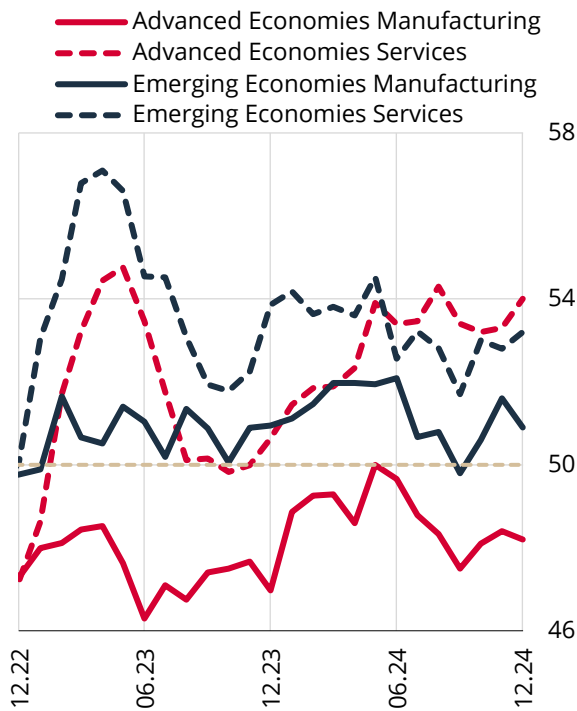


2. Economic Outlook

2.1 Global Economy

The limited improvement in the global growth outlook continues, while the divergence in advanced economies has become more evident. Leading indicators on global economic activity indicate that the relatively weak trajectory in the manufacturing industry persists, and the services sector stands as the main source of economic growth. The weak performance in the manufacturing industry is more apparent in the advanced economies group. Meanwhile, the services sector has maintained its favorable course in both advanced and emerging economies (Chart 2.1.1). The growth outlooks of Türkiye's trading partners vary; however, when compared to the previous reporting period, it is worth noting that their growth forecasts for 2025 have mostly been revised downwards (Table 2.1.1). The US economy continues to diverge favorably from the other large economies. The forecasts have been revised downwards for the euro area and upwards for the US. In China, while the growth forecast remains unchanged, the lower-than-expected monetary and fiscal expansion, deflationary concerns and the stronger protectionism in trade policies have led to increased uncertainty over economic activity. The global growth index weighted by the export shares of Türkiye's trading partners is projected to increase by 1.9% in 2024 and 2.2% in 2025. External demand is estimated to display a more favorable outlook in 2025 compared to last year. However, the recently heightened uncertainty over global economic and trade policies as well as geopolitical developments have amplified downside risks to global economic activity.

Chart 2.1.1: Global PMI Indices (Level)



Source: S&P Global.

Table 2.1.1: Growth Forecasts for Türkiye's Main Trading Partners* (%)

	2024 Forecast/ Realization	2025 Forecast		2026 Forecast	
		IR 2024-IV	IR 2025-I	IR 2024-IV	IR 2025-I
Euro Area	0.7	1.2	1.0	-	1.2
Germany	-0.2	0.7	0.4	-	1.0
USA	2.8	1.8	2.2	-	2.0
UK	0.8	1.3	1.2	-	1.4
Italy	0.5	0.9	0.7	-	0.9
Iraq	0.5	2.0	0.6	-	1.7
Spain	3.2	2.0	2.3	-	1.8
France	1.1	1.0	0.7	-	1.1
Netherlands	0.9	1.4	1.5	-	1.3
Israel	0.4	3.5	3.2	-	3.7
Russia	3.7	1.6	1.6	-	1.3
UAE	3.9	5.7	5.0	-	5.0
Romania	1.0	3.1	2.3	-	2.9
Belgium	1.0	1.3	1.1	-	1.4
Poland	2.7	3.7	3.4	-	3.3
Egypt	2.4	4.1	4.0	-	4.9
Bulgaria	2.2	2.9	2.7	-	2.7
China	5.0	4.4	4.4	-	4.1

Source: Consensus Economics, S&P Global.

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

The global growth outlook, supply-side factors, financial conditions and geopolitical risks continue to have a determining role on commodity prices. Commodity prices posted a broad-based increase compared to the previous reporting period. Recently, the US decision to impose sanctions against Russia and heightened uncertainty over global trade policies have increased the volatility in Brent oil prices. European natural gas prices rose by 28% compared to the previous reporting period due to the concerns over the security of supply stemming from geopolitical developments, higher storage and liquefied natural gas (LNG)

transportation costs, and expectations that the current climate conditions will boost demand. Meanwhile, the broad-based increase in commodity prices excluding energy, seen in the previous reporting period, continued, albeit at a more limited pace. On the other hand, industrial commodity prices fell due to the heightened deflation concerns in China and the weak global demand outlook. The increase recorded in the agricultural commodity index compared to the previous reporting period was mainly attributed to the rise in coffee and cocoa prices driven by the shrinking global supply due to climatic conditions, as well as the price rises in corn and soybeans (Table 2.1.2).

Table 2.1.2: Commodity Prices (%)

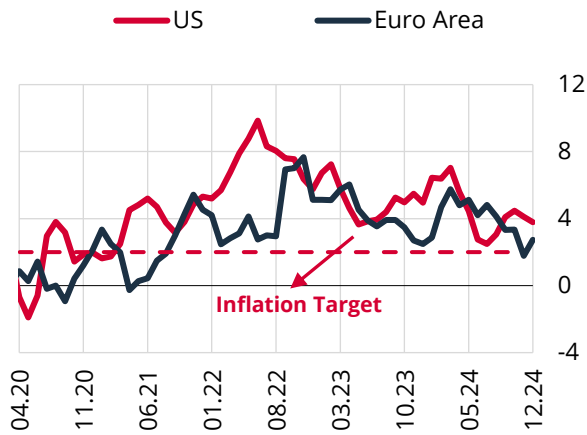
	October 2024	November 2024	December 2024	January 2025	Annual	Compared to the Previous Reporting Period*
Headline Commodity Index	3.5	-1.1	0.4	4.8	4.3	4.4
Energy	3.8	-1.7	0.1	6.9	-0.1	3.8
Agricultural Commodity	1.2	0.9	2.6	2.4	2.0	7.7
Industrial Metal	4.3	-3.1	-1.3	-0.1	9.0	-3.2
Precious Metal	4.5	-1.5	-0.5	2.8	33.9	4.6
Excl. Energy	3.0	-0.4	0.8	2.3	10.5	5.0
Brent Oil	1.8	-1.7	-0.8	7.1	-1.4	4.0
Natural Gas (USA)	7.6	16.1	14.7	8.6	36.4	14.1
Natural Gas (Europe)	11.4	10.6	1.3	7.4	61.9	28.0
Coal	3.8	-2.4	-8.4	-9.8	-9.0	-19.4
Aluminum	5.6	-0.6	-1.5	1.2	16.8	0.6
Copper	4.5	-5.4	-1.8	3.9	11.9	-0.6
Iron	14.1	-3.0	2.3	-4.2	-26.4	-1.7
Wheat	2.9	-5.8	-1.9	0.9	-9.3	-2.3
Soy	-1.0	-0.8	-1.2	4.6	-16.5	2.5
Rice	-1.5	-1.1	-1.7	-1.9	-18.0	-3.6
Corn	4.2	1.9	3.8	8.0	5.0	11.8
Cotton	1.2	-2.0	-0.7	-3.1	-18.1	-7.2
Sugar	8.4	-3.1	-6.2	-6.8	-15.8	-11.3

Source: Bloomberg.

* Denotes the percentage change in prices between January 31, 2025 and November 8, 2024. The colors red and green are used to indicate an increase and decrease in prices, respectively.

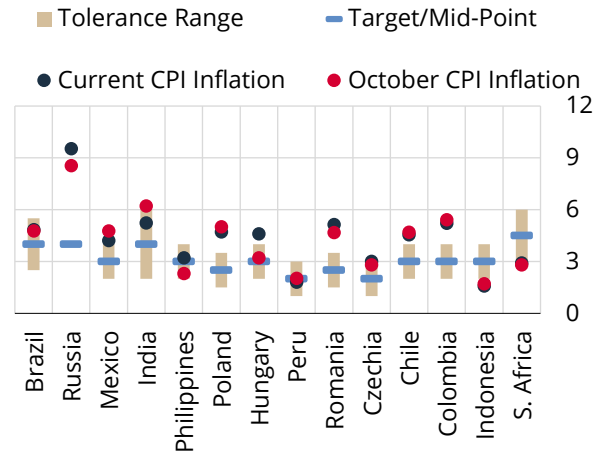
Global fiscal policy uncertainty and the possibility of stronger protectionism in trade policies increase upside risks to inflation for 2025. Recently, headline inflation in advanced economies has been driven up by food and energy prices. Despite the easing wage pressures, country-specific factors such as high rent inflation and relatively strong demand in the tourism-recreation sector have slowed the decline in services inflation. Annual inflation in the US and the euro area has recently edged up, while the underlying trend of services inflation has been volatile (Chart 2.1.2). Therefore, the US Federal Reserve (Fed) has placed a stronger emphasis on upside risks to inflation. On the other hand, the ongoing impact of core goods inflation on global disinflation is attributable to the normalization of supply conditions and the tight monetary policy stance. In addition to the impact of geopolitical developments and commodity price fluctuations, heightened uncertainty over fiscal and trade policies is a risk factor that may disrupt the favorable course of goods inflation. Once inflation receded to levels more in line with the targets, country-specific dynamics have gained greater importance. Accordingly, headline inflation in some EMEs recorded periodic increases and continued to remain outside the tolerance range (Chart 2.1.3).

Chart 2.1.2: Services Inflation in Advanced Economies (Annualized Three-Month Moving Average, Seasonally Adjusted, %)



Source: ECB, St. Louis Fed.

Chart 2.1.3: Consumer Inflation in Emerging Economies (Target, Tolerance Range and Realization, %)

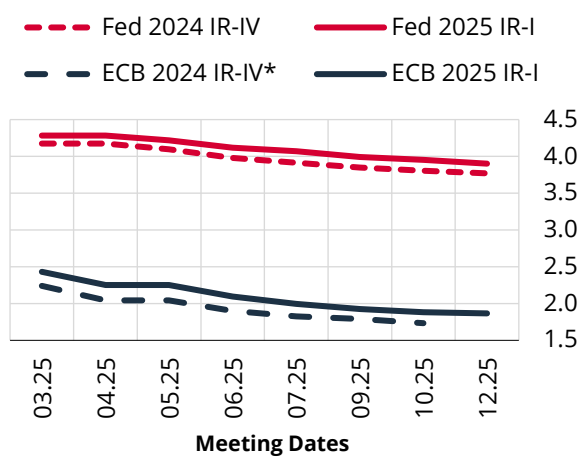


Source: Bloomberg.

