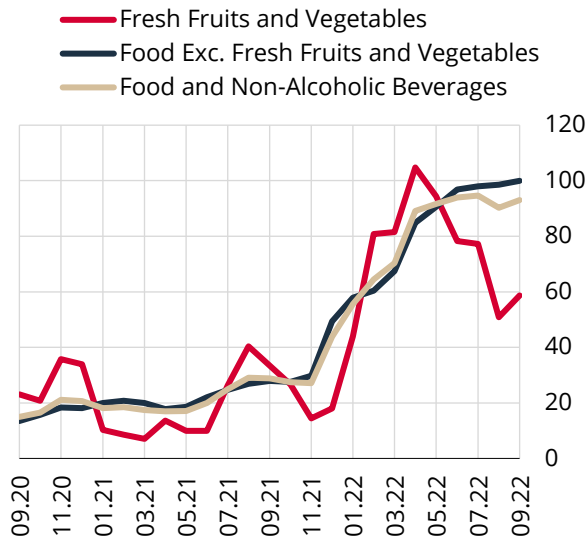


Source: Bloomberg.

* Brent oil per barrel, coal per ton, and butane and propane per gallon. European natural gas prices in euro and per MWh.

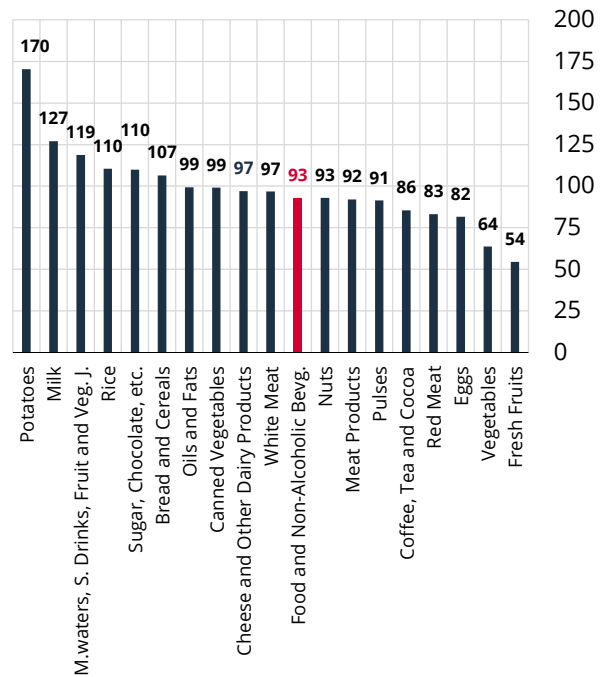
Food inflation remained elevated. The upward trend in annual inflation of the food and non-alcoholic beverages group that started in the second half of 2021 was replaced by a steadier outlook in this period, and annual inflation dropped by 0.88 points quarter-on-quarter to 93.05%, hovering above headline inflation (Chart 2.4.7). Annual inflation decreased by 9.26 points to 82.39% in unprocessed food, whereas it went up by 6.86 points to 102.90% in processed food (Table 2.4.1). Regarding the quarterly increase in unprocessed food, seasonally adjusted data pointed to some deceleration in prices of fresh fruits and vegetables while the deceleration in unprocessed food excluding fresh fruits and vegetables was more pronounced. In the third quarter, meat prices declined whereas egg and rice prices posted notable increases. International agricultural commodity and food prices dropped in the third quarter in line with the positive developments regarding the Black Sea Grain Initiative and the global demand outlook. As of September, FAO international food prices significantly converged to pre-War levels. The price increase in processed food remained strong in the third quarter despite losing pace. In this period, cost pressures continued to affect the inflation in the bread-cereals group. International sunflower seed oil prices, which had accelerated in the external market due to the Russia-Ukraine conflict but started to decelerate as of June, continued to decrease due also to the opening of the grain corridor. This decrease was reflected in domestic prices in the third quarter. On the other hand, canned vegetables, sugar and sugar-related products, tea, and non-alcoholic beverages were the items that stood out with increases in their prices in this period (Chart 2.4.8). Against this background, annual inflation in fresh fruits and vegetables declined over the previous quarter to 58.72% in the third quarter whereas the rise in the other food group continued and annual inflation reached 99.96% (Chart 2.4.7).

Chart 2.4.7: Food Prices (Annual % Change)



Source: CBRT, TURKSTAT.

Chart 2.4.8: Prices of the Food Group and Sub-items (September 2022, Annual % Change)



Source: CBRT, TURKSTAT.

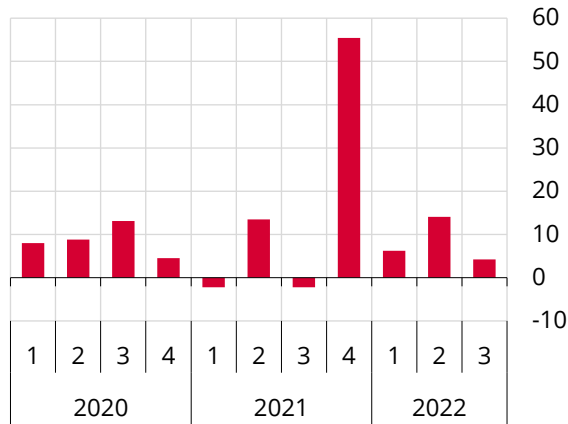
In the third quarter of the year, prices of alcoholic beverages and tobacco products rose by 6.99%. As per the Presidential decision³, the past six-month PPI increase was not entirely reflected on the specific and minimum specific taxes on alcoholic beverages and tobacco products. Having received the tax adjustment in June, prices of alcoholic beverages increased to a limited extent by 1.88% in the third quarter while prices of tobacco products rose by 7.43% due mainly to producer companies-driven effects. The increase in prices of alcohol and tobacco products added 0.38 points to the rise in annual consumer inflation in the third quarter.

Drivers of Inflation

The Turkish lira depreciated slightly in the third quarter of the year. Despite the increase in the foreign trade deficit and the deterioration in the global risk appetite, the measures put into effect secured a relatively stable course in the Turkish lira. While the nominal currency basket posted a more limited increase of 4.3% compared to previous quarters (Chart 2.4.9), real exchange rate indices suggested a moderate appreciation. Prices of highly exchange rate-sensitive groups were affected by the stable course of exchange rates while the lagged effects of the Turkish lira depreciation continued to prevail in items subject to time-dependent pricing.

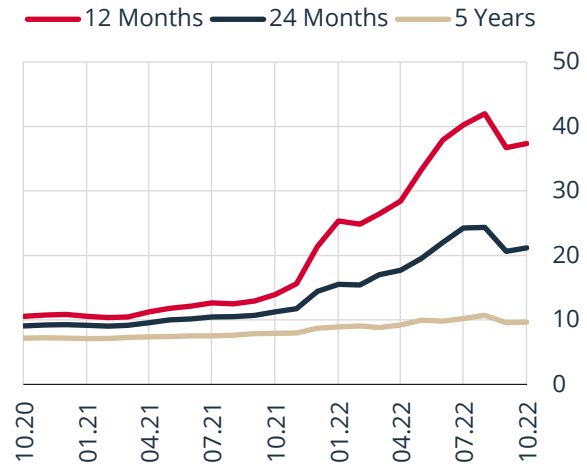
³ With the Presidential Decree No. 5614 published in the Official Gazette No. 31848 dated 27.05.2022, the specific and minimum specific taxes on alcoholic beverages and tobacco products were rearranged and it was decided not to reflect the rate of change in producer price index in the last six months for the July-December period of 2022 in the taxes.

Chart 2.4.9: Currency Basket* (Quarterly % Change)



Source: CBRT.
* US dollar and euro have equal weights.

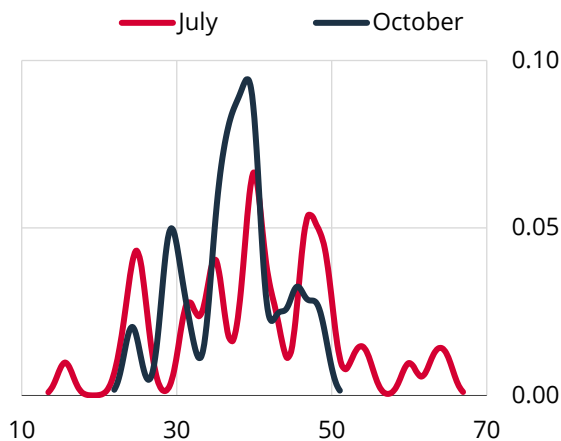
Chart 2.4.10: Expectations for CPI* (%)



Source: CBRT.
* Results of the CBRT Survey of Market Participants that polls real and financial sector representatives as well as professionals.

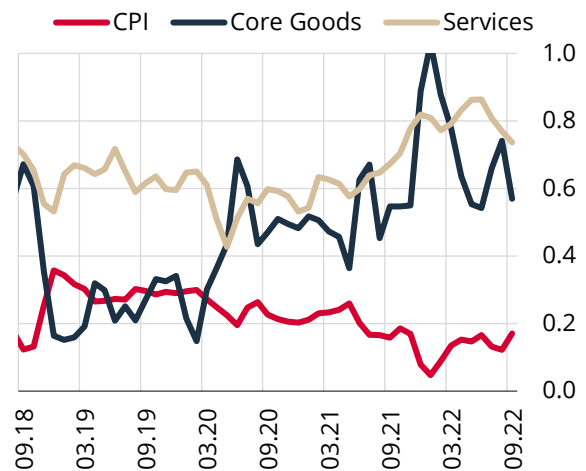
Inflation expectations maintained their high levels despite a decline and the distribution of expectations pointed to continued, albeit decreasing, inflation uncertainty. According to the October results of the Survey of Market Participants, the 12-month ahead inflation expectation dropped by 2.89 points to 37.34% compared to the previous reporting period while the 5-year ahead inflation expectation declined by 55 basis points to 9.66% (Chart 2.4.10). The distribution of 12-month ahead CPI inflation expectations suggested that the concentration around the median value increased but uncertainty in inflation forecasts remained high (Chart 2.4.11). Over the last three-month period, excluding the natural gas prices that registered hikes due to geopolitical problems, shocks to the economy such as those from exchange rates, commodity prices, and supply constraints have waned. Accordingly, diffusion indices for both core goods and services have somewhat receded (Chart 2.4.12).

Chart 2.4.11: Distribution of Survey of Market Participants (12-Month Ahead CPI Expectation)



Source: CBRT.

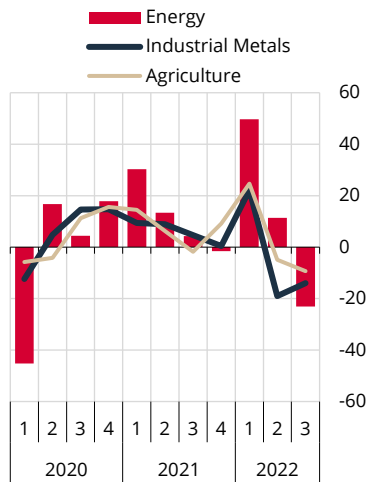
Chart 2.4.12: Diffusion Indices of CPI and Main Expenditure Groups (Seasonally Adjusted, 3-Month Average)



Source: CBRT, TURKSTAT.

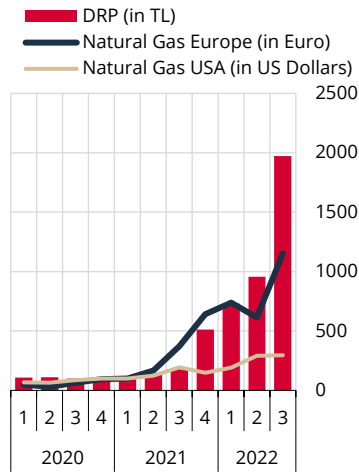
While global commodity prices declined in the last three-month period, natural gas prices posted sharp increases due to geopolitical problems and curbed the effect of this development on domestic prices. The weakening global economic activity and easing supply-side constraints alleviated the pressure on commodity markets. While global commodity prices moved downwards in quarterly terms (Chart 2.4.13), natural gas prices rose markedly. European countries were more strongly affected by this development (Chart 2.4.14). Increases in European benchmark natural gas prices triggered a rise in the domestic benchmark natural gas price announced by the Energy Exchange Istanbul (EXIST), and also prevented a more significant possible decline in the import unit value index. Accordingly, the quarter-on-quarter decline in the import unit value index remained limited (Chart 2.4.15). While the increases in natural gas prices were reflected on consumer electricity and natural gas tariffs to a limited extent, subsidies in producer tariffs remained more restricted, which has affected costs of firms adversely in the recent period.

Chart 2.4.13: Commodity Price Indices (Quarterly % Change)



Source: Goldman Sachs.

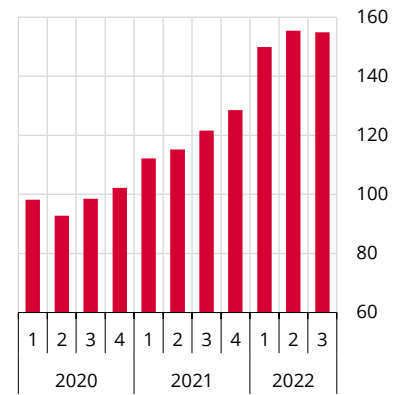
Chart 2.4.14: Natural Gas Prices* (2021Q1=100)



Source: Bloomberg, EXIST.

* DRP: Daily reference price.

Chart 2.4.15: Import Unit Value Index* (2019Q4=100, USD)

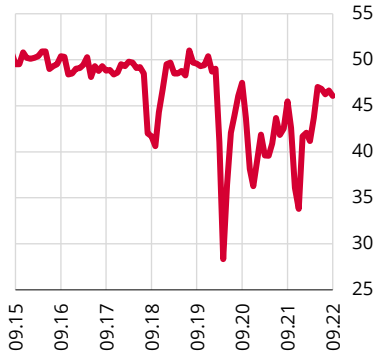


Source: TURKSTAT.

* Quarterly data are composed of data for the last month of the related period. The third quarter data is as of August.

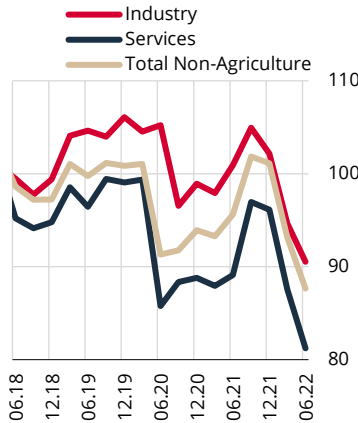
Producer price increases hovered above their historical average but tended to weaken. PMI data revealed that there was no significant change in suppliers' delivery times in the last three-month period, and the series continued to take a value slightly below its historical average (Chart 2.4.16). Although supply chain disruptions have not been eliminated completely, declines in international transport costs that had started in June became more pronounced in the third quarter of the year. As for labor costs, partial productivity was almost flat in the second quarter, and real unit wages per hour decreased as nominal wage increases remained below inflation. Real unit wages decreased in both industrial and services sectors, most visibly in services (Chart 2.4.17). The fall in real unit wages is estimated to have reversed in the third quarter of the year thanks to the additional minimum wage increase made in July. Considering all these developments that affect the costs of firms, it is observed that the upward trend in producer prices weakened in the last three-month period (Chart 2.4.18, Zoom-In 2.4).

Chart 2.4.16: PMI Suppliers' Delivery Times* (Manufacturing, Seasonally Adjusted)



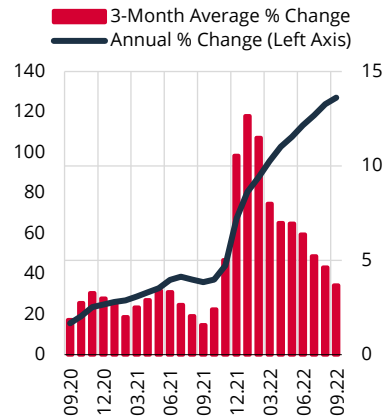
Source: ICI and S&P Global.
* Lower values denote longer delivery times.