As central banks continue to cut rates, market pricing indicates that the pace of further cuts will be more gradual than in the previous reporting period. The fact that inflation and growth outlooks differ based on country dynamics leads to diverging expectations regarding the timing and magnitude of rate cuts. The Fed initiated the policy rate cut process with a 50-basis-point reduction at its September meeting in 2024,

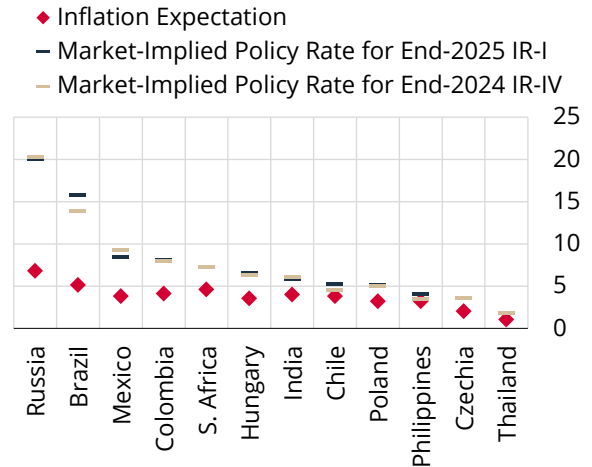
following up with rate cuts of 25 basis points each in November and December, and kept the policy rate unchanged at the end-January meeting. Meanwhile, median expectations of the Fed members in December were revised so as to indicate fewer rate cuts for 2025 compared to September's projections. In addition, the communication signaled a more cautious rate-cut path. The European Central Bank (ECB), on the other hand, continued to cut rates by 25 basis points at its December and January meetings. Moreover, the ECB signaled that the rate cuts may continue given its assessments on inflation and economic activity dynamics. Meanwhile, market pricing indicates a slower pace of rate cuts for both the Fed and the ECB compared to the previous reporting period. As of February 3, the amount of additional rate cuts priced until the end of 2025 is 42 basis points for the Fed and 80 basis points for the ECB (Chart 2.1.4). In the current reporting period, the Bank of England lowered its policy rate for the second time in 2024 by 25 basis points. The Bank of Sweden cut its policy rate by 25 basis points, and the Bank of Canada by a total of 75 basis points in two meetings, both continuing their rate cuts. On the other hand, the Bank of Japan raised its policy rate by 25 basis points at its January meeting, communicating that the rate hike process would continue if current projections materialize. Meanwhile, emerging market central banks maintained their cautious stance on rate cuts due to the slowing improvement in the inflation outlook and the global uncertainty. Bank Indonesia, the Central Bank of Colombia, the Central Reserve Bank of Peru, the Central Bank of the Philippines and the Central Bank of Chile continued rate cuts by 25 basis points each, while Banco de Mexico and the South African Reserve Bank cut policy rates by a total of 50 basis points in two meetings each. On the other hand, the Banco Central do Brasil, having revised its inflation forecasts upwards, continued to raise its policy rate by a total of 200 basis points in two meetings, while the Bank of Russia, which increased rates by a total of 500 basis points in 2024, kept its policy rate unchanged in December. China maintained its expansionary policy stance in order to alleviate concerns over deflation and achieve its 5% growth target. Heightened upside risks to inflation lead central banks to require a relatively tighter monetary policy. Accordingly, many emerging economies are pricing higher policy rates for end-2025 compared to the previous reporting period. Furthermore, the futures-implied policy rates and inflation expectations point to the continuation of policy rates being set above inflation rates (Chart 2.1.5).

Chart 2.1.4: Market-Implied Policy Rate Paths for 2025 (Effective, %)



Source: Bloomberg.
 * ECB policy rate pricing data used in the 2024 IR-IV covers the period until the ECB October 2025 meeting.

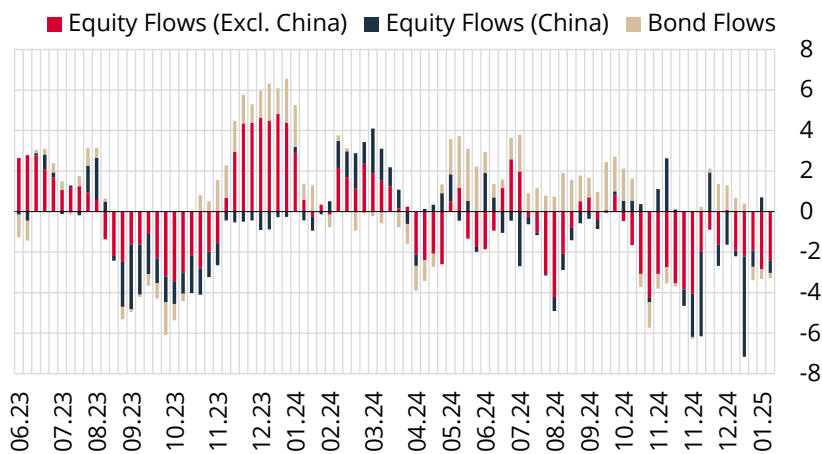
Chart 2.1.5: Futures-Implied Policy Rates and Inflation Expectations for End-2025* (% Points)



Source: Bloomberg.
 * Inflation expectations are from the Bloomberg Survey.

The rising global uncertainty and expectations of a slower pace of rate cuts by central banks in advanced economies have caused portfolio outflows from EMEs. Portfolio flows to emerging economies fluctuated throughout 2024. Moreover, the divergence in portfolio flows towards equity and bond-bill markets seen in previous periods continued in the current reporting period. Recently, portfolio outflows from equity markets have been stronger amid heightened global uncertainty. Between November 8, 2024 and January 31, 2025, outflows from equity markets excluding China amounted to USD 25.2 billion, while inflows to bond markets were USD 2.5 billion (Chart 2.1.6). In this period, due to the increasing uncertainty over China's growth and inflation outlook following the US elections, outflows from equity markets totaled USD 20.2 billion. In the upcoming period, developments regarding the global economy and trade policies, the inflation outlook and the expectations regarding the monetary policies of central banks of advanced economies are expected to shape portfolio flows.

Chart 2.1.6: Portfolio Flows to Emerging Economies (Four-Week Moving Average, USD Billion)



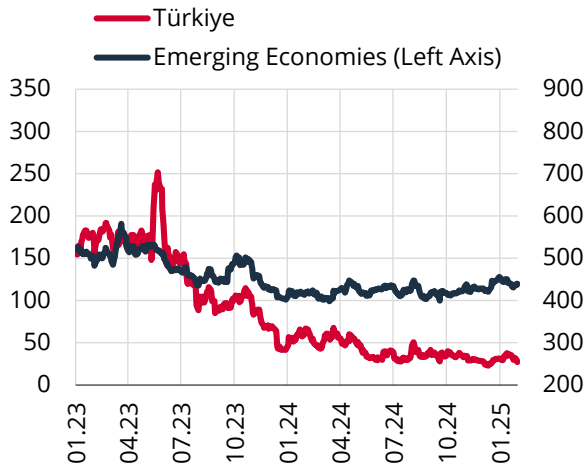
Source: IIF.

2.2 Financial Conditions

Mounting uncertainties over global economic and trade policies coupled with expectations for more cautious rate cuts by advanced economies in response weakened global risk sentiment, which had signaled a recovery. In view of the diminishing risk appetite for emerging market economies, while emerging market risk premiums increased, Türkiye's CDS premium posted a more limited worsening and

stood at 255 basis points as of January 31 (Chart 2.2.1). The volatility in risk appetite during the current reporting period resulted in outflows from emerging market assets. On the other hand, Türkiye witnessed portfolio inflows totaling USD 4.27 billion, comprising net inflows of USD 4.18 billion in the Government Domestic Debt Securities (GDDS) market and USD 0.1 billion in the equity market (Chart 2.2.2).

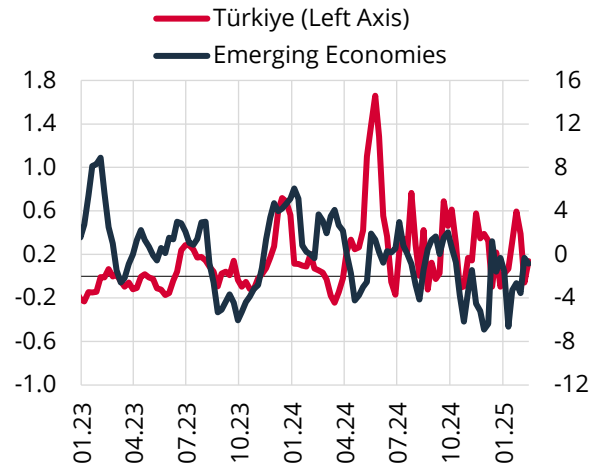
Chart 2.2.1: CDS Premium in Türkiye and Emerging Economies* (Five-Year, Basis Points)



Source: Bloomberg.

* Emerging economies include Brazil, Indonesia, the Philippines, South Africa Colombia, Malaysia, Mexico, and Chile.

Chart 2.2.2: Portfolio Flows to Türkiye* and Emerging Economies (Four-Week Average, USD Billion)

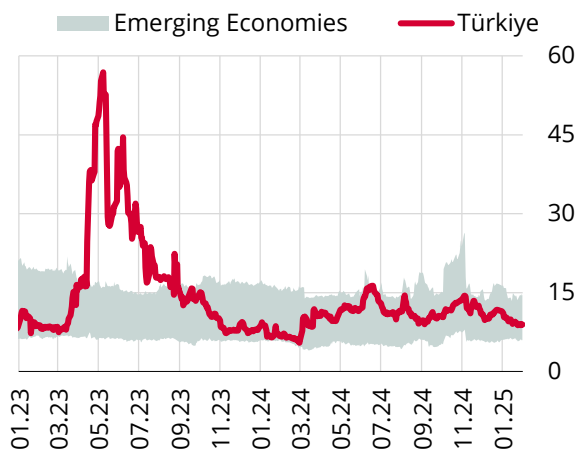


Source CBRT, IIF.

* Data for Türkiye includes portfolio flows to equity and GDDS markets. Repo is excluded from the GDDS data.

The implied volatility of the Turkish lira posted a decline. Exchange rate volatility, which trended upwards in the previous reporting period amid the deterioration in global risk sentiment, improved in the current reporting period in light of domestic developments. While the global risk appetite remained weak and volatile, better inflation expectations boosted the positive divergence that the Turkish lira recorded. Accordingly, the implied exchange rate volatility of the Turkish lira dropped to 8.9% for one month and to 18% for 12 months (Charts 2.2.3 and 2.2.4). The difference between short-term and long-term volatilities indicates that the policies in effect still have an impact on exchange rate stability, yet long-term risks persist.

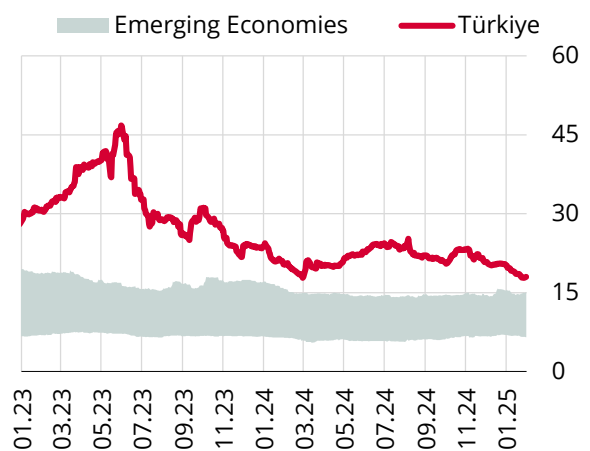
Chart 2.2.3: Implied Volatility of FX Options* (Against USD, One-Month Maturity, %)



Source: Bloomberg.

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

Chart 2.2.4: Implied Volatility of FX Options* (Against USD, 12-Month Maturity, %)

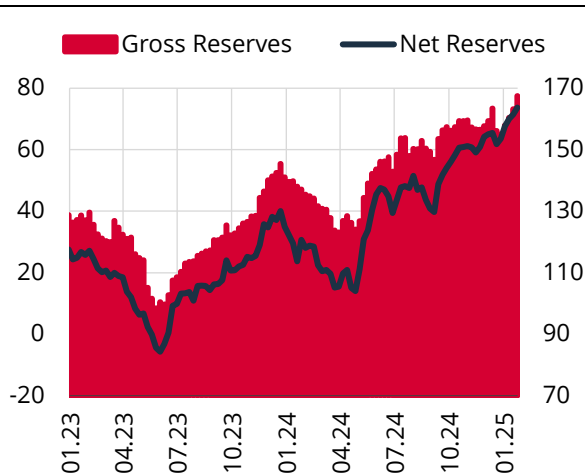


Source: Bloomberg.