Chart 2.4.17: Real Unit Wage per Hours Worked* (Value Added, 2015=100, Seasonally Adjusted)



Source: CBRT, TURKSTAT.
* Deflated by the CPI. Real Wage per Hour/Productivity.

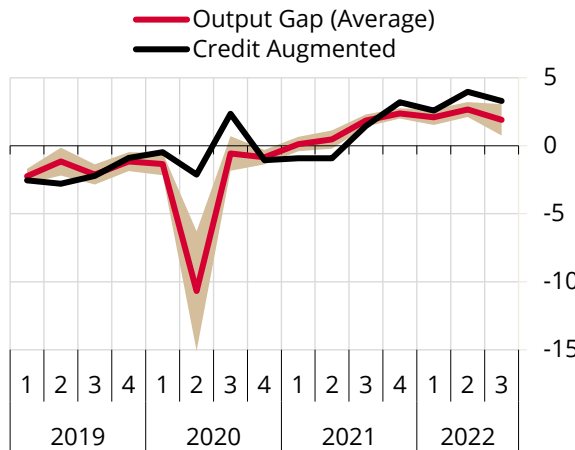
Chart 2.4.18: Manufacturing Prices Excl. Petroleum and Base Metals



Source: CBRT, TURKSTAT.

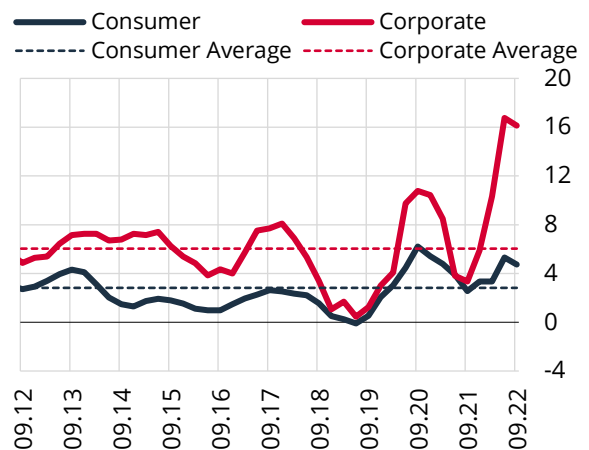
Although aggregate demand conditions remained strong in the third quarter, output gap indicators declined following the normalization in credit supply as projected in the previous Report period (Chart 2.4.19). This loss of momentum was driven by both domestic and external demand (Chart 2.3.6). The purchasing power, which decreased due to rising inflation, was among the factors that dampened domestic demand. While the strong tourism performance and increased spending of foreign visitors affect external demand favorably, signals of a deceleration in global growth weigh on exports of goods. Persistent geopolitical problems and continued weakening of the growth outlook in our main export markets may attenuate aggregate demand conditions due to external demand. An evaluation of the third-quarter courses of different output gap indices reveals that only the survey-based indicators increased while other indices moved downwards. On the other hand, the capacity utilization rate in the manufacturing industry decreased slightly in the third quarter after having remained relatively flat in the second quarter of the year (Chart 2.3.12). Consistent with the output gap indicator that covers credit developments, net credit utilization dropped in the third quarter (Chart 2.4.20). For demand developments, loan composition matters as much as the loan amount. In this context, net credit utilization converged to its historical average in consumer loans, while corporate loans, which were encouraged to be directed towards capacity-building activities, declined following the measures taken, yet remained above their historical averages.

Chart 2.4.19: Output Gap Indicators* (%)



Source: CBRT.
* The average of the output gap indicators, calculated by six different methods, is shown with the 95% confidence interval.

Chart 2.4.20: Net Credit Utilization* (%)



Source: CBRT.
* Net credit utilization is calculated as the ratio of the annual change in the nominal loan stock to the annual GDP of four quarters before. The historical average covers the period 2006Q1 to 2022Q3. Credit cards are included in utilization of personal loans. Corporate loan utilization is adjusted for exchange rate effects.

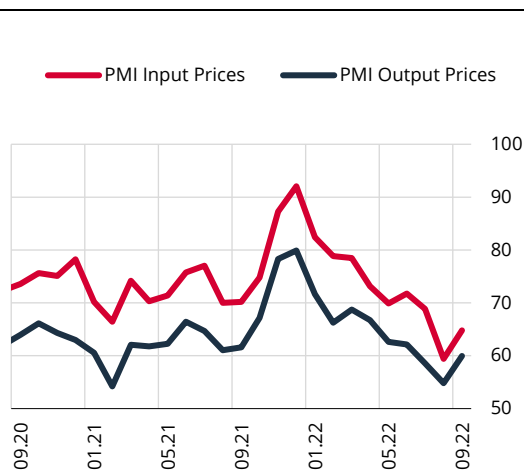
The impact of items with administered prices on headline inflation increased somewhat due to product groups subject to time-dependent pricing in addition to natural gas prices. Hikes in international natural gas prices continued to affect consumer prices directly as well as indirectly through producer prices. While natural gas tariffs for companies and electricity producers were raised in September, a gradual system was adopted as of October and the relationship between tariffs and the daily reference natural gas price was reinforced in industrial groups with intensive consumption. Although state subsidies in residential tariffs continued at an accelerated pace, electricity and natural gas prices were raised by 20.00% and 20.98% in September, respectively. In the last three-month period, fares of intercity passenger transport by railway increased. School bus fares, subject to time-dependent pricing, were increased in September, constituting another item on which cumulative energy costs were reflected. On the other hand, local administrations increased municipal water prices due to growing energy costs, and backward inflation indexation behavior continued. In the third quarter of the year, increases in university tuition fees and the arrangement in compulsory vehicle insurance fees were reflected on prices of the other services group. Additional increases made in July in the euro reference price used for pricing of medicines also affected other goods group. On the other hand, a more limited tax increase was made in alcohol and tobacco products at the end of May instead of the D-PPI-indexed automatic tax increase to take place in July. In addition to the tax arrangement, companies' cost-driven price increases in tobacco products also affected the July inflation figures.

Zoom-In 2.4

Observations Regarding Cost Pressure and Trend Indicators

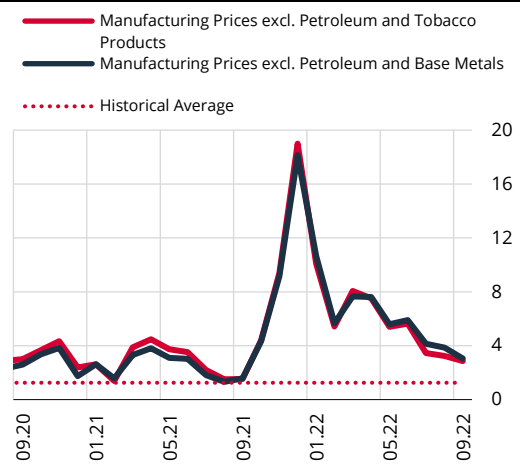
PMI indices and underlying trend indicators of producer prices show that cost-based price pressures continue but are tending to ease. In this period, there has been a mild deceleration in PMI input and output price indices as well as in the monthly price increases of the manufacturing indicator which excludes sub-items such as oil and tobacco that are significantly affected by tax developments (Charts 1 and 2). Although the average monthly increases in the underlying trend indicator of producer prices maintained their high level in the third quarter, they declined to half the level in the previous quarter. In fact, the nominal depreciation in the Turkish lira was limited in this quarter while global commodity prices excluding natural gas and international transport costs decreased, and supply constraints eased compared to previous periods. On the other hand, pressures from domestic energy prices such as those of natural gas and electricity remained strong due to natural gas prices affected by geopolitical developments, which stood as the main factor holding back a more positive outlook in producer prices.

Chart 1: PMI Input and Output Prices Index (Level)



Source: ICI and S&P Global.

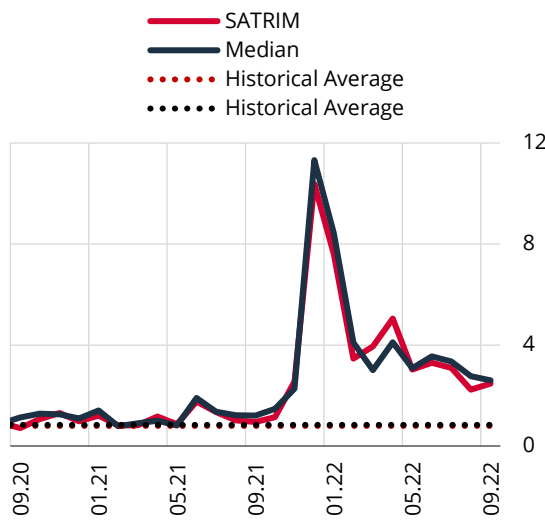
Chart 2: Underlying Trend Indicators of PPI (Seasonally Adjusted, Monthly % Change)



Source: CBRT, TURKSTAT.

The monthly increases in B and C indicators registered a moderate slowdown, which was also confirmed by alternative core inflation indicators. A mild deceleration was also observed in alternative indicators such as SATRIM and Median that are based on monthly price distribution of sub-items (Chart 3). Diffusion indices, which are monitored to see to what extent price hikes are widespread, weakened in the third quarter but nevertheless maintained their elevated course above historical averages. A breakdown of the diffusion index reveals that the diffusion declined in core goods prices whereas it remained relatively high in the services sector despite some deceleration (Chart 4). Monthly increases in the services sector have strengthened somewhat recently, which is associated with some services items such as education that display a time-dependent pricing behavior as well as with the upward trend in rents.

Chart 3: Main Inflation Indicators: SATRIM* and Median** (Seasonally Adjusted, Monthly % Change)

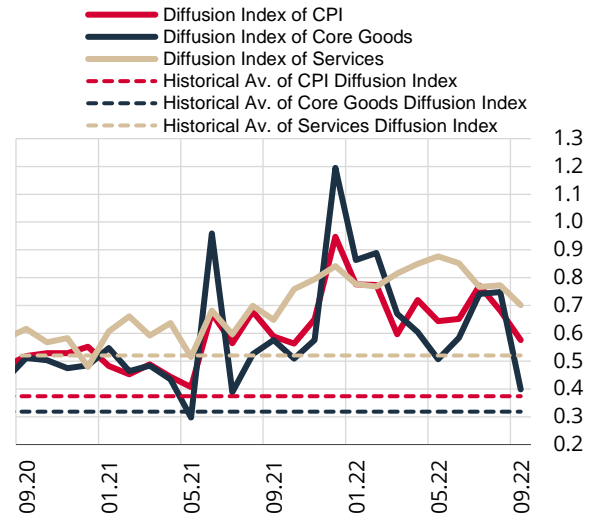


Source: CBRT, TURKSTAT.

* SATRIM: Seasonally adjusted, trimmed mean inflation.

** Median: Median value of monthly inflation distribution of seasonally adjusted 5-digit sub-indices.

Chart 4: Diffusion Indices of CPI and Main Expenditure Groups (Seasonally Adjusted, Monthly)



Source: CBRT, TURKSTAT.

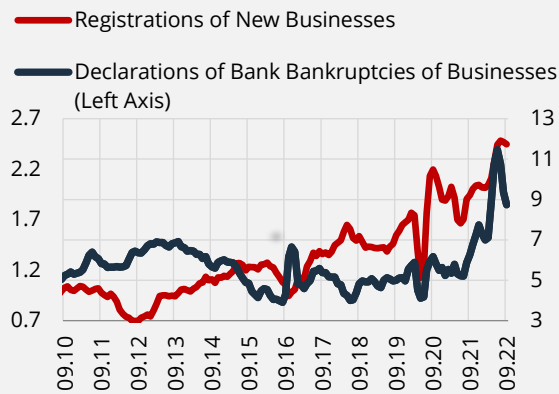
* Calculated by taking the average of values between 2005 and 2022.

Box 2.1

Business Dynamism in the Context of Business Registration and Bankruptcy Statistics

Business dynamism has decreased significantly in developed economies recently, which poses a significant risk of increasing inequality and decreasing long-term growth trends. Indicators for the labor market, the demographic structure, and the productivity and growth performance of the economy give an idea about the relative strength of business dynamism in the country. One of the main indicators of business dynamism is the sound process of company registrations and bankruptcies while the economy is growing. This box examines the recent course of the statistics of business registrations and bankruptcies.

Chart 1: Business Registrations and Bankruptcy Statistics (3-Month Moving Average, Seasonally Adjusted, Thousand Unit)



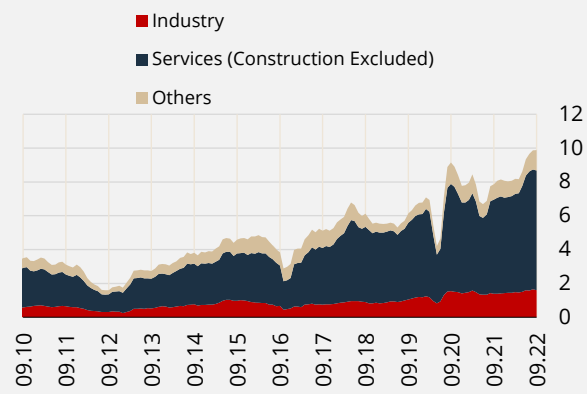
Source: TOBB.¹

Although the number of business registrations has been on the rise since 2013, it has sharpened its upward trend after 2020 (Chart 1). This increase was driven by supportive monetary-financial policies during the pandemic and regulations that facilitate doing business by enabling some legal and corporate transactions related to the process of online business registrations. In addition, incentives for women and young entrepreneurs, entrepreneurial support, the expansion of credit lines, and non-refundable incentives are among other factors supporting this increase. As a result, as of September 2022, the total number of new business registrations increased by 69% compared to the same period in 2019.

The number of business bankruptcies declined from 2013 to 2015 but displayed a stagnant outlook in the 2016-2020 period and a rapid increase that spread across all sectors after 2021. This increase in the bankruptcies may have been caused by the negative effects of the lockdown measures during the pandemic on sectors such as restaurants, accommodation, culture, and entertainment. On the other hand, there are critical structural transformations such as digitalization changes in consumer habits and supply chains in the post-pandemic period.

The increase in the number of business registrations and bankruptcies during this period partially sheds light on the process's effect on the economy's dynamism. Chart 2, which shows the net effect of the increasing dynamism through the difference between new business registrations and bankruptcies, indicates that the seasonally adjusted net number of firms has reached ten thousand. According to the sectoral distribution of net business registrations, it is seen that the companies are predominantly located in the services sector (Chart 2).

Chart 2: Net Business Registrations Statistics (3-Month Moving Average, Seasonally Adjusted, Thousand Unit)



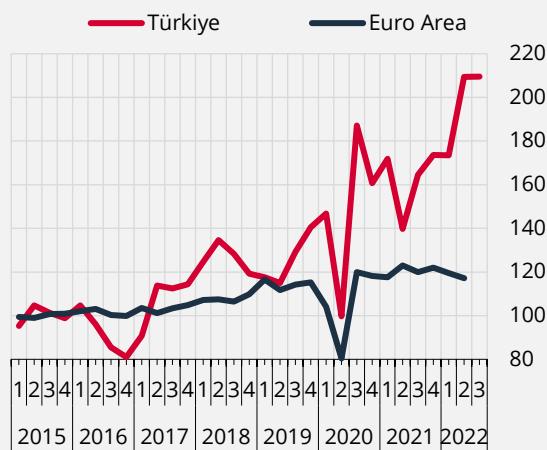
Source: TOBB.

¹ According to the registrations published in the Turkish Trade Registry Gazette, business registrations and bankruptcy statistics announced by TOBB include companies that initiated or terminated their activities. Firms that do not contribute to economic activity, have stopped their activities and remain passive are not included in these statistics.

However, it is noteworthy that the number of new business registrations / bankruptcies in the industrial sector is less affected by cyclical fluctuations, while the services sector, which includes various subsectors with different dynamics, is more sensitive to cyclical fluctuations. As of September 2022, the net number of companies increased by 57.1% in total, 50.7% in services, and 46.6% in the industrial sector compared to the same period of 2019.

The trends in the number of business registrations and bankruptcies are compared with those of European countries, where our importance as a production center has increased in the post-pandemic period and there is a higher degree of harmonization between these statistics. According to the European Union Statistical Office (Eurostat) data, the trends in new business registrations did not diverge from 2015 to the pre-pandemic period, but while they shifted and flattened after the pandemic and, more recently, declined in the Eurozone, they have been accelerating in Türkiye (Chart 3). Chart 4, which provides information about the trends in the number of bankruptcies, supports the ongoing structural transformation in Türkiye. While a permanent decline was observed in the number of bankruptcies in the euro area after the pandemic, there was an acceleration in the statistics of new business registration in Türkiye. As seen in Chart 2, the net number of business registrations are increasing, and there is a significant dynamism in Türkiye's new business registrations and bankruptcies.

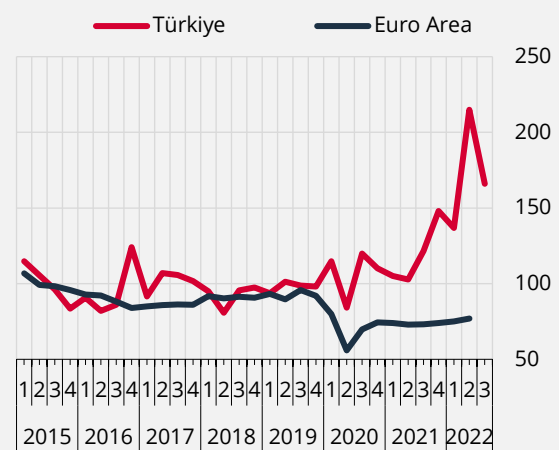
Chart 3: Business Registrations in Türkiye and the Euro Area (Seasonally Adjusted, 2015=100)



Source: CBRT, Eurostat.

* Includes 19 countries in the euro area.

Chart 4: Bankruptcies in Türkiye and the Euro Area (Seasonally Adjusted, 2015=100)

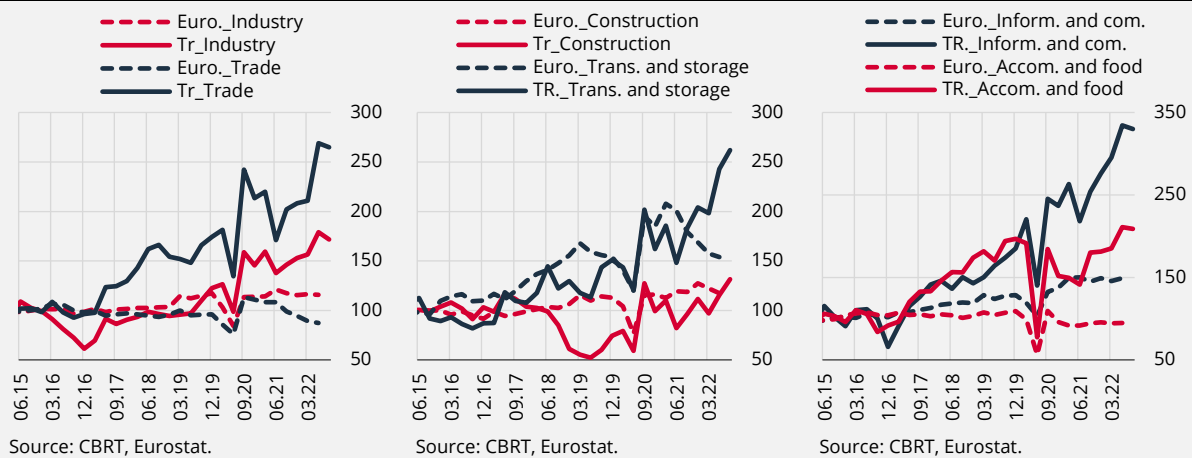


Source: CBRT, Eurostat.

* Includes 19 countries in the euro area.

It is observed that the increase in post-pandemic new business registrations in Türkiye spread across sectors (Chart 5). As a result of the digital transformation, new business registrations in the information-communication sector, a technology-intensive and high-value-added sector, increased at a more dramatic pace than in other sectors. On the other hand new business registrations decreased in the Eurozone except in industrial, accommodation-food services, and information-communication sectors. According to sizes, it is seen that new business registrations mostly include micro-scale companies, followed by small and medium-sized companies, respectively. Although their share in employment is low, there are findings in the literature that small and medium-sized young firms grow faster and have a higher job creation capacity than large firms (Ayyagari et al., 2014; Yue & Rama, 2015, and Rotar et al. 2019). In this context, the increase in net newly established companies and the company composition contain positive signals for the increase of entrepreneurship and business dynamism.

Chart 5: Business Registrations in Türkiye and Euro Area by Sectoral Division
(%, Seasonally Adjusted, 2015=100)



In summary, there has been a significant increase in the trends of new business registrations and bankruptcy statistics following the pandemic. However, both variables have stagnated in Eurozone, our largest export destination where these variables are statistically more comparable and we face our biggest competition. In addition, the number of net new business registrations increased, reflecting the added value and employment growth. Moreover, net business registrations increased in high value-added sectors like the manufacturing industry and communication sectors. Therefore, the above information provides essential information about the structure of the economic transformation experienced after the pandemic.

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Box 2.2

Findings Obtained from Interviews with Businesses

Within the Central Bank of the Republic of Türkiye (CBRT), studies are carried out under the name of “Economic Lens to the Real Sector” (ELRS), which is based on face-to-face meetings with businesses.¹ This box summarizes the findings from the interviews conducted in the July-September 2022 period.

Despite the weakening in demand conditions, especially export-linked companies are considered to maintain their investment appetite. While cost pressure eased in line with the fall in global commodity prices, it is understood that the limiting effect of energy costs continues.

Information from the interviews indicated that economic activity weakened in the third quarter of the year compared to the previous quarter. Domestic and foreign demand conditions and, therefore, slowing production activities stood out as the main reasons underlying this weakening.

It was observed that consumer demand for non-durable and semi-durable goods, was relatively buoyant while the demand for non-essential and deferrable durable goods slowed.

The general level of prices and consumer financing conditions in particular were listed as the main factors that put pressure on domestic sales across sectors. The supporting effect of sales to domestic exporting companies noticed in previous periods weakened in the third quarter due to a slowdown in export orders.

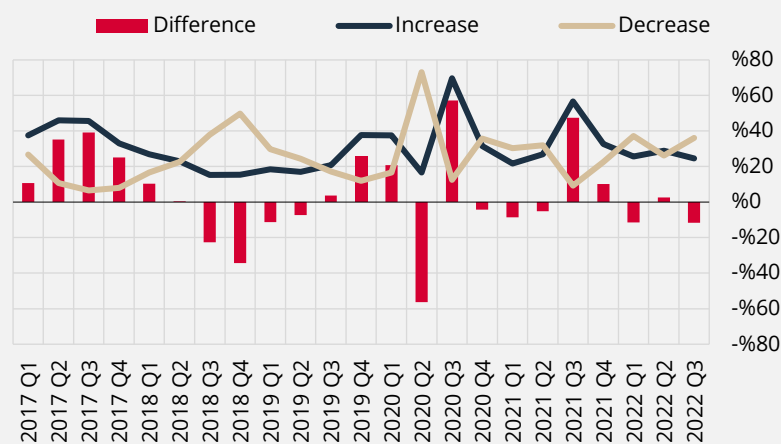
Non-durable and semi-durable goods sales were observed to be relatively positive in regions where tourism activities were buoyant. While the demand for food and fast-moving consumer goods was relatively stronger, the demand for end-of-season discount sales of apparel was below expectations. It was stated that in the durable goods group, the expected seasonal recovery was not observed in products such as furniture and white goods due to the slowdown in the construction sector, the demand brought forward in the first half of the year, and the suppressing impact of regulations regarding credit cards and the number of installments on sales. On the other hand, it has been observed that supply problems in the automotive sector have decreased and there has been a stabilization in demand. It was pointed out that the six-month and 6,000 km requirement for vehicle sales had reduced investment demand for vehicles. It has been also stated that the housing sales for investment have also weakened. While the companies expected the weakness in demand conditions to continue in the last quarter, they also stated that there may be a recovery in domestic demand if stocks are replaced, public support is increased, and there is a possible relief in the credit channel.

It has been observed that pressures originating from the EU market in exports have become more evident.

The shift in demand towards Türkiye due to the breaks in the supply chain continued to support exports, but the accelerating global inflation and rising uncertainty due to the war and increasing energy costs put significant pressure on foreign demand, especially from the EU. Pressure was felt more intensely in textile and basic metals sectors, while chemical products, rubber, plastic, machinery-equipment, and automotive exports held steady. It was also stated that the rapid increases in energy prices resulted in rising demand for paper, cable, and sub-industrial products for automotive sector from the European market.

Firms in the tourism sector reported occupancy rates beyond their pre-season expectations. It is stated that with the increase in the number of tourists in the upper segment, more income per capita is achieved.

¹The main purpose of this study is to obtain information on periodic production, domestic and international sales, investments, employment, credit conditions, and cost and price developments in a timely manner, to closely monitor economic activity, and to improve the communication between the CBRT and real sector representatives, through meetings with businesses in different sectors. The findings obtained from the semi-structured interviews constitute a high-quality and timely source of information for monetary policy decisions. Interviews are held with businesses in the manufacturing industry, and trade and services sectors within the framework of the sample created by considering their weight in the total economic activity at sectoral, regional and scale levels. The graphics are produced by scoring the anecdotal information obtained from the company interviews. This study includes evaluations and inferences based on interviews with businesses and does not reflect the views of the Central Bank of the Republic of Türkiye. The information and findings obtained may differ from the official statistics, information and findings that will be published later.

Chart 1: Demand Perception of Companies* (QoQ)

Source: CBRT ELRS.

* Demand Perception shows the evaluation made by considering the current sales realizations, orders and expectations of the companies. The series, stated as the difference, shows the difference between firms with a positive perception of demand and those with a negative perception of demand compared to the previous quarter, and provides information on the prevalence of the change in demand perception, not the size of the change.

Domestic demand conditions and the slowdown in export orders of some sectors due to recession concerns for the EU economy caused a slowdown in production.

Among manufacturing sectors that mainly aim to export to Europe, the slowdown in production in textile-apparel companies was the most obvious. On the other hand, automotive production is expected to gain momentum in the last quarter of the year with the decrease in supply disruptions, which will support the related sectors such as the fabrication metal, plastics and the automotive parts industry. It was observed that demand conditions and declining raw material prices weakened the raw material stocking tendency of firms in the third quarter. It was stated that possible energy crisis for the EU countries in the next quarter may create additional demand in sectors such as glass, ceramics, chemicals automotive, plastic, and rubber, which consume energy intensively.

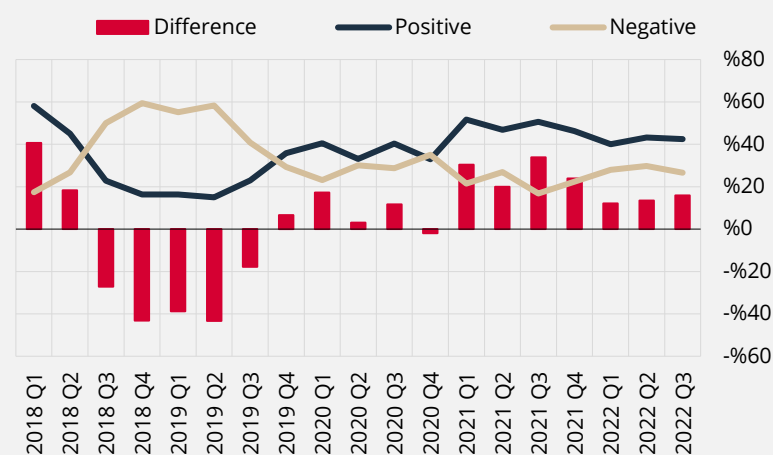
Although there has been an improvement in the investment stances of companies for the next twelve months since the beginning of the year, it is observed that this improvement did not become evident on a quarterly basis.

The investment appetite of those companies that have buoyant foreign demand and have production close to capacity constraints is strong. Machinery-equipment, production facility, and energy investment plans dominate the investment plans of such companies. Companies from food manufacturing and retail, textile and apparel, automotive and automotive parts industry, chemicals, plastics and rubber, basic metals, electrical equipment and not elsewhere classified machinery and equipment manufacturing, energy production-distribution, logistics and food service sectors all have a positive investment appetite.

Although the long-term financing conditions were especially emphasized in the interviews, it is understood that the Advance Loans Against Investment Commitment (ALAIC) positively affects the investment plans of the companies and this loan facility is effective in bringing the investment plans of some companies forward.

The tendency for employment growth is limited except for the companies that plan to increase their capacity in the upcoming period. In this period, most of the firms state that they intend to maintain their employment levels in the next six months. In that context, it is seen that the skilled worker shortage and demand conditions are the main factors limiting the employment increase plans.

Chart 2: Investment Stance of Companies* (Next 12 Months, %)



Source: CBRT ELRS.

* Investment stance shows the evaluation made by considering the investment appetite of the companies for the next 12 months. The series stated as difference shows the difference between the number of firms with a positive investment stance and firms with a negative investment stance, and provides information on the prevalence of the change in investment stance, not the size of the change.

Although the companies' need for working capital financing decreased slightly compared to the previous quarter due to the declining raw material prices, it was observed that especially rising energy costs limited this decrease.

Despite falling raw material prices and the stability observed in the exchange rate, the high working capital requirement throughout the quarter was associated with increased costs due to labor payments and energy expenses. While mismatches in cash flow were mentioned as another factor that increased the working capital needs, it was observed that the emphasis on long-term financing needs continued in investment financing.

Macprudential measures were taken after the loosening of credit conditions and standards in the second quarter. In the third quarter, the impact of those measures was tried to be observed outside the targeted areas. In that context, while the loan interest rates decreased with the measures taken at the end of August, companies' emphasis on interest rates decreased. Although companies emphasized the limit and maturity aspects throughout the quarter, it was observed that a significant part of the companies did not have any problems accessing finance. At this point, the supportive role of rediscount loans, which provide suitable financing conditions in meeting the working capital needs, becomes clear. Furthermore, the support that ALAIC gives to investment decisions has grown recently, especially due to long-term loan conditions.

Cost pressures on firms eased somewhat due to fall in global commodity prices.

In the third quarter of the year, companies' emphasis on raw materials as a source of increasing costs decreased compared to the previous quarter, and the emphasis on the exchange rate, which increased in June, decreased in the third quarter. Energy and labor were highlighted as cost factors throughout the quarter, and it was stated that the increases in these items limited the impact of the decrease in raw material prices. It has been observed that the transition in energy costs to prices is faster in sectors that use energy intensively in production.

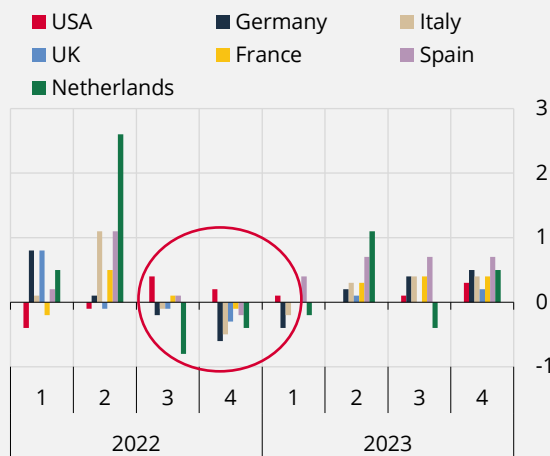
Box 2.3

Slowdown in Foreign Demand and Its Effects on Economic Activity

The slowdown in global growth after the Russia-Ukraine war was driven by persistent geopolitical risks and the energy crisis that emerged in the European Union due to the sanctions imposed on Russia. In addition, the tightening trend in the monetary policies of developed countries has also strengthened due to rising inflation, which has led to a downward revision of the 2023 growth forecasts, especially for the US, European Union and UK economies. This box examines the possible implications of these developments for the Turkish economy.