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

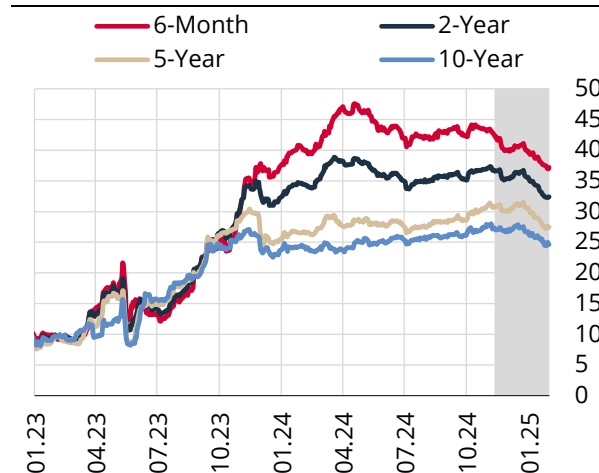
The strong upward trend in CBRT reserves continues, and the reserve composition has improved significantly. CBRT gross international reserves remained on the increase and reached USD 167.6 billion as of January 24 (Chart 2.2.5). This uptrend in reserves was recorded in a period of weaker global risk appetite, while the improvement in reserve composition became more apparent. In the same period, net international reserves surged by around USD 12 billion to USD 73.7 billion. As part of the diversification of sterilization instruments, the balance of sell-side FX and gold swap transactions rose further in the same period and reached USD 11.6 billion.

Chart 2.2.5: CBRT's Gross International Reserves (Weekly, USD Billion)



Source: CBRT.

Chart 2.2.6: GDDS Yields (%)

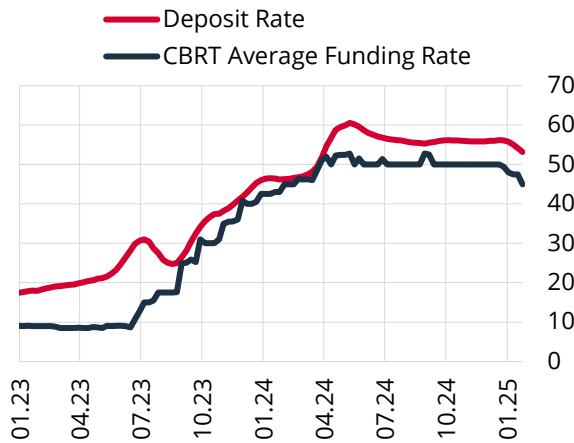


Source: Bloomberg.

GDDS yields recorded a decline. GDDS yields are still shaped by this market's attractiveness to domestic and foreign investors. Following the policy rate cut at the December MPC meeting and the December inflation realization, GDDS yields declined notably, with a sharper fall in short maturities (Chart 2.2.6). As the disinflation process continues and there is greater evidence of budget discipline, the GDDS market is likely to attract more investors and long-term bond yields are expected to register a more evident decline.

Financial conditions remain tight. The tight monetary policy stance and macroprudential measures that support the transition towards Turkish lira deposits helped keep Turkish lira deposit rates on a flat path since the second quarter of 2024. Following the policy rate cut of 250 basis points in December, deposit rates posted a decline similar to that in the policy rate. As of January 24, 2025, Turkish lira deposit rates stood at 51.8% (Chart 2.2.7). Despite the flat course of TL deposit rates until the policy rate cut, Turkish lira commercial loan and personal loan rates started to fall modestly after the second quarter of 2024. This is attributed to banks' desire to meet the loan demand and support their profitability by extending loans at relatively higher interest rates before the start of rate cuts. However, as of January 24, real interest rates on Turkish lira commercial and personal loans were positive according to both expected and actual inflation. After the policy rate cut, the decline in Turkish lira commercial and personal loan rates was more limited compared to Turkish lira deposit rates. As of January 24, TL commercial loan and personal loan rates were 54.4% and 67.1%, respectively. Having followed a rather flat course due to their long-term nature, housing loan rates were 40.5%, and, with fluctuations caused by campaigns, vehicle loan rates stood at 40.0% as of January 24 (Chart 2.2.8, Chart 2.4.1 and Chart 2.4.9).

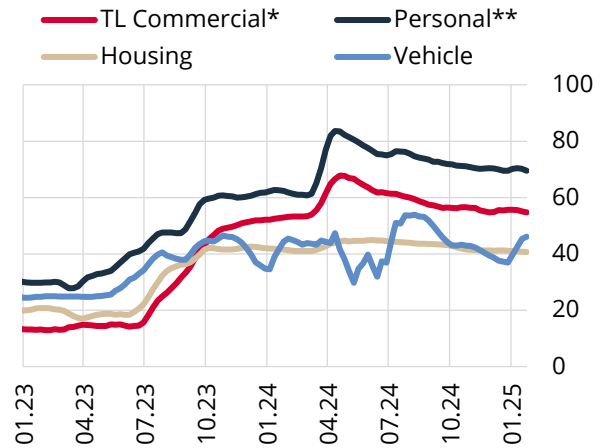
Chart 2.2.7: Turkish Lira Funding Rates*
(Four-Week Moving Average, %)



Source: CBRT.

* Deposit rate is compound interest rate, while CBRT average funding rate is simple interest rate.

Chart 2.2.8: Loan Rates (Flow, Four-Week Moving Average, %)

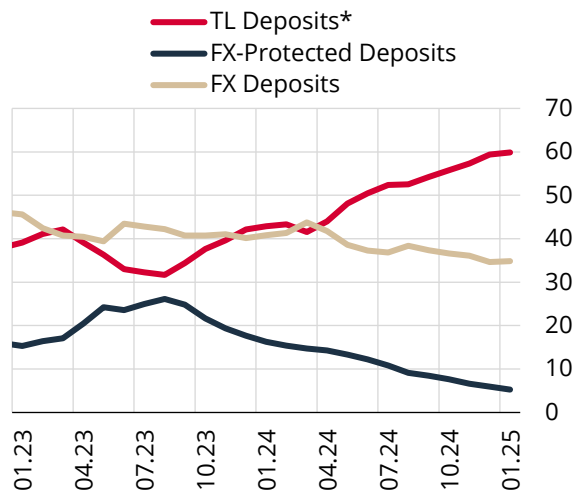


Source: CBRT.

* Excluding overdraft accounts and credit cards.
** Excluding overdraft accounts.

In banks' deposit composition, the share of FX-protected deposits decreased, while the share of Turkish lira deposits rose further. The tight monetary policy stance and macroprudential measures supporting Turkish lira deposits helped the share of Turkish lira deposits reach 59.4% and exceed the 50% target for end-2024. As of January 24, the share of Turkish lira in banks' deposit composition stood at 59.9%, while the share of FX-protected accounts in total deposits dropped further to 5.3% (Charts 2.2.9 and 2.2.10). To support the decline in the KKM balance, the total target for KKM accounts' transition to TRY and renewals was reduced from 75% to 70% on November 22, 2024 and from 70% to 60% on December 20, 2024. Moreover, with the press release of December 20, 2024, the minimum interest rate applicable to KKM accounts was reduced from 70% to 50% of the policy rate. Meanwhile, the remuneration of reserve requirements maintained for KKM accounts has been terminated for new KKM accounts or for those to be renewed. These measures aimed to reduce the attractiveness of the KKM for the banking sector and depositors. In the Monetary Policy Text for 2025, it was stated that the CBRT plans to terminate the KKM facility in 2025. In line with this, on January 20, the CBRT decided to terminate the opening and renewal of FX-protected deposit and participation accounts -converted from FX and gold- with maturities of six months and 12 months as of that date.

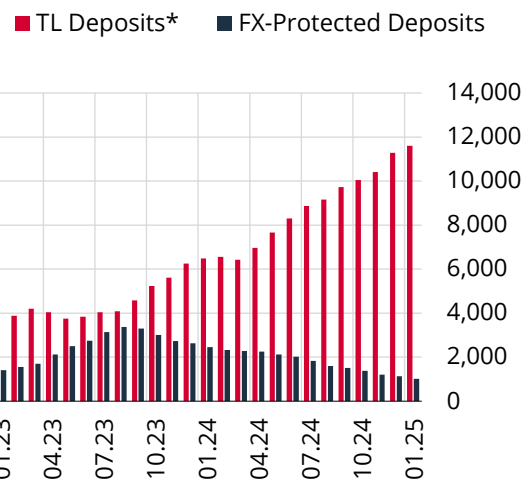
Chart 2.2.9: Deposit Composition (% Share)



Source: CBRT.

* TL deposits exclude KKM and FX-protected deposit accounts converted from FX (DDM).

Chart 2.2.10: Turkish Lira Deposit Composition (TRY Billion)



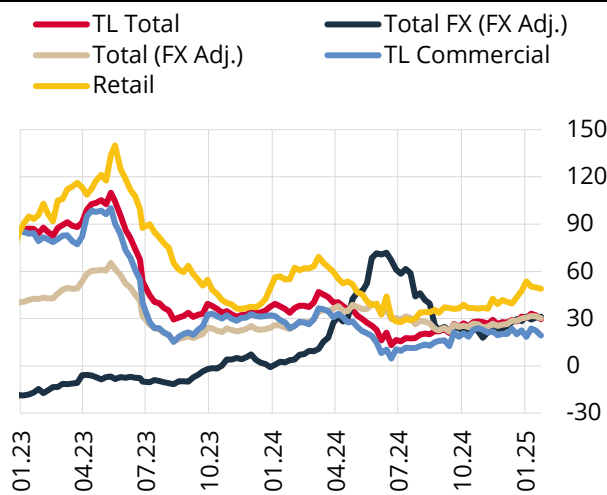
Source: CBRT.

* Data for Turkish lira deposits excludes KKM and DDM.

FX-adjusted total commercial loan growth remains moderate. Despite banks' appetite for lending, Turkish lira commercial loan growth remains relatively weak. As of January 24, the 13-week annualized growth in Turkish lira commercial loans stood at 19.3%, slightly below the path implied by the 2% monthly growth limit for restricted loans. On the other hand, FX loan growth, which started to decelerate after the 2% growth limit introduced in May 2024 was lowered to 1.5% in July, accelerated slightly in the current reporting period. The 13-week annualized growth in FX-adjusted FX loans stood at 31.3% as of January 24, above the path implied by the limit set for restricted loans. The FX-adjusted 13-week annualized growth in total commercial loans remained almost flat in the current reporting period and stood at 25.0% as of January 24 (Chart 2.2.11). To ensure that loan growth and composition remain in line with the disinflation path, the monthly growth limit for FX commercial loans was reduced from 1.5% to 1% on 4 January 2025 while the 2% monthly growth limit for Turkish lira commercial loans was differentiated as 2.5% for SME loans and 1.5% for other commercial loans. Additionally, it was decided to exempt Turkish lira SME loans extended through KOSGEB or in the scope of funding provided by international development finance institutions to support sustainability from the loan growth limit. These decisions aimed to slow down FX loan growth and support Turkish lira financing of SMEs.