The national income of a significant portion of Türkiye's main trading partners is expected to decline from the second half of 2022 to the first quarter of 2023 (Chart 1). Annual growth forecasts and PMI indices also indicate that the global growth outlook deteriorated significantly compared to the July Report period (Table 1). In addition, the risks to growth have gained downward weight and the probability of recession in 2023 in particular in the European Union and UK economies has increased (Table 2). This negative outlook, especially originating from the Eurozone, which constitutes nearly half of Türkiye's export market, indicates that foreign demand may weaken in the rest of the year.

Chart 1: Quarterly Growth Forecasts for Türkiye's Major Trading Partners* (%)



Source: Consensus Economics.

* Prepared according to the September Consensus Bulletin.

Table 1: PMI Indices for Türkiye's Major Trading Partners

	Manufacturing PMI		
	Q2	Q3	Difference
Euro Area	54.1	49.3	-4.8
USA	56.3	51.8	-4.5
Germany	53.8	48.8	-5.1
Italy	52.4	48.3	-4.1
UK	54.4	49.3	-5.2
France	53.9	49.3	-4.6
Spain	53.2	49.2	-4.0
Netherlands	57.9	52.0	-5.9

Source: CBRT, S&P Global.

Table 2: Annual Growth Forecasts* for Türkiye's Major Trading Partners (2022-2023 Cumulative Growth)

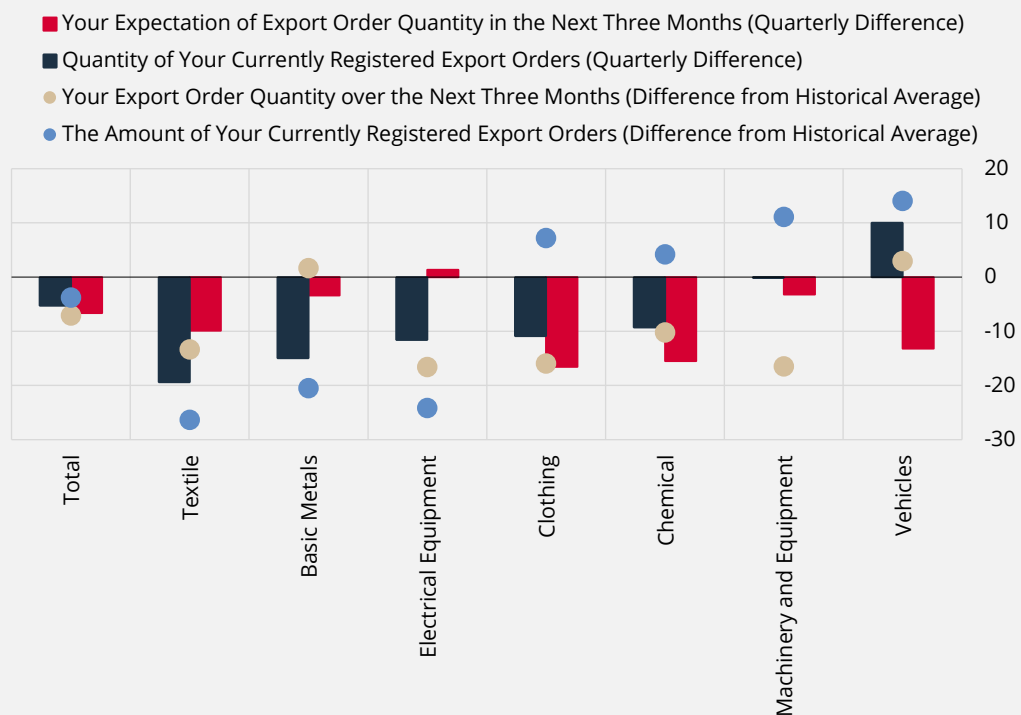
	Consensus			IMF			OECD		
	July IR	October IR	Difference	July	October	Difference	June	September	Difference
Euro Area	4.8	3.0	-1.8	3.8	3.6	-0.2	4.2	3.4	-0.8
USA	4.4	1.9	-2.5	3.3	2.6	-0.7	3.7	2.0	-1.7
Germany	3.9	0.5	-3.4	2.0	1.2	-0.8	3.6	0.5	-3.1
Italy	4.3	3.2	-1.1	3.7	3.0	-0.7	3.7	3.8	0.1
UK	4.3	3.8	-0.5	3.7	3.9	0.2	3.6	3.4	-0.2
France	4.1	2.8	-1.3	3.3	3.2	-0.1	4.0	3.2	-0.8
Spain	7.3	5.7	-1.6	6.1	5.6	-0.5	6.4	6.0	-0.4
Netherlands	4.2	5.3	1.1	3.5	5.3	1.8	-	-	-
Iraq	16.4	14.6	-1.8	-	13.7	-	-	-	-

Source: Consensus Economics.

* The Iraq estimate is created by the CBRT based on the S&P Global estimates.

It is anticipated that the developments summarized above will adversely affect the export performance in particular. Considering that industrial products account for 94.4 percent of Türkiye's exports in the last five years, a negative shock on the foreign demand side will affect the manufacturing industry the most. There are two questions regarding the export outlook in the Business Tendency Survey (BTS), which is the leading indicator for the industry sector. The first of these questions includes information on the current status of registered export orders, while the second reflects the expectations for the next three months. The sectoral changes in these questions in the third quarter compared to the previous quarter shows that the current situation for export orders weakened in the main sectors excluding the vehicle sector (Chart 2). For the next three months, a significant decrease is expected in export orders in the vehicle sector, while the expectation that the decrease in demand will continue in other sub-sectors excluding electrical equipment is maintained.

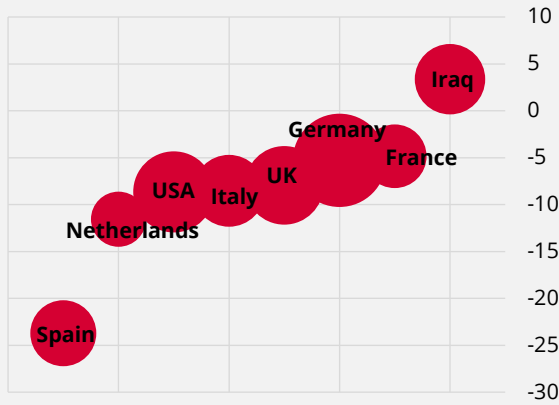
Chart 2: Current Situation and Expectations of Export Orders in the Third Quarter of 2022 (Increase-Decrease, Seasonally Adjusted)



Source: CBRT BTS.

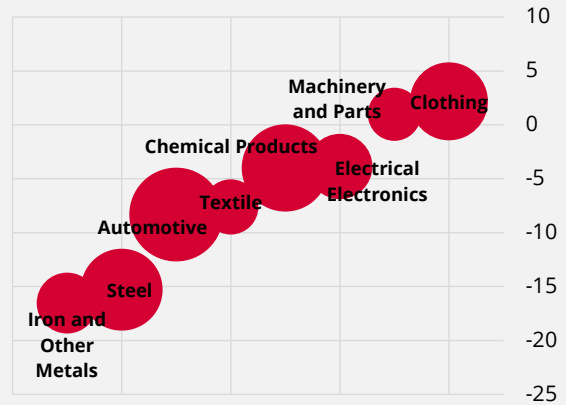
Recent foreign trade developments are in line with the survey data. Seasonally adjusted exports, which had increased steadily in the post-pandemic period, decreased in the third quarter of the year, which was driven by the slowdown in European countries and the USA. It is observed that exports to the eight main trading partners, which constitute 42.5 percent of Türkiye's exports, declined except Iraq (Chart 3). On the other hand, the increase in exports to Russia and Ukraine in this period limited the decrease in total exports. On a sectoral basis, exports decreased in the third quarter in the main exporting sectors, primarily iron, steel, automotive and textile, while exports in the clothing and machinery and accessories sectors increased, albeit slightly (Chart 4).

Chart 3: Change in Exports to Türkiye's Major Trading Partners in the Third Quarter of 2022* (Seasonally Adjusted, Quarterly, %)



Source: Ministry of Trade, TURKSTAT.
 * Ministry of Trade data for September 2022 is provisional. The size of the balloon is proportional to the share of the relevant country in exports.

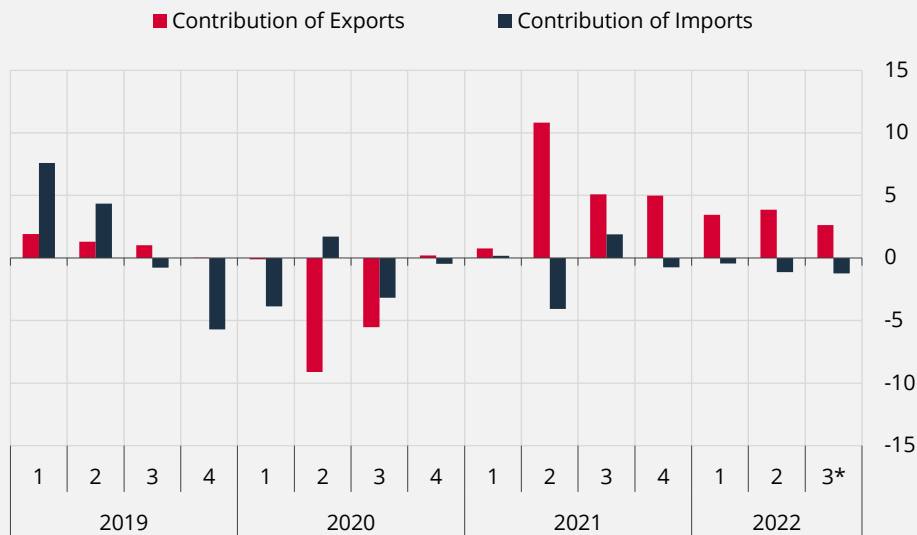
Chart 4: Change in Exports by Sectors in the Third Quarter of 2022* (Seasonally Adjusted, Quarterly, %)



Source: Turkish Exporters Assembly.
 * The size of the balloon is proportional to the share of the relevant sector in exports.

Considering the channels through which the slowdown in foreign demand is reflected on the domestic market, the loss of momentum in exports is expected to limit the strong growth performance in the first half of the year by directly slowing economic activity. As a matter of fact, the positive contribution of net exports, an important driver of growth, to annual growth in the third quarter is expected to decline due to the slowdown in exports (Chart 5).

Chart 5: Contribution of Exports and Imports to Annual Growth (%)

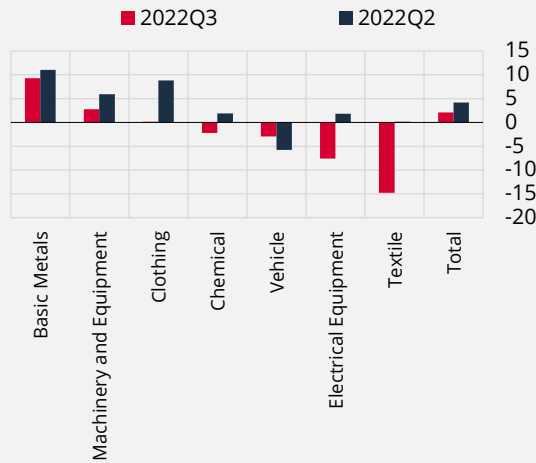


Source: CBRT, TURKSTAT.
 * Forecast for 2022Q3.

The decline in exports may also hit the current positive trend in employment and bring about a slowdown in employment growth, especially in the industrial sector. The employment tendency data in the BTS shows that the employment expectation for the next three months in the third quarter decreased compared to the previous quarter in many sectors, especially in the clothing, textile and electrical equipment sectors (Chart 6).

The slowdown in foreign demand may also put a drag on fixed capital investments, which have maintained their strong course for a long time despite the pandemic. When the fixed capital investment expectations in the BTS are analyzed, it is seen that the investment expectations remained above the long-term average in the third quarter, but there was a decline compared to the second quarter (Chart 7).

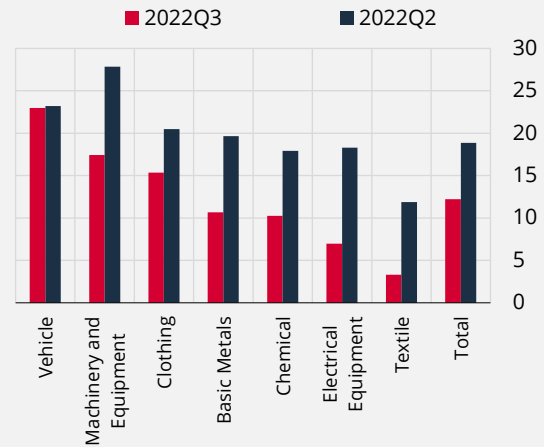
Chart 6: Expectations of Total Employment in the Next Three Months
(Increase-Decrease, Seasonally Adjusted, Difference from Long-Term Average*)



Source: CBRT BTS.

* The average for the period of 2011-2019 was taken as the long-term average.

Chart 7: Fixed Capital Investment Expenditure in the Next Twelve Months Compared to the Past Twelve Months
(Increase-Decrease, Seasonally Adjusted, Difference from Long-Term Average*)



Source: CBRT BTS.

* The average for the period of 2011-2019 was taken as the long-term average.

In the period since the pandemic, the structural transformation in Turkish exports took place alongside (i) the preservation of the production potential as a result of the continuity of investments in the economy and (ii) the decrease in the supply capacities of some other economies in the face of supply-side shocks. The role of exporter firms' dynamic capacity and flexibility in product and market diversification in reducing vulnerabilities to external shocks has been clearly observed. The energy-related risks faced by the European economies will have downward effects on the economic activity in Türkiye through the external demand channel and upwards from the possible substitution of production channel. On the other hand, the increasing trend in exports to countries in the Middle East region (such as Iraq, Qatar, the UAE) whose income increased as a result of the rise in energy prices in the post-pandemic period, and the recent acceleration of exports to markets such as Saudi Arabia, are likely to mitigate the potential risks arising from foreign demand on total exports. In addition to the Middle East countries, the recent increase in exports to Asian countries such as India, Japan and Malaysia also supports this expectation. Therefore, it is considered that the effects on exports and economic activity will occur in the form of a pause in the growth momentum rather than a large-scale and sudden decline, and the export targets announced in the MTP are achievable. On the other hand, financing costs, which are reduced by policy rate decisions and macroprudential measures, will reduce the general repercussions of this effect on the economy in the upcoming period, and contribute to the temporary nature of the expected effects.

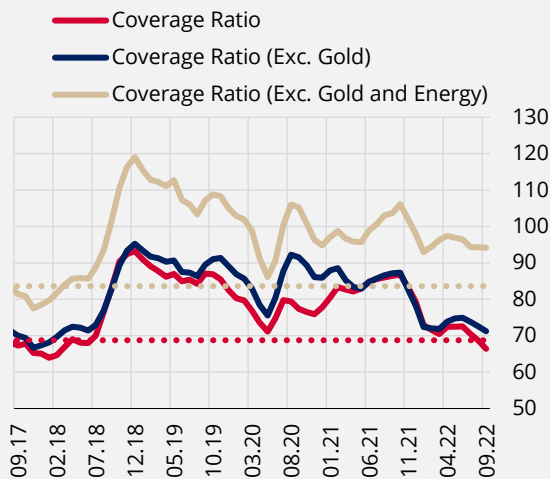
Box 2.4

Real Outlook of External Trade

Despite the strong course of exports in the first half of 2022, the high cost of energy imports caused a decrease in the ratio of exports to imports. In the third quarter of the year, there was a limited decrease in exports due to the loss of momentum in external demand, and an increase in imports due to the recent rise in gold imports as well as energy. Thus, the coverage ratio fell to 67 percent, below the average of the ten years before the pandemic. However, when these effects are excluded, the ratio of exports to imports excluding energy and gold, which can be described as the core coverage ratio, is 95 percent, higher than the headline ratio (Chart 1).