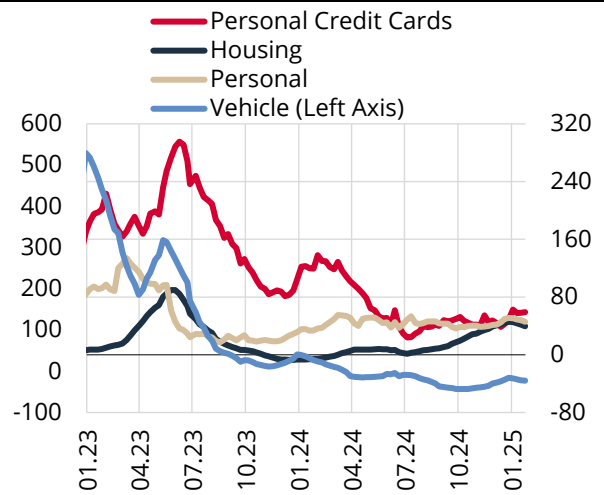
Retail loan growth accelerated slightly. The 13-week annualized growth in retail loans rose to 49.0% as of January 24, driven by growth in personal credit cards, housing loans and overdraft accounts, which were exempted from loan growth constraints in the current reporting period. The acceleration in retail loan growth is also attributed to banks' appetite for lending due to the year-end balance sheet period. The 13-week annualized growth rates of personal credit cards and housing loans reached 59.0% and 39.8%, respectively. The acceleration in housing loan growth is attributed to households' increased demand for housing loans amid the decline in the house price/rent ratio and banks' willingness to extend long-term loans. The growth in personal credit card balances was driven by the strengthened payment function of cards since the pandemic and the ability to pay in installments, which offers an alternative lending feature to personal loans with growth limits. In addition, year-end discount campaigns have also recently given a push to personal credit cards. The 13-week annualized growth in personal loans rose slightly during the current reporting period and reached 45.6% as of January 24, 2025. Although the growth in personal loans excluding overdraft accounts lags behind the 2% growth limit, overdraft accounts have a significant impact on personal loan growth. The share of overdraft accounts within personal loans increased from 28.2% to 31.2% in the current reporting period. The 13-week annualized growth in vehicle loans has been in the negative territory since March (Chart 2.2.12).

Chart 2.2.11: Loan Growth (13-Week Annualized, FX Adjusted, %)



Source: CBRT.

Chart 2.2.12: Retail Loan Growth (13-Week Annualized, %)

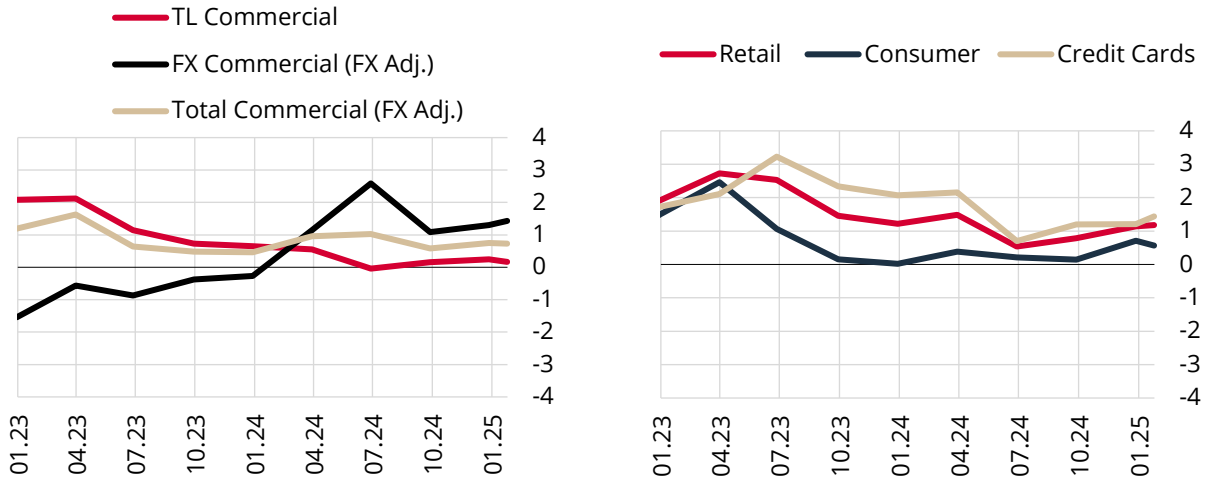


Source: CBRT.

Real credit utilization is above long-term averages. Turkish lira commercial loan changes in real and standardized terms have remained close to long-term averages since the second half of 2024. On the other hand, standardized and FX-adjusted FX commercial loan changes in real terms still hover above the long-term average, despite some deceleration amid the loan growth limits that were introduced in May 2024 and tightened in July 2024. With the decision to lower the monthly growth limit from 1.5% to 1%, FX loan growth is expected to converge to the long-term average in the upcoming period. Due to FX commercial loans, total

standardized commercial loan changes in FX-adjusted and real terms also hover above the long-term average. Changes in real and standardized terms edged up in the current reporting period and exceeded their long-term averages for consumer loans, while those for personal credit cards remained above their long-term averages (Chart 2.2.13).

Chart 2.2.13: Credit Change* (13-Week Average, Real, Standardized Value)



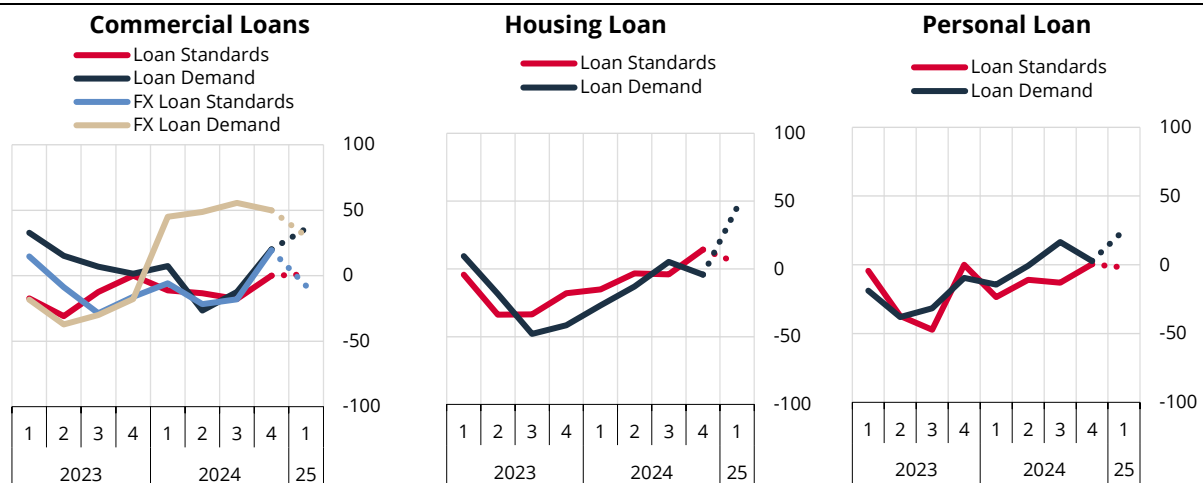
Source: CBRT.

Source: CBRT.

* Series are deflated by CPI. The mean and standard deviations of the series are calculated based on the 2006-2019 period. The 13-week average is taken after real weekly changes in loan stock balances are standardized. Consumer loans are composed of housing, vehicle and personal loans, while retail loans are the sum of consumer loans and personal credit cards.

According to the Bank Loans Tendency Survey (BLTS), both corporate and retail loan demand are expected to increase in the first quarter of 2025. Banks anticipate no significant change in Turkish lira commercial loan standards in the first quarter of 2025 compared to the previous quarter, yet an increase in Turkish lira commercial loan demand. As for FX commercial loans, the CBRT expects that FX commercial loan standards will tighten in the first quarter due to the lowering of the loan growth limit to 1% on January 4, but firms' demand for FX loans will continue. In the first quarter of the year, it is expected that the easing in housing loan standards will continue, while personal loan standards will tighten only slightly, whereas demand for both types of loans will increase (Chart 2.2.14).

Chart 2.2.14: Loan Standards and Loan Demand*



Source: BLTS.

Source: BLTS.

Source: BLTS.

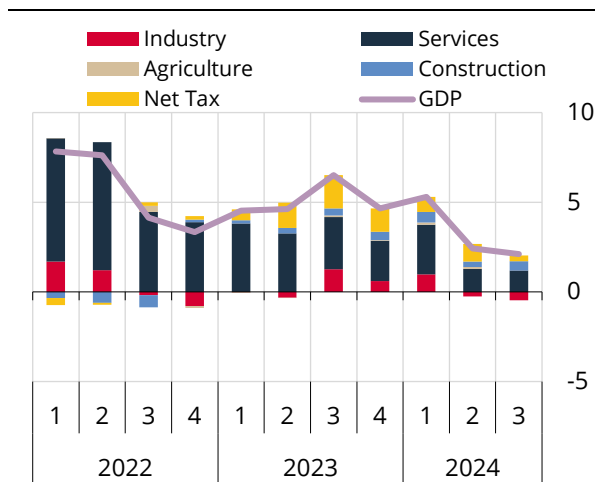
* Denotes banks' expectations. Loan standards and loan demand are calculated as follows: Banks are asked how their loan standards (loan demand) have changed in the past three months. Net trends, which are calculated using percentages of responses, show the direction of change in loan standards (loan demand). An index above zero indicates easing in loan standards (increase in loan demand).

2.3 Economic Activity

Supply and Demand Developments

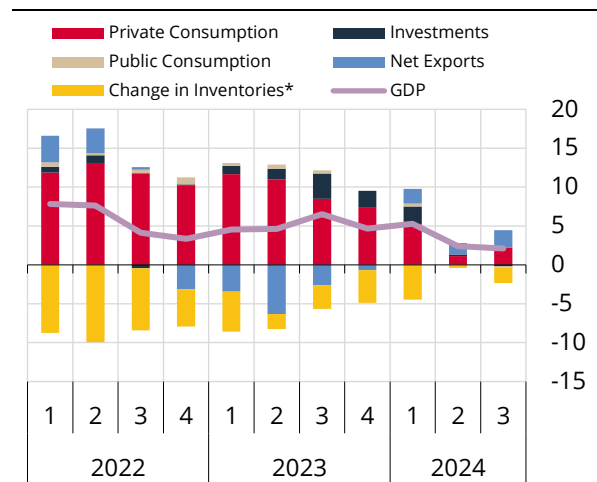
GDP data pointed to a limited deceleration in economic activity in the third quarter of 2024. In the third quarter, GDP increased by 2.1% year-on-year and contracted by 0.2% quarter-on-quarter. Moreover, the first-quarter growth rate was revised downwards by 0.2 percentage points (from 1.4% to 1.2%), while the second-quarter growth rate was revised downwards by 0.3 percentage points (from 0.1% to -0.2%). In this period, the services sector remained the main driver of annual growth on the production side. All sectors excluding the industrial sector made positive contributions to annual growth on the production side (Chart 2.3.1). On a quarterly basis, the construction and services sectors stood out for their positive contributions to growth. On the expenditures side, final domestic demand continued to contribute significantly to annual growth in the third quarter. Coupled with the growth-dampening contribution of the change in inventories, the contribution of domestic demand to annual growth was relatively limited at 0.1 percentage points. In this period, the contribution of consumption to annual growth was moderate despite its quarter-on-quarter rise (Chart 2.3.2). Meanwhile, the positive contribution of net exports to annual growth further increased. The rise in demand, albeit moderate, was mainly driven by growing demand for private consumption, while public consumption and total investments made negative contributions to annual growth. Among investment items, construction investments continued to contribute positively to growth, while machinery and equipment investments posted a decline on an annual basis, as in the previous quarter. On a quarterly basis, private consumption continued to decline, while investments went up in the third quarter, replacing the previous quarter's downtrend. In this period, exports of goods and services grew quarter-on-quarter, while imports of goods and services dropped, with net exports making a positive contribution to quarterly growth. Thus, the demand composition of growth remained balanced. In sum, national income data for the first three quarters of 2024 indicate a moderate slowdown in economic activity.