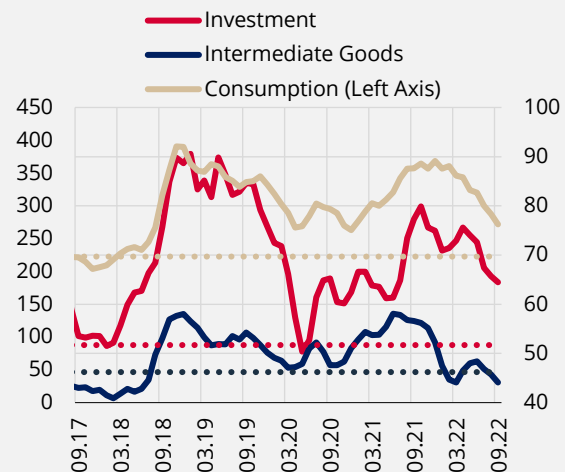
When the export-import coverage ratios are analyzed according to the classification of large economic groups, decreases were observed in investment and intermediate goods that has similar trend to the headline ratio, and the ratio of exports to imports for those two groups decreased to 64 percent and 44 percent, respectively, in September. In consumer goods, although the ratio decreased, it remained above 250 percent. The fact that the consumption goods coverage ratio has historically been over 200 percent is due to the fact that the share of exports of consumption goods in total exports (approximately 40 percent) is higher than the share of imports of consumption goods in total imports (approximately 12 percent) (Chart 2) in Türkiye's external trade structure.

Chart 1: Export Import Coverage Ratio*
(Seasonally Adjusted, 3 Months Moving Average, %)



Source: CBRT, Ministry of Trade, TURKSTAT.
* September data is provisional. Dashed lines represent the historical average.

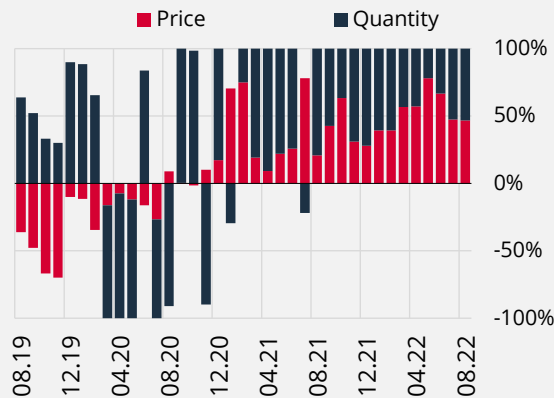
Chart 2: Export Import Coverage Ratio*
(Seasonally Adjusted, 3 Months Moving Average, %)



Source: CBRT, Ministry of Trade, TURKSTAT.
* September data is provisional. Dashed lines represent the historical average.

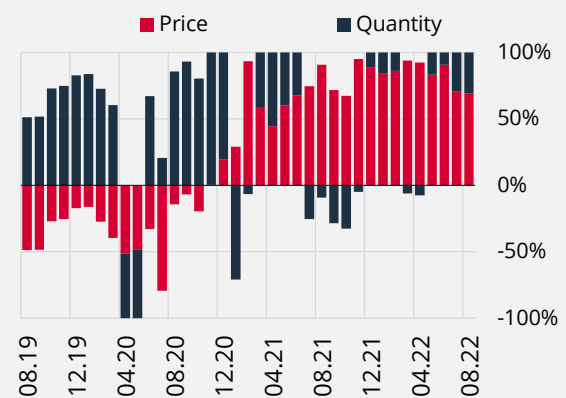
Energy and other commodity prices, which increased in the post-pandemic recovery process and reached high levels on the back of geopolitical developments in the first quarter of 2022, increased import prices more significantly than export prices and caused a decrease in the terms of trade. Although commodity prices have decreased recently, they have maintained their relatively high levels and the increase in the terms of trade remained limited. The low levels of external trade naturally drive the external trade deficit up (coverage ratios down) and may overshadow the developments in the real sector. In this context, it is important to examine the recent trends in exports and imports and to understand the real outlook in external trade.

Chart 3: Contributions to Annual Export Change



Source: TURKSTAT.

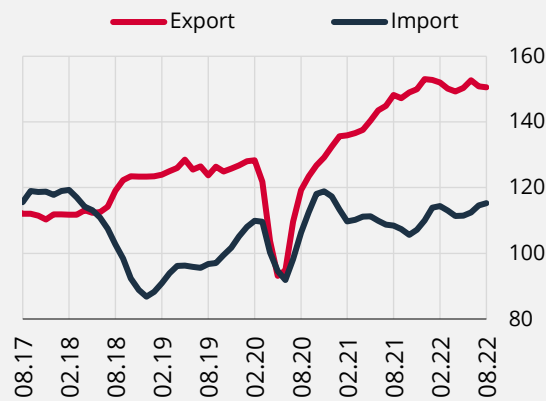
Chart 4: Contributions to Annual Import Change



Source: TURKSTAT.

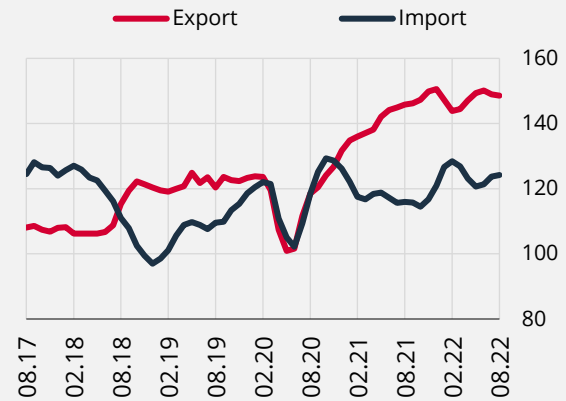
Charts 3 and 4 show the annual changes in Türkiye's exports and imports and the contributions of price and quantity indices to these changes. The contribution of price changes increases relatively, as the amount of exports, which recorded high annual growth rates in the post-pandemic period, converges to long-term growth rates in 2022. Annual increases in exports are driven by larger quantities, while increases in imports are driven mostly by changes in prices. Although the contribution of the amount of imports has been positive in the recent period, the weight of the price contribution in the annual growth of imports continues.

Chart 5: Export Import Indices (Seasonally Calender Adjusted, 3 Months Moving Average, 2015=100)



Source: CBRT, TURKSTAT.

Chart 6: Intermediate Goods Export Import Indices (Seasonally Calender Adjusted, 3 Months Moving Average, 2015=100)

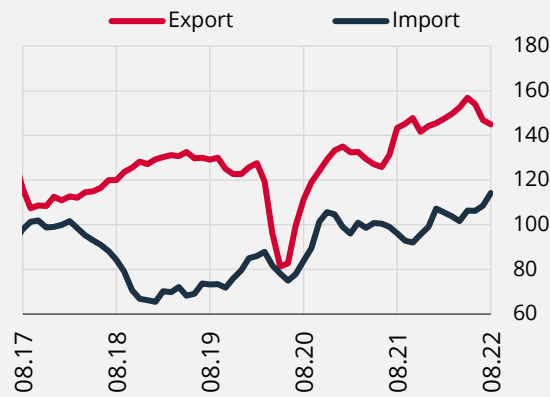


Source: CBRT, TURKSTAT.

Analyzing the real developments in external trade, it is noteworthy that there has been a significant real balancing process that started in the last months of 2020 and continued until the end of 2021 (Chart 5). In this period, the export quantity index displayed an uninterrupted upward trend with the effect of strong external demand, competitive price levels and the changing trade dynamics after the pandemic. The decreasing trend of the import quantity index in the same period indicates that, in addition to the strengthening of the import substitution tendency structurally, the domestic demand may have been met mostly by domestically produced products or partially with stocks. With the end of 2021, when normalization trends continued after the pandemic, the quantitative increase in exports shifted to a horizontal course as was observed in imports. However, the export amount is 16 percent higher as of August compared to February 2021, and 39 percent higher than January 2018.

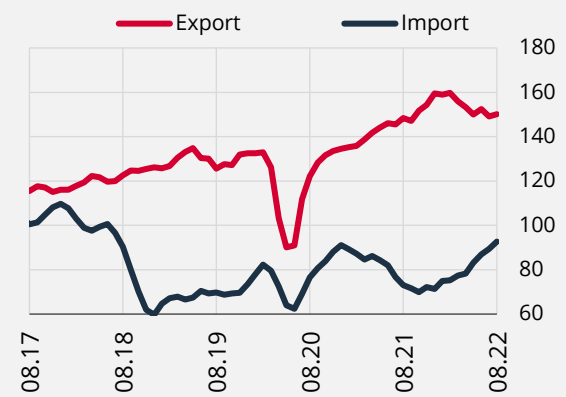
In the post-pandemic period, a structure similar to the total export and import balance is observed in the external trade of intermediate goods (Chart 6). In this item, the real stabilization that started after the pandemic continued until the last months of 2021, and ends with the loss of momentum in exports and the increase in imports. In the following months, real exports of intermediate goods increase again, while real imports decline and the balancing process starts again.

Chart 7: Investment Goods Export Import Indices (Seasonally Calendar Adjusted, 3 Months Moving Average, 2015=100)



Source: CBRT, TURKSTAT.

Chart 8: Consumption Goods Export Import Indices (Seasonally Calendar Adjusted, 3 Months Moving Average, 2015=100)



Source: CBRT, TURKSTAT.

Despite the ups and downs observed in the amount of imports of investment goods in the post-pandemic period in line with the increasing trend in machinery and equipment investments, it is observed that imports of investment goods generally increase, while the amount of exports also increases but has recently decreased in line with global investment expectations (Chart 7). Real stabilization is observed in investment goods in the period after June 2021 and continues until June 2022. On the consumer goods side, there is an uninterrupted real rebalancing until the end of 2021 (Chart 8). In the following periods, when normalization became widespread, the process was reversed and real deterioration was observed as the amount of exports decreased and the amount of imports increased. However, the import amount of consumption goods is 21 percent higher and the export amount is 25 percent higher compared to 2018.

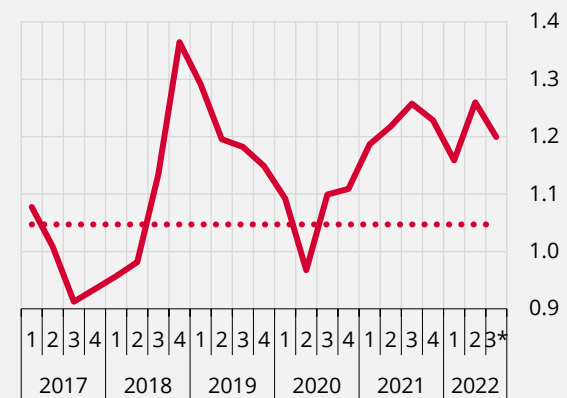
Chart 9: Exports Excluding Gold/Intermediate Goods Imports Excluding Gold and Energy (Seasonally Adjusted)



Source: CBRT, Ministry of Trade, TURKSTAT.

* September data is provisional. Dashed lines represent the historical average.

Chart 10: Exports Excluding Gold/Intermediate Goods Imports Excluding Gold and Energy (Seasonally Adjusted Quantity Index, 2015=1)



Source: CBRT, Ministry of Trade, TURKSTAT.

* Average of July and August. September data is provisional. Dashed lines represent the historical average.

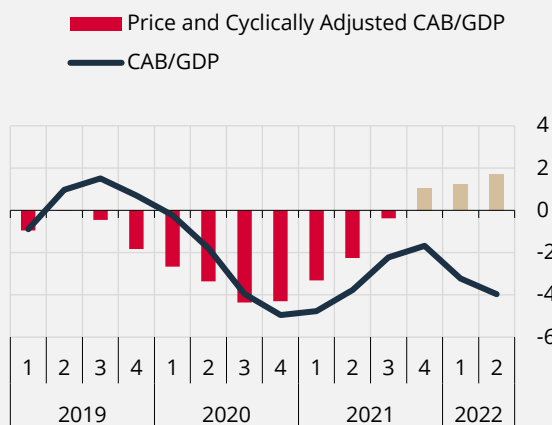
The ratio of exports to imports for intermediate inputs of companies has decreased since the third quarter of 2020, approaching the average of the last ten years before the pandemic. The high course of import prices of intermediate goods contributed to this decrease (Chart 9). As a matter of fact, when price effects are excluded, the aforementioned ratio increased significantly in the post-pandemic period and remained above 1 in the third quarter of 2022 (Chart 10). It is considered that the increase in the share of domestic product use in the use of intermediate inputs by companies may also have an impact on this increase.

Box 2.5

Recent Outlook for the Energy Market and Its Reflections on the Current Account Balance

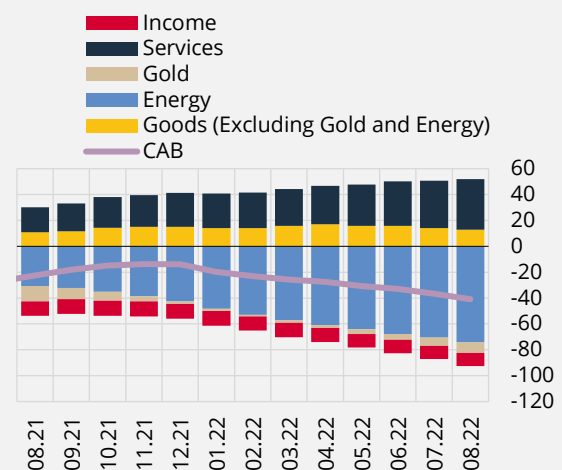
In order to be able to make more reliable and accurate assessments on the current account balance, it is important to identify the cyclical effects in the current account balance, which denote incidental effects such as foreign trade prices and fluctuations in economic activity, and focus on structural factors after eliminating these effects. As a matter of fact, in the last quarter of 2021, while the structural current account balance in the Turkish economy, adjusted for price and cyclical effects, moved into positive territory for the first time in history, it maintained this outlook in the following two quarters and posted a surplus in the first half of 2022 (Chart 1).¹ However, the rising energy import bill due to the supply-demand mismatch resulting from the pandemic and geopolitical risks has been overshadowing the current account balance outlook and becoming the most prominent factor driving the increase in the headline current account deficit (Chart 2). Against this background, this box analyzes the recent outlook for the energy market, which plays an important role in the current account balance, and examines the concordance between energy import prices and global energy commodity prices. In addition, it presents a discussion of upside and downside risks to energy prices as well as their possible implications in the upcoming period.

Chart 1: Cyclical Adjusted Current Account Balance (12-Month Cumulative, %)



Source: CBRT, TURKSTAT.

Chart 2: Current Account Balance Sub-Items (USD Billion, 12-Month Cumulative)



Source: CBRT.

According to the SITC Rev.4 classification, import unit value index (IUVI) consists of food, beverages and tobacco (food), crude materials except fuels (crude), fuels (fuel), manufactured goods excluding food, beverages and tobacco (manufactured), and commodities not classified elsewhere in the SITC (other). In this context, the sub-breakdowns of the general import unit value index with the coefficients of the regression results formed within the framework of Equation (1) are shown in Chart 3. Even though there is a significant decrease in the coefficient compared to the pre-pandemic period, the manufacturing subgroup has the most important share in the general index. While it is followed by the fuels group, a significant increase is observed in the coefficient of the food subgroup compared to the pre-pandemic period as a result of rise in global agricultural commodities' prices due to increasing drought, disruptions in the supply chain, global restrictions caused by the supply security and geopolitical risks. A more stable course is observed in crude materials and other items (Chart 3).

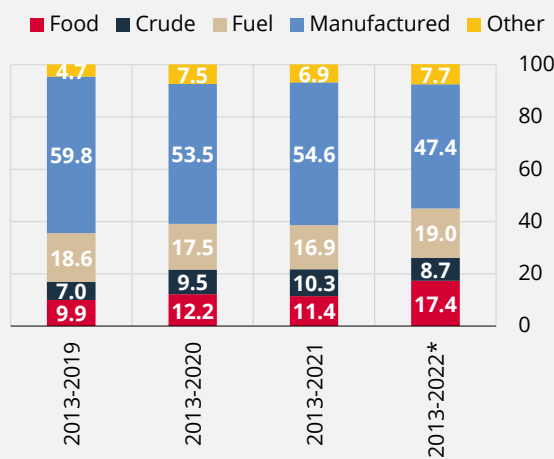
$$\ln(IUVI)_t = \alpha_1 \ln(Food)_t + \alpha_2 \ln(Crude)_t + \alpha_3 \ln(Fuel)_t + \alpha_4 \ln(Manufactured)_t + \alpha_5 \ln(Other)_t \quad (1)$$

¹ See Eren (2022) for further details.