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



Source: CBRT, TURKSTAT.

Chart 2.3.2: Annual GDP Growth and Contributions from Expenditures Side (% Points)



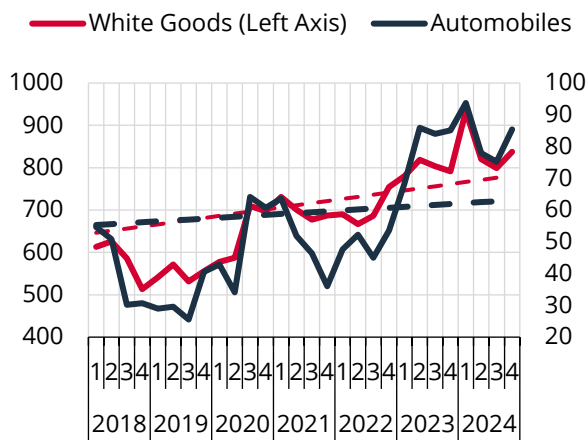
Source: CBRT, TURKSTAT.

* Includes changes in inventories and statistical discrepancy due to chain-linking.

Recent indicators suggest that domestic demand stands at disinflationary levels. As of November, the retail sales volume index, a sub-item of the trade sales volume index, increased by 4% in the last quarter of 2024 (Chart 2.3.4). Demand brought forward due to campaigns and upcoming wage revisions helped household demand for goods to remain robust in the last quarter of the year. However, excluding gold, the quarterly increase in retail sales volume was milder (Zoom-In 2.2, Inflation Report 2024-IV). Wholesale trade and motor vehicles trade, which are other sub-items of the trade sales volume index, posted lower quarterly increases than retail trade in the same period. The services production index, which displays a very similar pattern to the services expenditures component of final household consumption, was up by

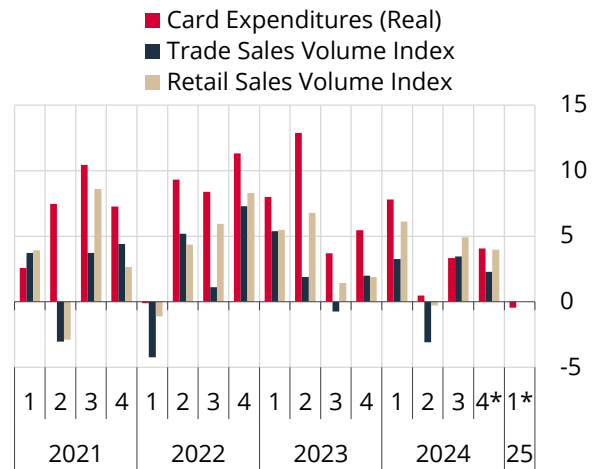
0.2% quarter-on-quarter but down year-on-year (Chart 2.3.5). Survey data for manufacturing industry firms suggest that domestic orders picked up in the fourth quarter yet remained below their historical average. After falling in the previous two quarters, sales of automobiles and white goods displayed a recovery trend in the last quarter (Chart 2.3.3). The monthly rate of increase in real spending by card fell below the average of the previous quarter in October and November before posting an uptick in December. Thus, card spending increased slightly on a quarterly basis. On the other hand, data for January point to a monthly and quarterly decline in card spending. Meanwhile, it is noteworthy that card spending on services has followed a relatively weaker trend compared to spending on goods. Similarly, information on consumption expenditures obtained from interviews with firms as of January indicates that spending slowed subsequent to the last quarter of 2024, in line with the seasonal transition (Box 2.1).

Chart 2.3.3: Sales of White Goods and Automobiles* (Thousand, Seasonally and Calendar Adjusted)



Source: CBRT, ODMD, TURKBESD.
* Dashed lines show the average for the 2010-2018 period.

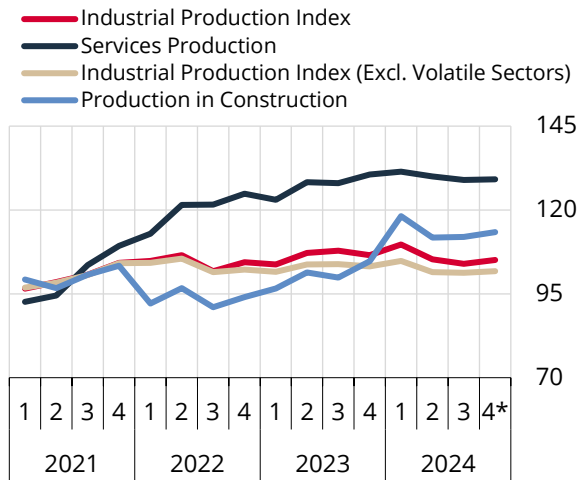
Chart 2.3.4: Consumption Indicators (Seasonally and Calendar Adjusted, Quarterly % Change)



Source: CBRT, TURKSTAT.
* Average of October-November retail sales volume index and trade sales volume index. As of January for card spending. Deflated by the CPI.

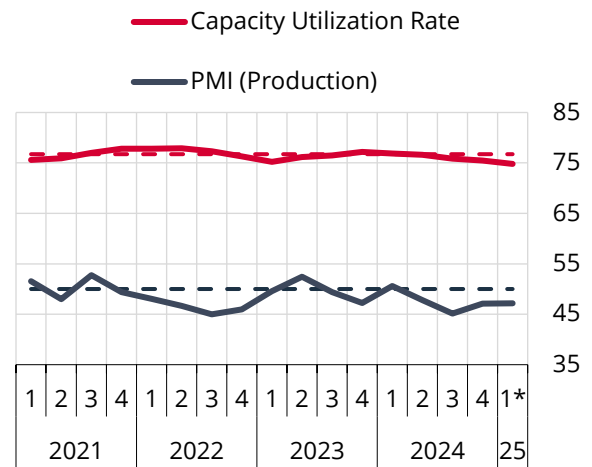
Production indicators display moderate recovery. As of November 2024, seasonally and calendar-adjusted industrial production increased by 1.1% quarter-on-quarter (Chart 2.3.5). After experiencing negative quarterly growth in the second and third quarters of the year, industrial production posted an increase in the last quarter as of November. Meanwhile, excluding sectors that are typically more volatile, such as other transportation, the recovery in industrial production was somewhat milder. Following the decline in the second and third quarters of 2024, services production also posted a limited quarterly increase of 0.2% in November. Accordingly, services production recovered at a slower pace than industrial production. The Index of Production in Construction, which TURKSTAT began publishing in January 2025, registered a quarterly increase of 1.3% in the last quarter as of November, and an annual increase of 8.8% compared to the October-November period of the previous year, due to the ongoing support from earthquake-related construction (Zoom-In 2.1). Survey-based indicators such as Business Tendency Survey (BTS) and PMI also confirm the recovery in industrial activity in the last quarter of 2024. In this period, survey indicators for production, employment and demand posted quarter-on-quarter increases. The quarterly fall in the capacity utilization rate persisted in the last quarter, but it was quite limited at 0.4 percentage points. The capacity utilization rate thus stood at 75.5% in the last quarter and dropped to 74.8% as of January. Similarly, the PMI production indicator registered a quarterly increase in the last quarter, albeit remaining below the threshold. In January, it maintained the level of the previous quarter (Chart 2.3.6). In sum, production indicators improved in the fourth quarter, but the recovery was more limited in the services production index, which also gives information about the demand for services.

Chart 2.3.5: Industrial, Services, and Construction Production Indices (Seasonally and Calendar Adjusted, 2021=100)**



Source: CBRT, TURKSTAT.
 * Average of October-November.
 ** Industrial production excluding recorded media, computer-optical instruments, basic pharmacy and other transportation sectors that are typically volatile.

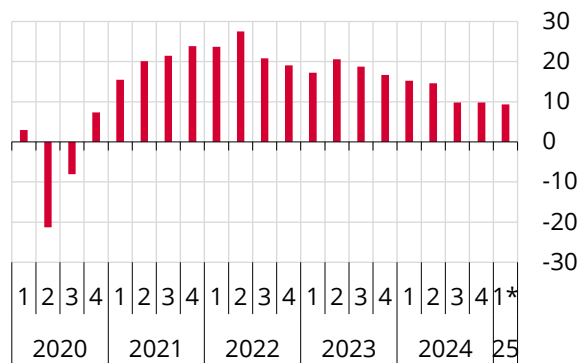
Chart 2.3.6: Capacity Utilization Rate and PMI (Seasonally Adjusted, %)**



Source CBRT, S&P, TURKSTAT.
 * As of January.
 ** Dashed lines show the average capacity utilization rate for the 2011-2019 period and the threshold value of 50 for the PMI.

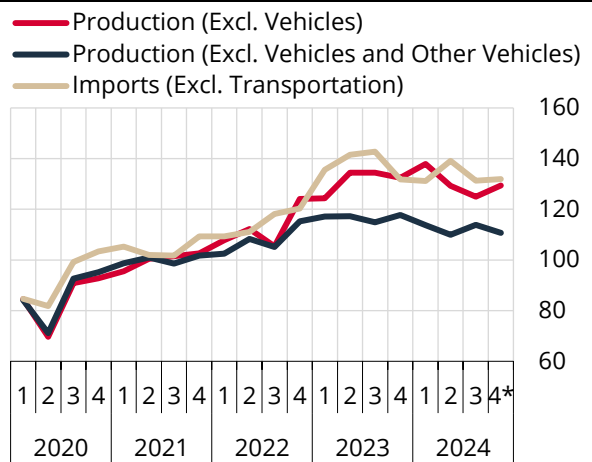
Investment tendencies of manufacturing industry firms remain flat. The production of capital goods excluding other transportation is broadly consistent with the flat course of investment tendency in the fourth quarter (Chart 2.3.7). As of November, the capital goods production index increased on a quarterly basis in the fourth quarter, while the production of capital goods excluding vehicles and other transportation, which is typically volatile, posted a modest decline. Meanwhile, imports of capital goods excluding transportation vehicles remained flat quarter-on-quarter (Chart 2.3.8).

Chart 2.3.7: BTS Expectations for Fixed Capital Investment Spending (Up-Down, Seasonally Adjusted, %)



Source: CBRT.
 * As of January.

Chart 2.3.8: Production and Import Quantity Indices of Capital Goods Excluding Vehicles (Seasonally Adjusted, 2015=100)



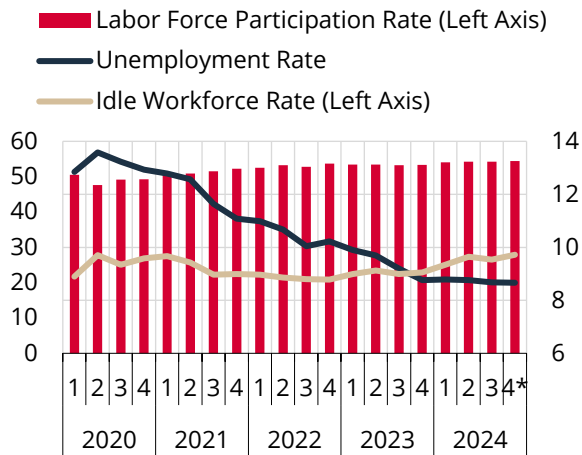
Source: CBRT, TURKSTAT.
 * Average of October-November.