If a similar procedure is applied to fuels and its sub-items in the framework of Equation (2), oil import prices have the highest share in energy import prices. The coefficient of the natural gas group increased compared to the pre-pandemic period and ranked second, while the coefficient of the coal group remained quite low compared to the other two energy commodity groups (Chart 4).

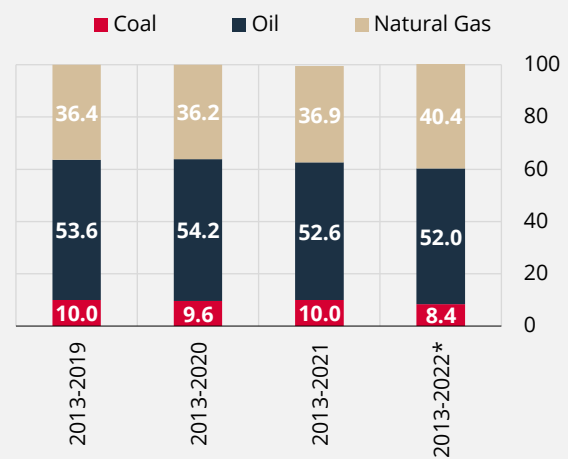
$$\ln(Fuel)_t = \beta_1 \ln(Coal)_t + \beta_2 \ln(Oil)_t + \beta_3 \ln(Natural\ Gas)_t \quad (2)$$

Chart 3: Coefficients of Sub-Breakdowns of Import Unit Value Index (%)



Source: TURKSTAT, author's calculations.
* Last Observation: August 2022.

Chart 4: Coefficients of Sub-Breakdowns of Energy Import Unit Value Index (%)



Sources: TURKSTAT, author's calculations.
* Last Observation: August 2022.

When the price changes of these sub-items over the last year are examined, it is observed that the import unit value index increased led by the fuels group, which includes energy commodities. While the import unit value index increased by 34.1% in the January-August 2022 period compared to the same period of the previous year; food increased by 20.7%, crude materials by 22.1% and other items by 20.0%. With the weakening in the global growth outlook, the increase in the manufacturing group remained more limited at 8.7%. On the other hand, the change in the import unit value index of the fuels group has considerably diverged from the change in other groups, increasing by 166% in a one-year period, and became a determinant item that pushed general import prices up. Against this background, it is important to examine the fuels group in their sub-fractions in order to better understand the outlook for the energy market and import prices.

Similarly, an examination of the fuels sub-items for the last year reveals that import unit value index of coal, which has a more limited share in import prices, increased by 89.3%. While the import unit value index of oil, one of the key determinants of energy import prices, increased by 63.0%, natural gas prices posted a more striking increase of 444.1%. When the course of imports is analyzed in terms of volume, there is a different outlook compared to price developments. While the general import volume index increased by 5%, an increase of more than 10% was observed in the food and manufacturing groups. While the volume index in the crude materials group followed a horizontal course, a significant increase was observed in the other item due to the increase in gold imports in the recent period. The volume index of the fuels item with the highest price increase decreased by 10.2% due to the decrease in natural gas imports (Table 1). In this context, while there is a decrease in energy imports in terms of volume, the current account balance is pulled down by the price cycle effect resulting from the fact that energy import prices, especially natural gas, are above their trends. Therefore, it is important to detect the determinants of energy commodity prices in order to understand the possible effects of energy prices on the current account balance in the upcoming period.

Table 1: Import Unit Value and Volume Indices (Year-on-Year % Change)

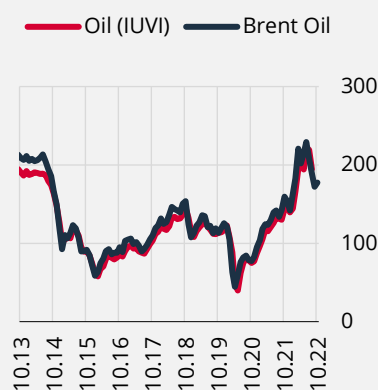
	2019		2020		2021		2022 January-August*	
	Unit Value	Volume	Unit Value	Volume	Unit Value	Volume	Unit Value	Volume
General	-4.1	-5.1	-6.2	10.7	23.3	0.7	34.1	5.0
Food-Beverages-Tobacco	-2.5	4.2	2.9	-5.8	16.9	-2.7	20.7	15.0
Crude materials except fuels	-9.8	-0.6	-5.1	11.4	48.6	5.5	22.1	0.3
Fuels	-4.3	-0.1	-30.8	-1.8	61.8	9.4	166.4	-10.2
Coal	-17.2	-2.6	-23.9	1.2	65.6	-2.6	89.3	19.2
Oil	-8.7	8.6	-32.8	-3.9	59.6	4.4	63.0	21.9
Natural Gas	9.3	-13.3	-28.0	3.1	62.1	13.8	441.1	-38.3
Manufactured goods except food, beverages and tobacco	-4.1	-7.6	-3.6	9.1	16.5	9.0	8.7	10.3
Commodities not classified elsewhere in SITC (Other)	5.2	-5.2	29.4	71.9	-14.2	-75.5	20.0	73.5

Source: TURKSTAT.

* Shows the percentage change between the average of January-August 2022 and the average of the same period of the previous year.

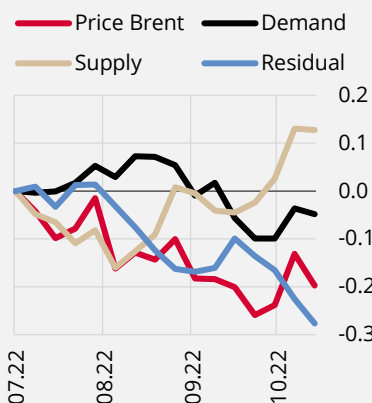
Oil import prices have historically been quite consistent with Brent oil prices per barrel (Chart 5). There is a nearly perfect correlation between the oil import unit value index and the price of Brent oil. Correlation analysis and graphical representation show that international oil prices are the drivers of imported oil prices. In this context, when the recent global oil prices are examined, it is seen that both supply and demand factors continue to be effective on prices. Although supply-side problems persist in the recent period, the tightening of international financial conditions and the strengthening of the dollar index as well as increasing concerns on global demand play a dominant role on oil prices. As a matter of fact, the price of Brent oil per barrel, which rose above USD 125 in June, dropped below USD 85 by the end of September. However, the latest OPEC+ decision to cut oil output by 2 million barrels per day as of November caused an increase in oil prices again. Increasing prices in the oil market reduce demand and allow supply to adapt, and prices may stabilize after a while. However, the recent plans of oil producers regarding supply indicate that the demand-driven downward movement in oil prices may be more limited compared to the previous reporting period (Chart 6). In summary, OPEC's below-capacity production decisions (Chart 7) as well as the decisions of OECD countries regarding the use of strategic reserves, and the future course of the global demand outlook continue to keep risks in both directions to oil prices alive.

Chart 5: Oil Import Unit Value Index (2015=100) and Brent Oil Price (2015=100)



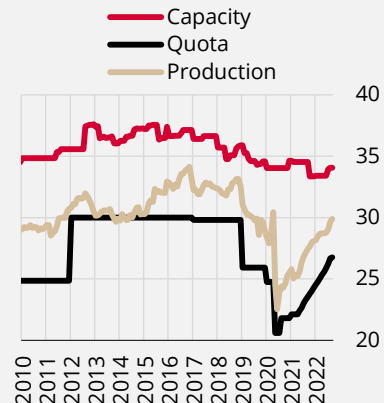
Source: Bloomberg, TURKSTAT.

Chart 6: Brent Crude Price Decomposition (July 2022=0)²



Source: New York Fed.

Chart 7: OPEC Capacity, Quota and Production Developments (Million Barrels)

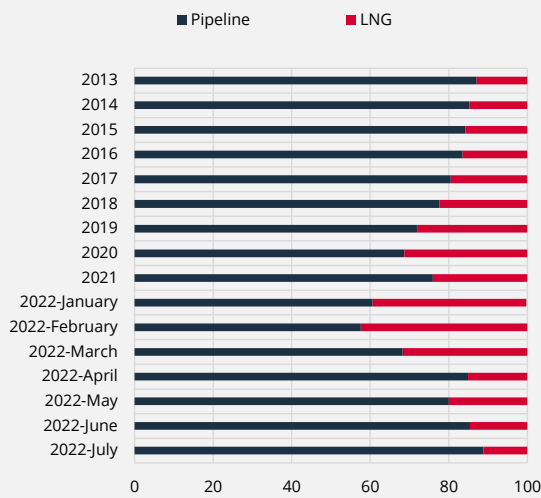


Source: Bloomberg.

² The report on oil prices published by the New York Fed is used to determine how much of the change in oil prices is due to supply and demand factors. The upward (downward) movement of the series implies that it plays an increasing (decreasing) role in oil prices. The series indicated as residual shows the portion of prices that cannot be explained by supply and demand factors.

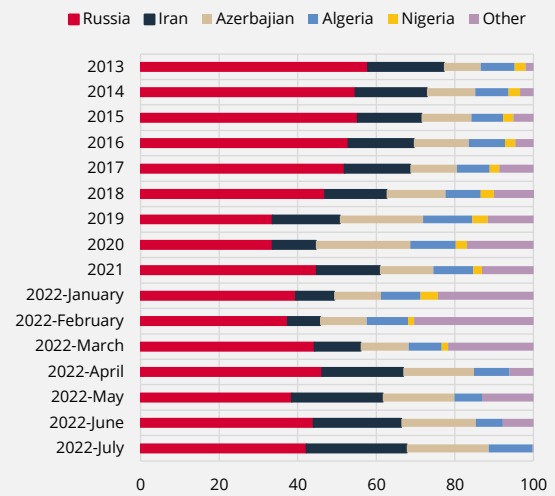
In order to diversify supply sources and increase supply security and flexibility in supply, natural gas is imported in two ways: through pipelines and liquefied natural gas (LNG). Although there are divergences in ratios according to periods, a significant deal of natural gas imports is made through pipelines. Although the share of natural gas imports by pipelines which fell to around 57% in February 2022, it recovered in the following months and rose to 89% as of July 2022 (Chart 8). There is also flexibility in natural gas imports on a country-by-country basis. Historically, the shares of natural gas imports made through pipelines from Russia, Iran and Azerbaijan within the scope of long-term natural gas purchase agreements were at their peak, while the share of natural gas imports made via the LNG channel also increased significantly from time to time, as in the February-March 2022 period (Chart 9).

Grafik 8: Import Shares by Natural Gas Type (%)



Source: EMRA.

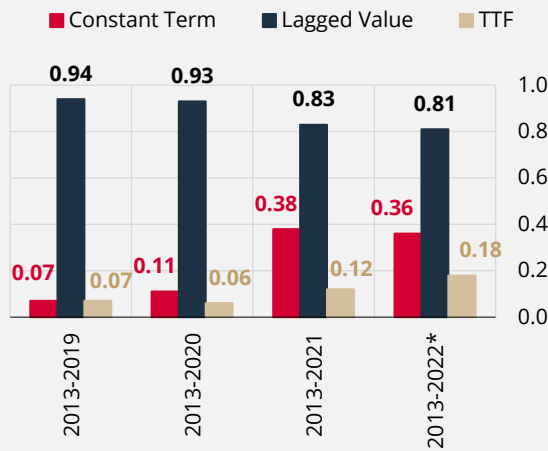
Chart 9: Natural Gas Import Shares by Countries (%)



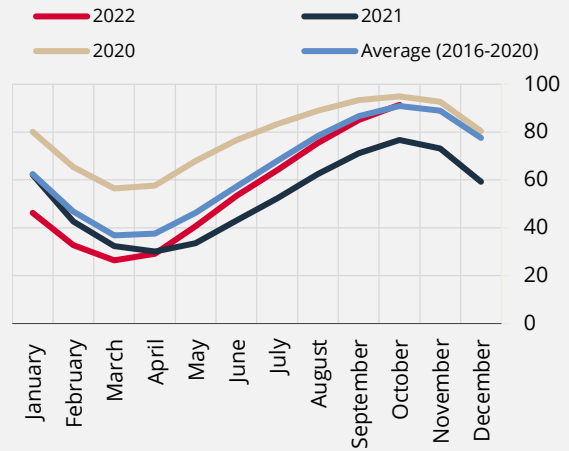
Source: EMRA.

In order to identify the determinants of the natural gas import unit value index, a model has been created using the constant term, lagged value and Netherlands-based 1-month natural gas prices (TTF), which are indicative for European natural gas prices. As mentioned before, since a significant portion of natural gas imports is made via pipelines within the scope of long-term agreements, the coefficient of lagged values of natural gas prices is quite high. However, this coefficient decreased gradually in the post-pandemic period and the TTF coefficient increased as a result of the adjustment of contract prices to spot market prices after a certain period of time and higher imports of natural gas from the spot market (Chart 10).

The recent outlook for the natural gas market suggests that the increase in risks regarding natural gas supply in the euro area due to the sanctions imposed on Russia caused a significant increase in the TTF during summer months. As a matter of fact, prices had increased by about 150% between August and May. However, after the European Union's natural gas stocks were considerably full, a retracement was observed in prices (Chart 11). It is considered that measures to increase energy efficiency, the amount of energy to be obtained from alternative energy sources, climatic conditions in winter, geopolitical risks, and the course of the level of natural gas stocks will play an important role in natural gas prices in the upcoming period. Accordingly, it has potential to become an energy distribution center with increase in local natural gas supply via natural gas reserves discovered in the Black Sea to be partially introduced to the system in 2023 and Türkiye's convergence to its geographical potential in global natural gas stock and distribution. These developments will create a strong base for both price and macroeconomic stability, not only through the stability in global and national energy prices to be ensured thanks to sounder price-setting, but also through the positive effects on our current account balance that will emerge from this channel.

Chart 10: Coefficients of the Natural Gas Import Unit Value Index Model³

Source: TURKSTAT, author's calculations.
* Last Observation: August 2022.

Chart 11: Natural Gas Inventories in European Union (%)

Source: AGSI+.

References

Eren, O. (2022). "Cyclically Adjusted Current Account Balance", CBRT Blog.

³ The coefficients are obtained from Equation (3) below. The coefficients in all four equations are statistically significant at the 1% level and the power of the models to explain the natural gas import unit value index (adjusted-R²) is 97%, 96%, 88% and 92%, respectively.