Labor Market Developments

Employment increased further in the fourth quarter. In seasonally adjusted terms, employment rose by 0.5% (150 thousand people) quarter-on-quarter as of November. The seasonally adjusted labor force participation rate went up by 0.2 percentage points to 54.4% (Chart 2.3.9). In the last quarter of the year, the unemployment rate remained the same as the previous quarter at 8.7%. In this period, population

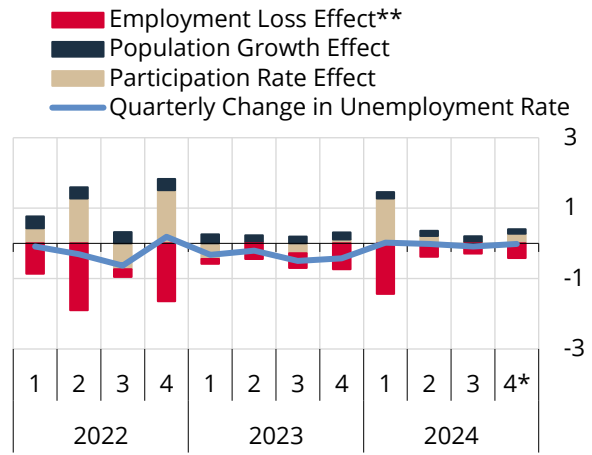
growth and the rise in participation rate had an upward effect of 0.13 percentage points and 0.28 percentage points, respectively, on the unemployment rate, while employment growth had a downward effect of 0.42 percentage points (Charts 2.3.10 and 2.3.11). Meanwhile, the idle workforce rate, a complementary indicator of the labor market, remained high, rising by 1.4 percentage points quarter-on-quarter as of November, suggesting that the labor market may not be as tight as implied by the main indicators (Chart 2.3.9).

Chart 2.3.9: Total Unemployment Rate and Labor Force Participation Rate (Seasonally Adjusted, %)



Source: TURKSTAT.
* Average of October-November.

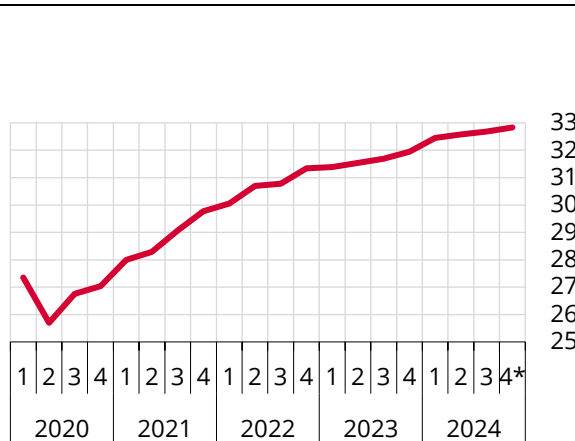
Chart 2.3.10: Contributions to Change in Total Unemployment Rate (Seasonally Adjusted, % Points)



Source: CBRT, TURKSTAT.
* Average of October-November.
** Negative value of the employment loss effect indicates an increase in employment.

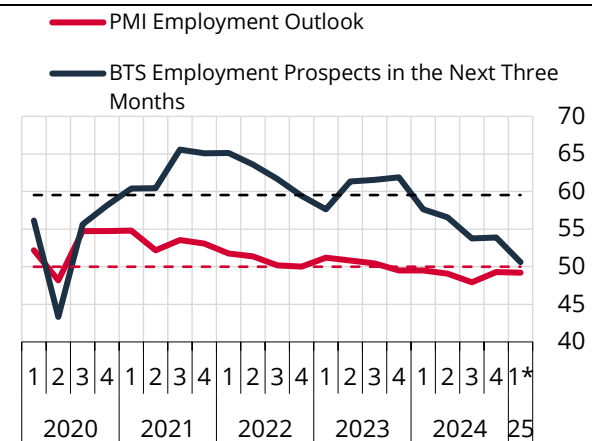
Survey indicators suggest a flat outlook hovering below the historical average in manufacturing industry firms' future employment expectations. In the last quarter of 2024, the total number of job postings decreased, while the total number of applications per job posting increased. Survey data for manufacturing industry firms indicate that firms' employment outlook improved somewhat quarter-on-quarter in the last quarter, but employment expectations for the next three months are still below their historical average (Chart 2.3.12). Data for January suggest that this trend continues in the first quarter of 2025.

Chart 2.3.11: Total Employment (Seasonally Adjusted, Million People)



Source: TURKSTAT.
* Average of October-November.

Chart 2.3.12: Employment Outlook and Expectation in the Industrial Sector** (Seasonally Adjusted, Up-Down)

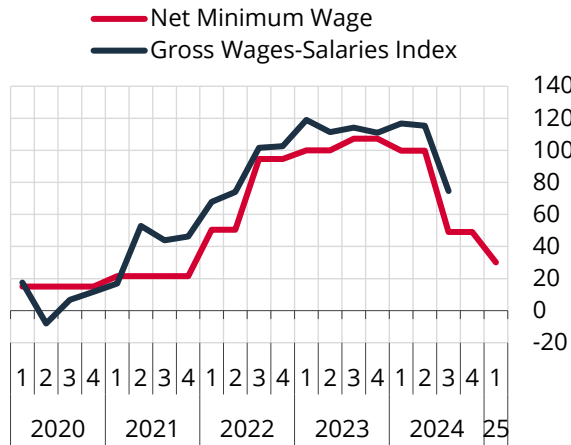


Source: CBRT, S&P Global.
* As of January.
** BTS indicator is adjusted so that its neutral level will be 50 in line with the PMI. Dashed lines show the average of 2011-2019 for the BTS and the threshold value of 50 for the PMI.

The annual rate of increase in non-farm nominal wages was 74.7% in the third quarter of 2024

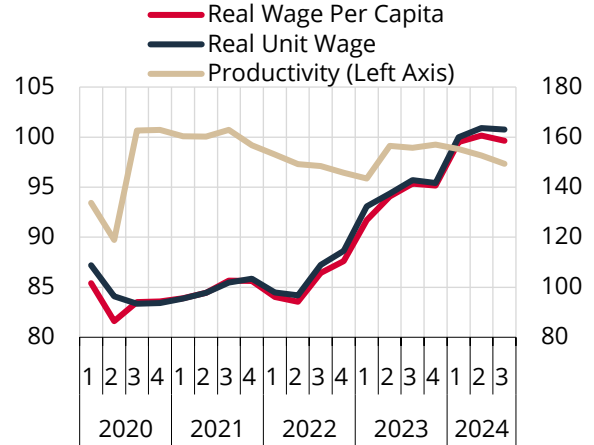
(Chart 2.3.13). Partial labor productivity in the non-farm sector (non-farm value added/non-farm employment) declined slightly in the third quarter. Real unit wages in the non-farm sector (real per capita wage/productivity) dropped moderately in the third quarter, with real per capita wages falling faster than productivity declines in this period (Chart 2.3.14). Accordingly, in the following period, real unit wages are expected to follow a milder course year-on-year, contributing to the disinflation process.

Chart 2.3.13: Non-Farm Wage Index and Net Minimum Wage (Nominal, Annual % Change)



Source: CBRT, Ministry of Labor and Social Security, TURKSTAT.

Chart 2.3.14: Non-Farm Partial Labor Productivity*, Real Per Capita Wage and Real Unit Wages** (Seasonally Adjusted, 2021=100)



Source: CBRT, TURKSTAT.

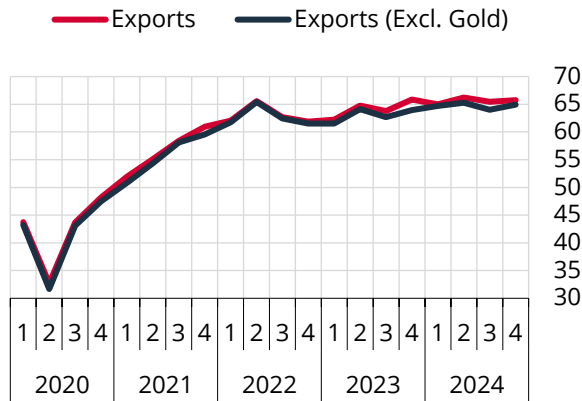
* Non-farm value added/non-farm employment.

** Real per capita wage/productivity. Deflated by the CPI.

Foreign Trade and Balance of Payments Outlook

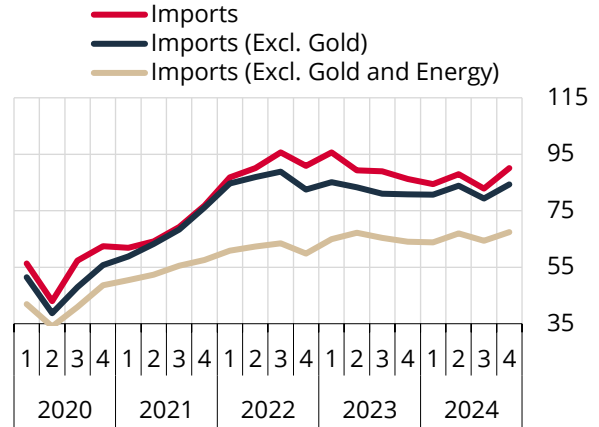
Exports and imports increased in the last quarter of 2024. Seasonally and calendar-adjusted exports which had decreased in the third quarter, posted a limited increase in the last quarter of the year due in part to the relatively mild course of the economic activity in Türkiye's main trade partners (Chart 2.3.15). Since gold exports fell significantly compared to the third quarter, the rate of increase in seasonally and calendar-adjusted exports excluding gold outpaced that of headline exports. In this period, other transportation equipment, fabricated metal products, motor vehicles and food products all made positive contributions to exports, while sectors including basic metals, machinery and equipment, computers, electronics and optical products curbed the rise in exports. In annualized terms, exports to the European Union, the Commonwealth of Independent States and North America increased, while exports to African countries and the Middle East decreased. On the other hand, seasonally and calendar-adjusted total imports, which declined in the third quarter, increased in the last quarter of the year (Chart 2.3.16). Both gold imports and seasonally and calendar-adjusted energy imports posted quarterly increases in this period, with gold imports posting a larger increase. Accordingly, seasonally and calendar-adjusted imports excluding gold posted a more limited increase compared to headline imports. Imports of consumption and intermediate goods made the largest contributions to the quarterly increase. Meanwhile, a flat outlook was observed when excluding the jewelry item, which contributed significantly to the rise in imports of consumption goods. The decline in the foreign trade deficit in the third quarter of the year was replaced by an increase in the last quarter due to the widening gold trade deficit, while the deterioration in the foreign trade deficit excluding gold stood at lower levels. The core foreign trade deficit also deteriorated in this period. On the other hand, provisional foreign trade data point to a monthly decline in both exports and imports in January in seasonally and calendar-adjusted terms. Following its increase in the last quarter of the year, seasonally adjusted imports of consumption goods remained high in January, despite a slight decline. Hovering around USD 0.8 billion on average on a monthly basis in the last quarter of 2024, jewelry imports declined at the beginning of 2025 and stood at around USD 0.1 billion in January. As a result, imports of consumption goods excluding jewelry increased. In this framework, the course of imports, particularly of consumer goods, in the remainder of the quarter will be closely monitored with respect to the rebalancing in demand.

Chart 2.3.15: Exports (Seasonally and Calendar Adjusted, USD Billion)



Source: CBRT, TURKSTAT.

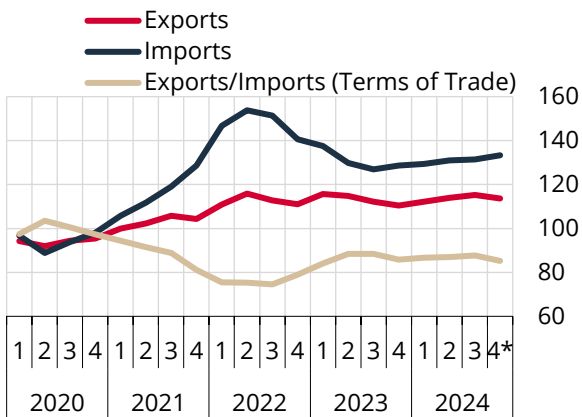
Chart 2.3.16: Imports (Seasonally and Calendar Adjusted, USD Billion)



Source: CBRT, TURKSTAT.

While the terms of trade declined in the last quarter of 2024, both export and import quantity indices increased, albeit to a lesser extent in exports. In the fourth quarter, export prices were down while import prices were up (Chart 2.3.17). Thus, the terms of trade declined, adversely affecting the foreign trade balance. This is attributed to the appreciation of the USD against the euro as well as the higher share of euro-denominated revenues in Türkiye's export revenues compared to the US dollar (Box 2.2). On the other hand, in terms of foreign trade volumes, both real exports and real imports increased in the last quarter of 2024, albeit to a lesser extent in seasonally and calendar-adjusted exports (Chart 2.3.18). This development had an upward impact on the foreign trade deficit in quarterly terms. An analysis by goods groups reveals that imports of intermediate goods, particularly consumption goods, contributed to the rise in the quantity of imports, while imports of investment goods posted a decline (Chart 2.3.19). Import quantity of consumption goods was mainly driven by the rise in October and November. Imports of unprocessed gold declined significantly following the introduction of quotas for unprocessed gold imports in August 2023, while imports of jewelry surged, leading to a sharp increase in imports of consumption goods.¹ Given the strong increase in jewelry imports in the last quarter, the rise in consumption goods excluding jewelry is fairly moderate.

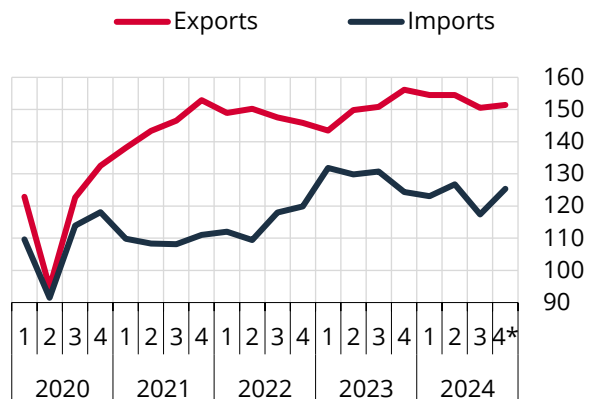
Chart 2.3.17: Foreign Trade Unit Value Indices (2015=100)



Source: TURKSTAT.

* December data is calculated using price assumptions.

Chart 2.3.18: Foreign Trade Quantity Indices (Seasonally Adjusted, 2015=100)



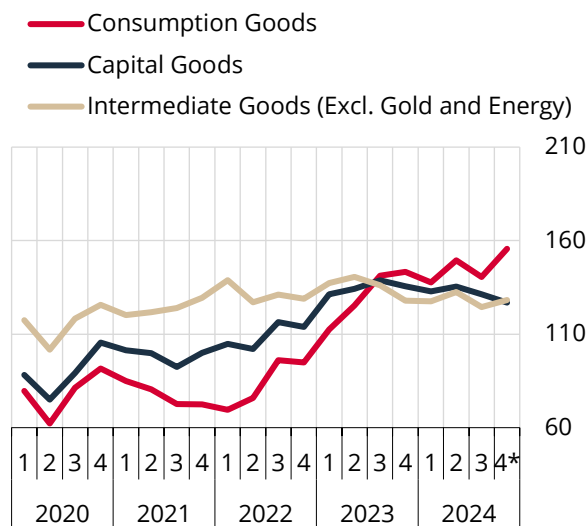
Source: CBRT, TURKSTAT.

* Quantity indices for December are estimates based on price assumptions.

¹ For further information on this subject, see Aldan, A., Eren, O., Eriş, B., & Yazıcı, D. (2025). "Gold Import Quota and Consumption Demand Indicators". CBRT Blog.

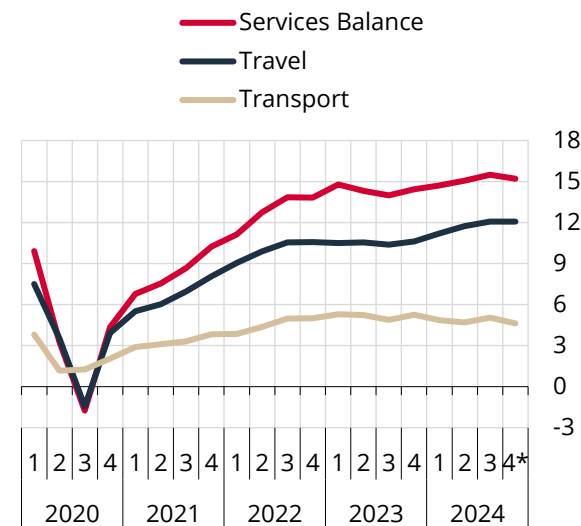
The services balance continues to contribute substantially to the current account balance. The services balance surplus remained robust in the last quarter of 2024 due to the continued high surplus in the seasonally and calendar-adjusted travel revenues balance (Chart 2.3.20). The ongoing upward trend in the seasonally and calendar-adjusted number of foreign visitors kept driving the rise in travel revenues. Leading indicators suggest that the number of foreign visitors will remain relatively high in December and continue to contribute positively to net travel revenues.

Chart 2.3.19: Import Quantity Indices by Goods Groups (Seasonally Adjusted, 2015=100)



Source: CBRT, TURKSTAT.
* Average of October-November.

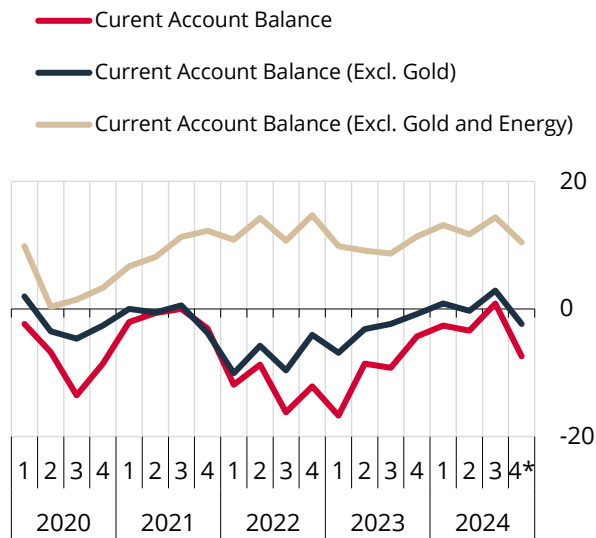
Chart 2.3.20: Services Balance (Seasonally and Calendar Adjusted, USD Billion)



Source: CBRT.
* Average of October-November.

The improvement in the current account balance observed in the third quarter of 2024 stalled in the last quarter, due to the widening trade deficit, despite the strong services balance. In the last quarter, the services balance continued to contribute to the current account balance. However, the previous quarter's downtrend in the seasonally and calendar-adjusted balance of payments-defined goods trade balance halted due in part to the increase in the gold and energy trade deficit during this period. Accordingly, the goods trade deficit widened by USD 6.8 billion over the previous quarter, exceeding its level in the last quarter of 2023. Thus, the seasonally and calendar-adjusted current account deficit increased slightly in the fourth quarter compared to the previous quarter (Chart 2.3.21). Likewise, the surplus in the current account balance excluding gold and energy, which is a main trend indicator, decreased in seasonally and calendar-adjusted terms in the final quarter. Developments in imports, consumption in particular, are expected to play a decisive role in the foreign trade and current account balances in the upcoming period (Zoom-In 2.2).

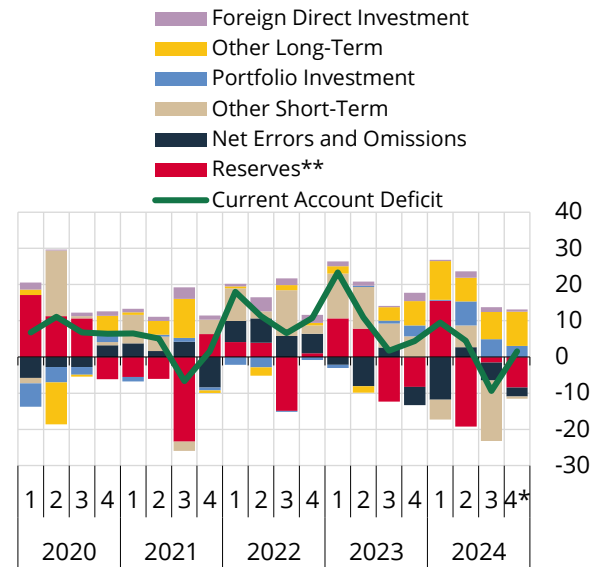
Chart 2.3.21: Current Account Balance
(Seasonally and Calendar-Adjusted, USD Billion)



Source: CBRT.

* Average of October-November

Chart 2.3.22: Financing of the Current Account Deficit (USD Billion)



Source: CBRT.

* Estimated based on October-November values.

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

In the last quarter of 2024, inflows to the equity and GDDS markets decreased, while the weight of long-term items increased in financing the current account balance. In this period, reserve build-up continued, while the net errors and omissions item registered outflows. Non-residents' direct investments excluding real estate did not register a significant change in the last quarter as of November. Meanwhile, portfolio inflows to equity and debt securities markets, and inflows through short-term investment items, such as loans, posted a quarter-on-quarter decline (Chart 2.3.22). In the last quarter, capital inflows took place predominantly through long-term loans and the bond issuances of the banking, general government and private sectors. In this period, the net errors and omissions item recorded outflows, while reserves increased. Data for December suggest that official reserves maintained their high level in the last month of 2024, and preliminary data for January 2025 indicate that official reserves rose in the first month of the year. Moreover, equity and debt securities markets received portfolio inflows in January 2025.

Public Finance Developments

In 2024, the central government budget ran a deficit of TRY 2,106.1 billion and a primary deficit of TRY 835.7 billion. The financing need was met by both domestic and external borrowing. It is estimated that the ratio of the central government debt stock to national income was 20.9% in 2024, while the ratios of domestic and external debt stocks to national income were 11.2% and 9.7%, respectively.

In 2024, revenues and expenditures were up by 66.5% and 63.6%, respectively, compared to the previous year. The tax revenues-primary expenditures coverage ratio was 76.8%. Personnel expenditures, which account for an important share in primary expenditures, posted a sharp annual rate of increase of 101.3%, driven partly by the adjustments made in civil servants' salaries. Current transfers, another important expenditure item, rose year-on-year by 62.8%. Moreover, a total of TRY 296.9 billion was transferred to public enterprises as part of duty losses, including TRY 213.7 billion to the Electricity Generation Corporation and TRY 66.0 billion to BOTAŞ, and a total of TRY 238.6 billion to public enterprises as part of lending, including TRY 122.9 billion to TCDD and TRY 71.9 billion to the Turkish Grain Board. On the other hand, income tax revenue, which made the largest contribution to the rise in tax revenues in the recent period, increased at a high annual rate of 120.1% in 2024. This positive performance is attributed to employment and wage developments as well as the rise in withholding tax rates along with increased returns on and volume of deposits. The contribution of other tax items, corporation tax and value added

tax on imports in particular, to the increase in tax revenues has been declining in recent months. Corporation tax recorded a low annual increase of 13.2%. On the other hand, the total restructuring revenues of TRY 59.4 billion collected in 2024 contributed positively to the budget.