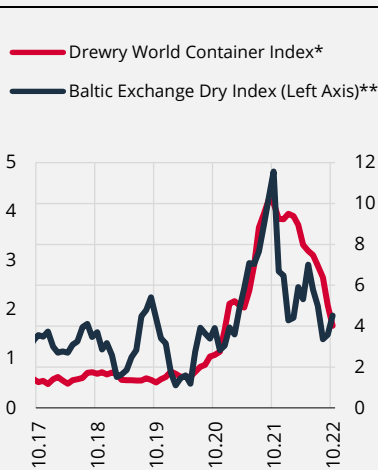
$$\ln(\text{Natural Gas Import Unit Value Index})_t = \text{Constant} + \gamma_1 \ln(\text{Natural Gas Import Unit Value Index})_{t-1} + \gamma_2 \ln(\text{TTF})_t \quad (3)$$

Box 2.6

Recent Outlook for Global Supply Constraints and Their Reflections

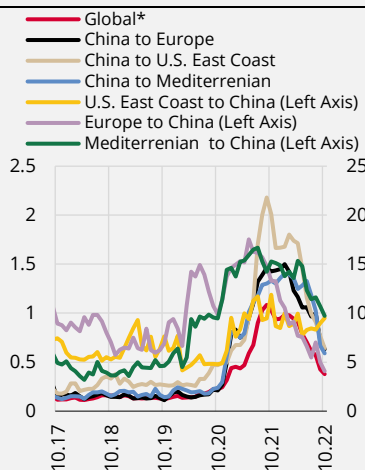
The disruptions in supply chains driven by the pandemic have been easing. Pandemic measures taken since the second half of 2020 led to problems in logistics networks, increased freight costs and delays in deliveries. With the spread of vaccination, the gradual removal of pandemic measures has increased global demand and trade, which caused transportation costs to reach historically high levels due to supply-demand mismatch. However, the recent period has seen a positive course in supply-side developments due to the effects of i) the implementation of measures such as increasing efficiency at ports and extending working hours to reduce supply bottlenecks, ii) the retreat of commodity prices, notably oil, and iii) the weakening of the global economic outlook. Thus, a remarkable downward movement is seen in the indicators regarding container and freight costs on a global scale (Chart 1). While the Drewry Container Index, which is a weighted composite indicator of container costs on various shipping routes, decreased by 57% as of October 2022 compared to the end of 2021, it has gradually been converging to its historical average. There is a similar outlook in the Baltic Dry Freight Index, which is another indicator for freight costs and shows the average transportation prices of raw material commodities such as coal, steel and grain to various routes. Besides, this situation in global transportation costs is widespread across routes rather than being specific to certain ones (Chart 2). As a result of all these developments, the global supply chain pressure index, constructed by the New York Fed using various transportation cost indices, air cargo prices and country-specific supply chain variables, has been improving rapidly after hitting its historical peak at the end of 2021, but it is still quite higher than the pre-pandemic levels (Chart 3). The positive course of suppliers' delivery times on a global scale compared to previous episodes and the decrease in backlogs support this outlook.

Chart 1: Drewry World Container Index (Thousand USD) and Baltic Exchange Dry Index (Thousand USD)



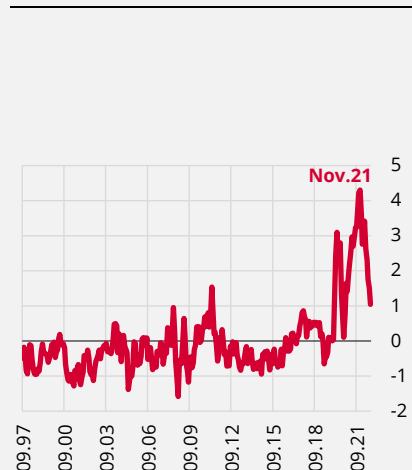
Source: Bloomberg.
 * The index is derived from the size-weighted average of container costs of eight shipping routes.
 **The index (January 1985=1000) shows the weighted average of Capesize (40%), Panamax (30%) and Supramax (30%) dry cargo freight forward contracts with an average maturity of approximately two months.

Chart 2: Freightos Baltic Container Index (Global and Selected Routes, Thousand USD)



Source: Bloomberg.
 * The global Freightos Baltic Container index shows the weighted average of the container (40 ft) index for 12 routes.

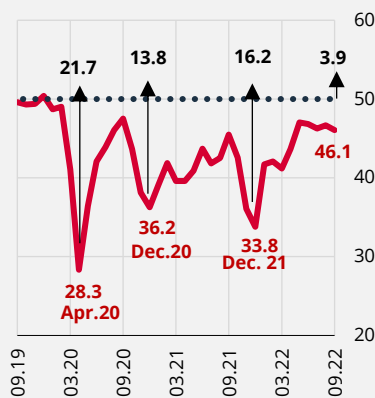
Chart 3: Global Supply Chain Pressure Index (Standard Deviations from Average Value)



Source: New York Fed.

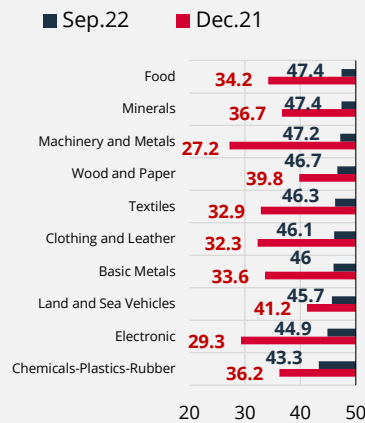
The outlook for the international supply chain firmly affects domestic supply developments. Although the pre-pandemic level has not yet been reached in the “PMI suppliers’ delivery times”, a positive course is observed compared to the previous year (Chart 4). The domestic sectoral effects of the delays in the supply chain suggest that the effects of the disruptions in the supply of raw materials and shipping issues, which were widespread throughout 2021 on the manufacturing industry, have eased as of 2022. Sectoral PMI indicators signal that despite being positive compared to last year, the supplier delivery times in sectors with high global integration and chip usage-related problems such as electrical-electronics and vehicles, and in those producing chemical-plastic-rubber products are still longer than other sectors (Chart 5). On the other hand, indicators imply that supply-side constraints have weakened in food, non-metallic mineral products, machinery and metal producing sectors, given their shorter delivery times.

Chart 4: PMI Suppliers’ Delivery Times (Seasonally Adjusted, Level) *



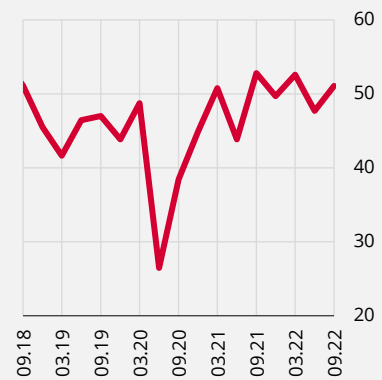
Source: IHS Markit.
* Lower values of the series indicate longer delivery times.

Chart 5: PMI Suppliers’ Delivery Times at Sectoral Level (Seasonally Adjusted, Level) *



Source: IHS Markit.
* Lower values of the series indicate longer delivery times.

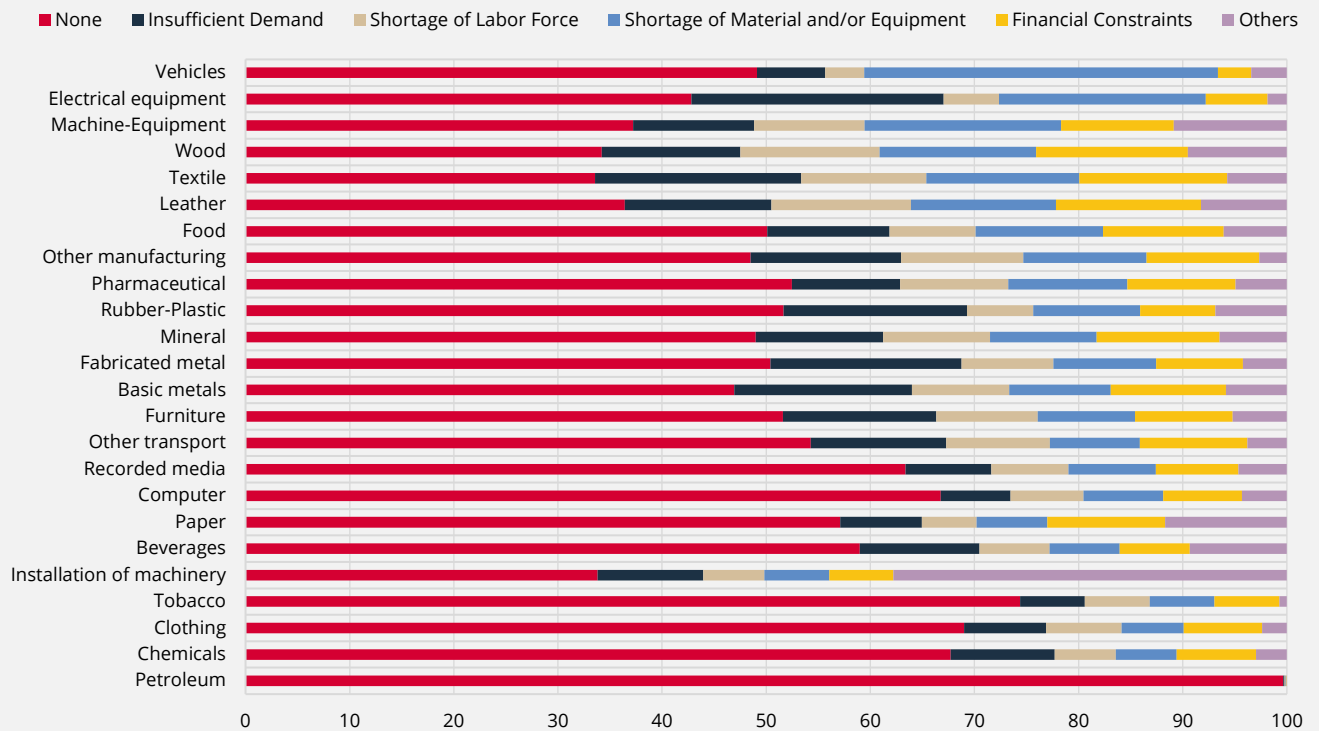
Chart 6: BTS The Ratio of Firms Reporting No Factor Limiting Production (Seasonally Adjusted, %)



Source: CBRT.

In the BTS, another indicator on the subject, the proportion of firms reporting that there was no factor limiting production in the third quarter of 2022 increased above the pre-pandemic level (Chart 6). Similar to what the aforementioned PMI indicators suggest, the sectors that refer most to the raw material and equipment shortage as the factors limiting their production, seem to be vehicle and electrical equipment producers (Chart 7). Lastly, the findings obtained from the CBRT’s face-to-face interviews with real sector companies also indicate that supply-side problems decreased in the third quarter compared to the first half of the year. This decline is due to the alleviation of problems both within the country and abroad, and the current ongoing supply bottlenecks seem to be mostly related to overseas. It is observed that overseas supply constraints are concentrated particularly in the automotive and electrical equipment sectors due to the Russia-Ukraine War as well as the lingering chip crisis albeit at a moderate magnitude.

Chart 7: Business Tendency Survey: Main Factors Limiting Production* (2022Q3, %)



Source: CBRT.

* Ranked based on the ratio of shortage of material and/or equipment.

Within the framework of the outlook outlined above, seven different models based on the VAR approach have been estimated to measure the impact of supply constraints on inflation caused by both commodity prices and PMI suppliers' delivery times. According to the findings based on historical decomposition analysis (average of seven variant models), the impact on annual consumer inflation arising from supply-side factors related to global commodity prices and delivery times, reached around 19 points in the July-August period of 2022, and retreated in September. In addition, analyzes indicate that unless there is an additional deterioration in the current outlook for global supply pressures, the impact of supply-side factors on consumer inflation will slow down in the last quarter after peaking in the third quarter.

3. Medium-Term Projections

3.1 Current State, Short-Term Outlook and Assumptions

Changes in Key Forecast Variables

Economic activity remained robust in the second quarter of 2022. Domestic demand conditions continued to support economic activity in this period. Accordingly, employment rose further and unemployment rates dropped. While the industrial and services sectors shaped economic activity in the second quarter, the construction sector had a limiting effect on growth. Output gap forecasts for the first half of 2022 were revised upwards, with the contribution of the strong demand for services thanks to the increase in tourism revenues and the increase in the number of visitors as well as the positive course of foreign demand (Table 3.1.1). In the third quarter of the year, leading indicators point to a loss of momentum in economic activity due to the slowdown in foreign demand.

Having ended the third quarter of 2022 at 83.45% and 74.63%, respectively, CPI and B-index inflation remained within the forecast range presented in the July Inflation Report. The third-quarter downtrend in non-energy commodity prices and international transportation costs helped alleviate supply constraints. The effects of the policy measures taken under the liraization strategy were more evident in this period, and the Turkish lira was one of the currencies that diverged positively by remaining relatively stable whereas many other currencies experienced significant depreciation amid the declining global risk appetite. Moreover, data for the third quarter point to a more moderate course in domestic demand. Thanks to macroprudential measures, credit growth has become more balanced as of the third quarter, and thus, the financing cost channel seems to function more efficiently. Hence, inflation was in line with the July Inflation Report projections (Table 3.1.1).

Table 3.1.1: Development of Main Forecast Variables*

	2022-II	2022-III
Output Gap (Percent)	1.2 (0.5)	0.6 (-0.1)
Consumer Inflation (Quarter-end, Annual Percentage Change)	78.6 (78.6)	83.45 (83.74)
B** Index Inflation (Quarter-end, Annual Percentage Change)	64.4 (64.4)	74.63 (76.1)

* Numbers in parentheses are from the July Inflation Report.

** B index is the CPI excluding unprocessed food, alcohol, tobacco, energy and gold.

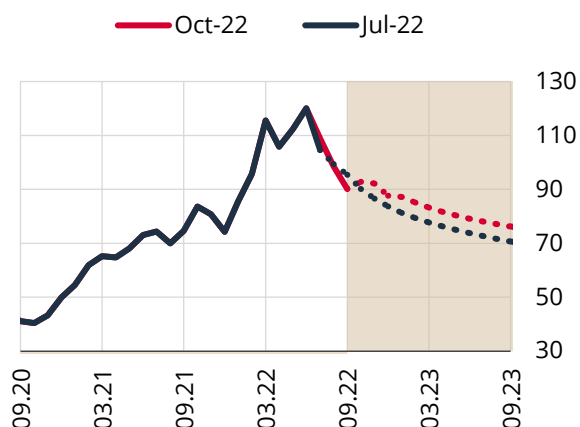
Assumptions of Exogenous Variables

The weakening effect of growing geopolitical risks and the tightening in global financial conditions on economic activity around the world continues. This outlook was shaped by high commodity prices caused by the conflict between Ukraine and Russia, supply chains and supply shocks dampening the trade volume as well as the course of the pandemic in China. On a global scale, despite the uncertainty led by geopolitical risks and financial conditions, global growth expectations for 2022 were slightly revised upwards compared to the previous reporting period with the realizations in year-end growth expectations across countries, mainly the euro area. On the other hand, elevated risks on energy supplies led by the energy crisis occupying the agenda in Europe coupled with tighter national monetary policies are estimated to lead to a sizeable deceleration in the global growth outlook for 2023. Thus, the export weighted global growth index, which reflects the external demand outlook of the Turkish economy, was revised significantly downwards for 2023 compared to the previous reporting period.

Major central banks underline that inflation may remain on the rise for a longer-than-expected period due to higher energy prices and supply-demand mismatch. The volatility accompanying currently high bond yields increased and the course of global financial conditions signal downside risks to portfolio flows to emerging economies. In fact, considering market pricing for the upcoming period, global financial conditions are assumed to be tighter compared to the July Inflation Report.

In line with the global demand outlook and global financial conditions, commodity prices decline from their record highs. However, commitments for sanctions against Russia coupled with the supply-limiting decisions taken by OPEC+ countries dominate the course of oil prices (Chart 3.1.1). Accordingly, assumptions for oil prices were revised upwards for 2022 and 2023. On the other hand, import prices increased to a limited extent due to the recent rise in agricultural commodity prices, which have receded upon favorable climatic conditions as well as the implementation of Black Sea Grain Initiative (Chart 3.1.2). Therefore, the assumption for the general import price level for 2022 was revised slightly upwards. On the other hand, in line with the global demand outlook, import prices for 2023 were revised downwards due to non-energy commodity prices (Table 3.1.2).

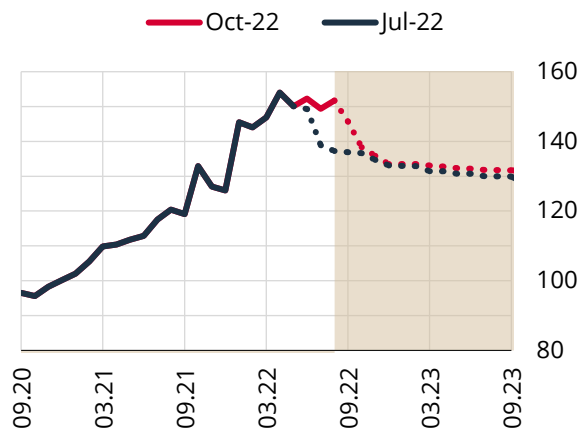
Chart 3.1.1: Revisions to Oil Price Assumptions* (USD/bbl)



Source: Bloomberg, CBRT.

* Shaded area denotes the forecast period.

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



Source: Bloomberg, CBRT..

* Shaded area denotes the forecast period.

Food prices assumptions were revised upwards for 2022 and downwards for 2023. Annual inflation in food and non-alcoholic beverages rose to 93.05% in the third quarter of 2022. This rise was caused by high agricultural commodity and energy prices, exchange rate developments, trade restrictions and supply constraints. It is assumed that food price inflation will remain high for a while in the upcoming period and will decline towards the end of the year, ending 2022 at 75.0%. Meanwhile, the assumption for 2023 was revised upwards due to the outlook for global food prices (Table 3.1.2)

Table 3.1.2: Revisions to Assumptions *

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

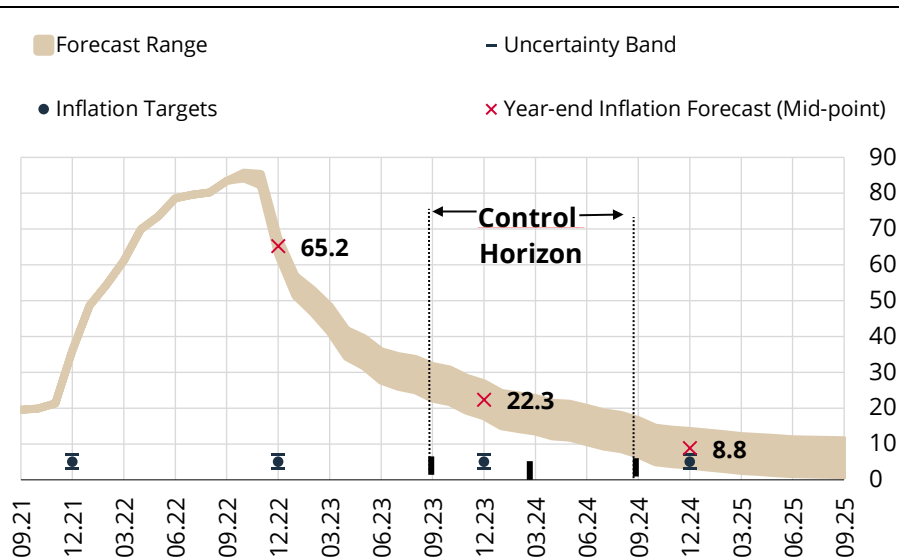
* Numbers in parentheses are from the July Inflation Report.

3.2 Medium-Term Outlook

The CBRT formulates monetary policy decisions with a medium-term perspective and prudent stance taking into consideration the analysis regarding the sources of risks to inflation, their permanence, and to what extent they can be controlled by monetary policy and mainly focusing on achieving lasting price stability.

Inflation is projected to be 65.2% at the end of 2022, to fall to 22.3% at the end of 2023, and to sustain the downward trend by receding to 8.8% by the end of 2024. The monetary policy stance is determined in line with the primary objective of achieving price stability and by focusing on continued production, the growth rate, composition and usage purposes of loans, components of the current account balance, and healthy pricing in the FX markets. Forecasts suggest that the underlying trend of inflation will decline gradually in 2023 and beyond. While creating the disinflation path implied by forecasts, it was assumed that commodity prices would gradually converge to their historical averages, and therefore, FX-denominated import prices would decline, thanks to the slowdown in global demand owing to the tightening of financial conditions. As for energy prices, a relatively high but moderate course is foreseen. Under these external conditions and underpinned by the stabilizing effects of macroprudential measures taken in the scope of the liraization strategy on loans and as a result of the policy mix implemented, it is expected that the potential supply would be supported via the financing cost channel and inflation expectations will also normalize pricing behaviors on the back of the stable course in the foreign exchange market achieved thanks to macroprudential measures and the improvement in inflation expectations. Accordingly, with a 70% probability, inflation is expected to be between 62.8% and 67.6% (with a mid-point of 65.2%) at end-2022, and between 17.7% and 26.9% (with a mid-point of 22.3%) at end-2023, and between 4.0% and 13.6% (with a mid-point of 8.8%) at end-2024 (Chart 3.2.1).

Chart 3.2.1: Inflation Forecasts* (%)



Source: CBRT, TURKSTAT.

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

Year-end inflation forecasts for end-2022 and end-2023 have been revised upwards compared to the previous reporting period (Chart 3.2.2). Persisting geopolitical risks and supply cut decisions taken by OPEC+ countries pose an upside risk for energy commodity prices. These developments led to a lower-than-expected decrease in energy commodity prices. Moreover, heightened inflation expectations continue to pose risks to the inflation outlook. Inflation forecasts were revised upwards due to the impact of these developments.

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

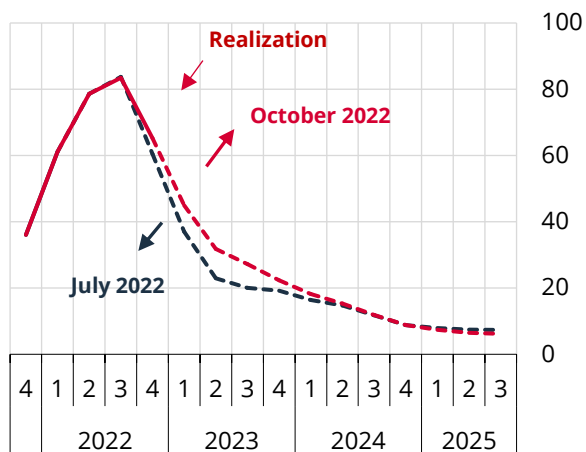
	2022	2023
2022-III (July 2022) Forecast (%)	60.4	19.2
2022-IV (October 2022) Forecast (%)	65.2	22.3
Forecast Revision as Compared to the 2022-III Period	+4.8	+3.1
Sources of Forecast Revisions (% Points)		
Turkish Lira-Denominated Import Prices (Including the Exchange Rate, Oil and Import Prices)	+2.2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

Source: CBRT.

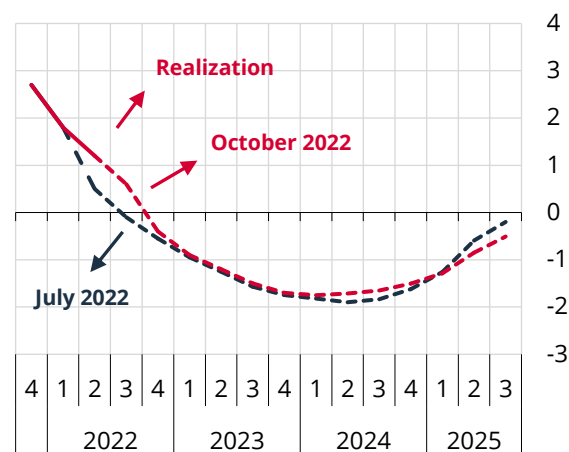
The year-end inflation forecast for 2022 was raised from 60.4% to 65.2%, up by 4.8 percentage points.

Compared to the previous reporting period, the update based on Turkish lira import prices increased the inflation forecast by 2.2 points, while the increase in the assumption for food prices contributed by an additional 0.9 points. Furthermore, administered prices pushed the year-end inflation forecast up by 0.6 points, mainly due to the increase in electricity and natural gas prices, while the revision in initial conditions to the underlying inflation trend caused a 0.9-point rise in the deviation from forecast (Table 3.2.1). In addition, the revised output gap drove the inflation forecast up by 0.2 points (Chart 3.2.3).

The year-end inflation forecast for 2023 was updated from 19.2% to 22.3%. The revision in TL-denominated import prices added 1.1 points to the forecast, while the deviation stemming from effects of the revision to initial conditions on inflation forecasts pushed the end-2023 inflation forecast up by 2.9 points. The update in the food prices assumption decreased the end-year inflation forecast by 0.9 points (Table 3.2.1).

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

Source: CBRT, TURKSTAT.

Chart 3.2.3: Output Gap Forecast (%)

Source: CBRT.

Forecasts are based on an outlook in which the weakness in the global economic activity is more evident, the rise in global inflation continues, and global financial conditions are tighter compared to the previous reporting period. Leading indicators show that the outlook for global economy has further weakened. Global growth forecasts for end-2022 were slightly revised upwards compared to the previous report period as actual growth rates, particularly in the euro area, were higher than expected. Whereas the

decelerating impact of geopolitical risks and risks concerning energy supply as well as uncertainties about global financial conditions on global economic activity have been growing stronger. For this reason, global growth forecasts for 2023, particularly for the euro area, have been revised downwards, and it is evaluated that global recession has become an important risk factor. In line with this outlook, international commodity prices are expected to decrease in the upcoming period. Moreover, the high course of global inflation is expected to continue, and financial conditions are expected to suppress global demand. Global uncertainties have brought about a significant decline in the global risk appetite in the current Report period.

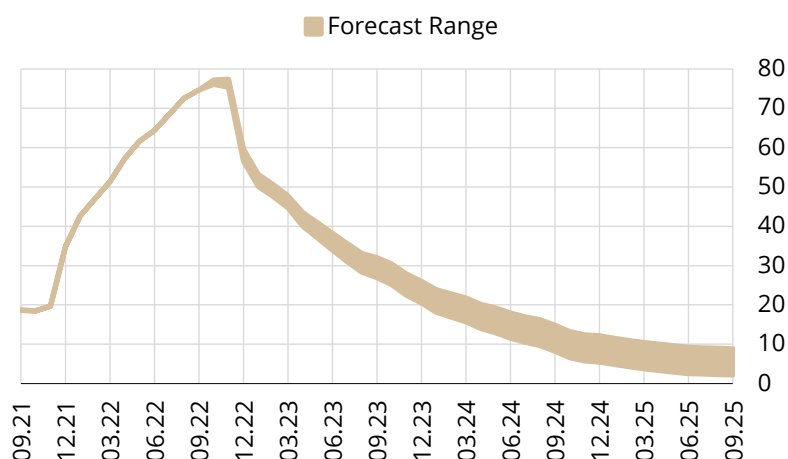
In the upcoming period, loan growth is expected to be more stable thanks to the macroprudential policy set reinforced by credit, collateral, and liquidity policy steps, whose evaluation processes have been completed. Based on the assumption that public finance developments are in line with the MTP forecasts and fiscal discipline is preserved, the ongoing stabilizing effects of macroprudential measures on credits are expected to support the recent improvement in pricing behavior. This support will be both supply-side and demand-side: supply-side via declining financing costs, and targeted loans, making sure that production continues and export capacity is maintained, and demand-side via ensuring healthy price formation in FX markets and limiting excessive consumption and import demand. In this framework, the growth rate of loans is expected to affect aggregate demand conditions in a way that is compatible with the supply potential of the economy. Once the effects of these factors on the disinflationary process through cost, supply-demand balance, current account balance and exchange rate stability become more evident, inflation expectations are expected to contribute more to the decrease in the underlying inflation trend.

Amid rising global uncertainties, it is important for monetary policy strategy that domestic financial conditions support the supply potential. Therefore, the use of loans extended with favorable conditions in targeted areas to boost investments that will increase production capacity, contributes to the strengthening of the supply potential. However, macroprudential measures were gradually increased to counter consumer and commercial loan growth which showed a sudden acceleration in the second quarter of 2022. In this context, on the back of the measures taken, loan growth started to normalize in the third quarter. Financing costs, which continued to decline owing to macroprudential measures reinforcing monetary transmission, will also contribute to the continuity of supply. The increase in the share of investment and export loans in corporate loans and a broader base achieved via targeted loans also support this channel.

The improvement in the current account balance facilitated by production and investment-oriented policies is expected to contribute to the continuation of the stable course in FX markets and the disinflation process. While the projected slowdown in foreign demand increases the risks to the current account balance, the moderate course of energy and commodity prices during the forecast period is expected to contribute positively to the current account balance, particularly in 2023. Meanwhile, increased export capacity, which was fueled by targeted loans encouraging production and investments in the medium term, supports the structural transformation observed in exports in the post-pandemic period. The stable course in the FX market is projected to continue on the back of the measures taken in the scope of the liraization strategy. Moreover, the projected slowdown in international energy and commodity prices is expected to contribute to the disinflation process through cost and current account balance channels.

The gradual decline in inflation expectations, which remain high, and in the underlying trend of inflation are expected to accelerate. It is observed that cost-based price pressures have tended to weaken as shocks to the economy such as exchange rates, commodity prices and supply constraints lost strength. With the measures taken, it is expected that the stable course in the exchange rates and credit markets and the improvement in the current account balance will contribute to the decrease in inflation through the expectation channel. The clearer the stabilizing effects of the policies on loans, the more positive their impact will become on the pricing behavior.

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

Chart 3.2.4: Annual Inflation Forecast for the B Index^{-*} (%)

Source: CBRT, TURKSTAT.

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

3.3. Key Risks to Inflation Forecasts and Possible Impact Channels

Macroeconomic risks may change the outlook on which the inflation forecasts are based, and the monetary stance is shared in detail in Section 1.3. Evaluations of the channels through which these risks may influence inflation forecasts are presented in Section 3.2 and the direction in which they may change the forecasts are summarized in Table 3.3.1.

Table 3.3.1: Key Risks

Cost Pressures

- Supply chain disruptions have waned recently, while the global demand outlook causes international commodity prices to follow a milder course. On the other hand, the possible supply shocks caused by the Russia-Ukraine war put upside pressures on inflation.

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

Uncertainties Regarding the Global Financial Markets and the Global Macroeconomic Outlook

- Global inflation remains high due to soaring energy prices, the supply-demand mismatch accompanied by rigidities in the labor market. The likelihood of a slower-than-expected decline in the core inflation trend in advanced economies puts pressure on financial conditions.
- In the current reporting period, the adverse course of the global risk appetite aggravates the volatility in financial markets. Moreover, in the upcoming period, the increased possibility of divergence in economic conditions and problems among advanced economies brings additional risks to global economic activity and financial conditions.

Tracked Indicators: Financing of the balance of payments, portfolio flows to stock and bond markets, bond yields and monetary policy stances of advanced economies, risk premium indicators, foreign exchange markets, dollarization indicators, global inflation indicators and expectations, the course of global monetary policies, demand and supply indicators for FX-protected deposits.

Geopolitical Risks and Economic Activity

- While concerns over energy commodity prices linked to the global demand outlook keep the downside risks brisk, persisting geopolitical risks as well as the supply-limiting measures taken by OPEC+ countries pose upside pressures. This leads to upside risks to inflation forecasts to remain in place.
- The pressure on commodity prices due to global recession expectations is expected to have a positive impact on inflation and the current account balance. However, the increase in the probability of a global recession makes the downside risks for foreign demand more pronounced compared to the previous Report period, posing a risk to the current account balance outlook.
- There are three factors that potentially balance the risks on the current account balance. The first one is the role that our country can play in regional energy distribution, as is the case in grain supply, and the rise in the share of domestic energy resources. The second is Türkiye's ability to substitute for probable energy-based production losses in Europe, as has been the case for a while, due to the supportive nature of the policy mix regarding the continuity of supply. The third factor is that in case of a deeper slowdown in global demand than anticipated, supportive effects on the current account balance emerge through domestic demand and global commodity prices.

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

Pricing Behavior and Inflation Expectations

- Inflation expectations and the underlying trend of inflation remain high, despite a recent decline. It is seen that shocks to the economy such as the exchange rate, commodity prices and supply constraints have recently lost strength. The effectiveness of the holistic policy mix against inflation, the frequency and magnitude of supply shocks as well as the extent of their spillover into the economy will shape this outlook. Despite the increasing disinflationary nature and coordination of policies in use, the ongoing effects of supply shocks on the economy creates upside risk to the forecasts.
- It is important for sustainable price stability that the growth rate of loans and the achieved financing resources meet with economic activity in accordance with their purpose. Sudden acceleration in loans poses an upside risk to inflation forecasts.

Tracked Indicators: Survey and market-based expectations for inflation and exchange rates, indicators for backward indexation, indicators for inflation uncertainty, financial volatility indicators, course of demand and growth components, loan and deposit developments, loan conditions.

Monetary, Fiscal and Financial Coordination

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

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

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