The budget deficit to GDP ratio is estimated to be 4.8% in 2024. This ratio is consistent with the realization forecast of 4.9% shared in the Medium-Term Program (MTP) for 2024. The ratios of expenditures and revenues to GDP are estimated to be 24.4% and 19.6%, respectively.

The central government budget ran a cash deficit of TRY 1,991.9 billion in 2024. The ratio of cash deficit to GDP is estimated to have increased by 2.2 points to 4.5%, compared to the 2023 realization.

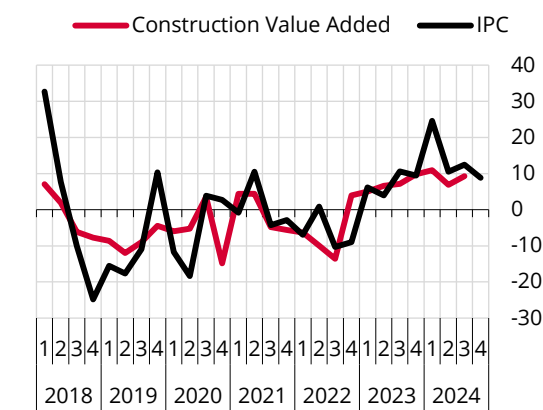
Zoom-In 2.1

Index of Production in Construction

TURKSTAT started publishing the Index of Production in Construction (IPC), along with the production indices for industrial and services sectors. The IPC covers the sectors of 41-construction of buildings, 42-civil engineering, and 43-specialized construction activities, according to NACE Rev.2. The index is calculated using the payments made by firms operating in these sectors (construction of buildings, civil engineering and specialized construction activities) for the materials they purchase and for their employees within the reference period. In this respect, the calculation method of the index differs from the turnover-based services production index in that IPC is based on input purchases.

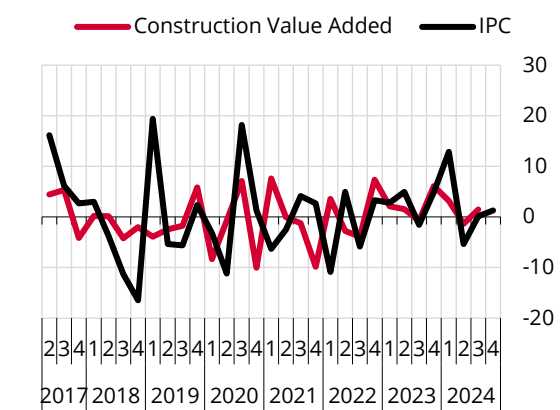
An analysis of the relationship between the IPC and the construction sector value added in GDP from the production perspective suggests a high correlation (0.71) between the annual changes in these two series but a weak correlation (0.25) between their quarterly changes (Charts 1 and 2).

Chart 1: Construction Value Added and IPC (Annual % Change)



Source: TURKSTAT.

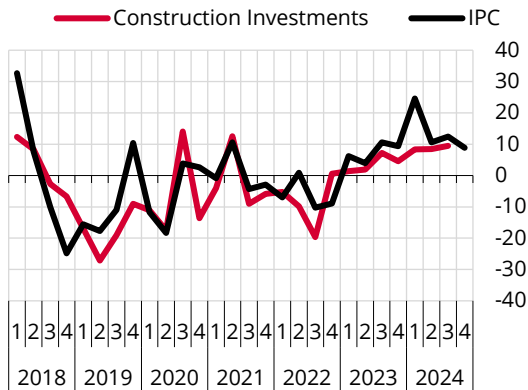
Chart 2: Construction Value Added and IPC (Quarterly % Change)



Source: TURKSTAT.

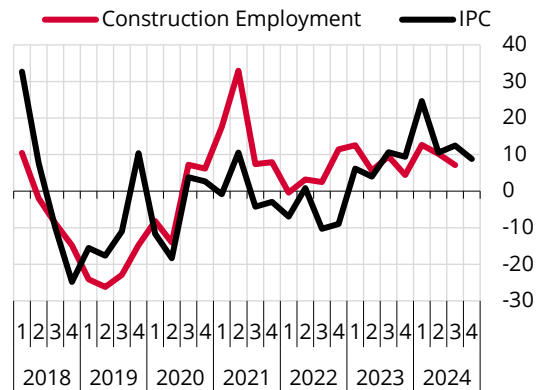
An analysis of the IPC's relationship with the construction investments in GDP from the expenditure perspective and construction sector employment also reveals a similar picture (Charts 3 and 4). In this context, the IPC is assessed to have significant explanatory power and might serve as a leading indicator for the value added, investments and employment in the construction sector, particularly for the annual changes in these indicators.

Chart 3: Construction Investments and IPC (Annual % Change)



Source: TURKSTAT.

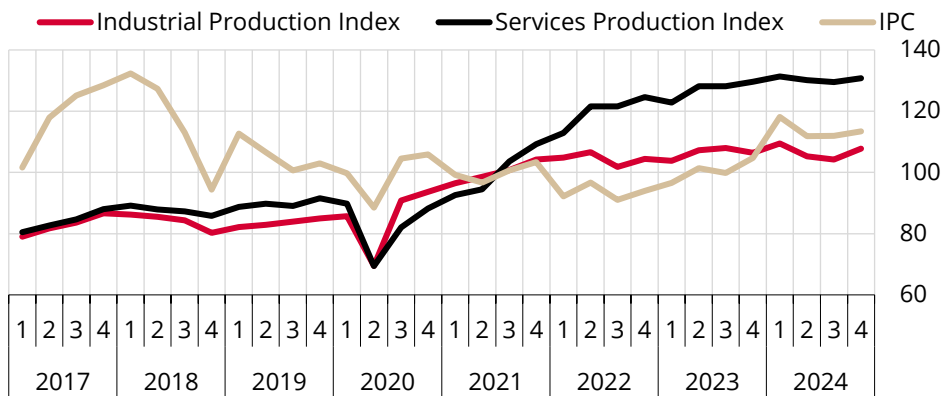
Chart 4: Construction Employment and IPC (Annual % Change)



Source: TURKSTAT.

When the production indices are compared, it is notable that production in construction has followed a relatively more favorable course than industrial and services production both since the beginning of the tightening period and in the more recent period (Chart 5). This is also attributed to increased construction activities after the earthquakes. Indeed, among the three components of IPC, the strong course in construction of buildings stands out.

Chart 5: Industrial, Services and Construction Production Indices (Seasonally and Calendar Adjusted, 2021=100)



Source: TURKSTAT.

* As of November 2024.

Zoom-In 2.2

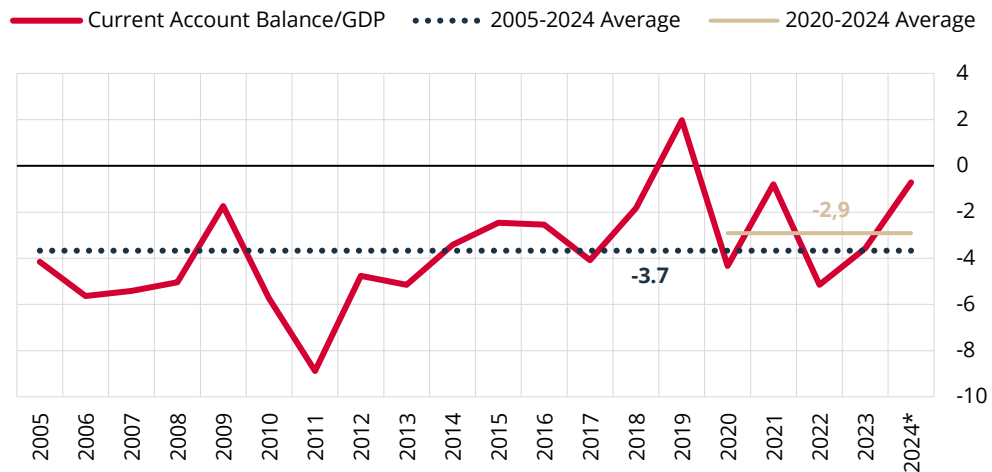
Current Account Balance Outlook in 2025

The current account deficit, which narrowed significantly in 2024, is expected to widen again in 2025.

The current account balance posted a marked improvement in 2024, led by both the decline in the trade deficit and the strong course of the services balance. The current account deficit, which stood at USD 40.4 billion at end-2023, dropped to USD 7.4 billion in 12-month cumulative terms as of November 2024. The ratio of the current account deficit to GDP, which was 3.6% in 2023, is expected to have remained below 1% in 2024. Forecasts based on the current state and the assumptions for 2025 imply an increase in the current account deficit.

In 2025, the trade deficit is expected to widen but to be restricted by an increase in the services balance surplus. Both the Inflation Report assumptions and international institutions' forecasts for the outlook of external demand, which is the main driver of exports, suggest that the weighted growth rate of Türkiye's trade partners will increase to a limited extent compared to the previous year. Given the relatively small effect of the real exchange rate and relative price changes on exports, a possible decline in the euro-dollar parity and developments regarding the real exchange rate level are thought to have moderate downward effects on exports. In this framework, model-based estimations imply a mild increase in exports in 2025.² On the imports side, domestic demand, as the main driver, is projected to be on a path consistent with the disinflation course in 2025. Based on the current state and model estimates, import demand, which contracted in 2024, is expected to increase in 2025. On the other hand, it is assumed that domestic demand for gold will normalize and go back to its historical average as the fall in inflation expectations and the preference for Turkish lira assets continue, and global energy prices will remain nearly flat. Thus, the trade deficit is expected to widen compared to 2024. On the services balance front, the rise in net revenues is expected to continue, led by the travel and transport sectors. As for tourism revenues, it is estimated that the upward trend in both the number of visitors and the average spending per visitor will continue, and the favorable course in the number of visitors will also bolster the passenger transport revenues. In addition to this picture, uncertainties regarding the course of global trade have increased due to imposition of reciprocal tariffs by countries in the upcoming period, and the related developments are being closely monitored for the possible risks to the current account balance.

Chart 1: Current Account Balance/GDP (%)



Source: CBRT, TURKSTAT.

* Estimate for 2024.

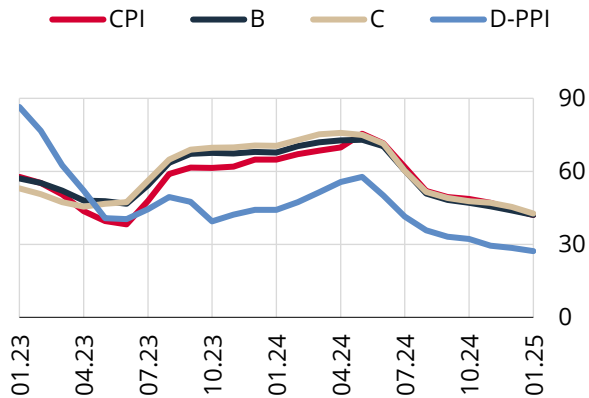
Although the current account deficit is projected to increase in 2025, as a share of GDP, the current account deficit will remain historically well below both the long-term and near-term averages. The average current account balance GDP ratio was -3.7% over the two decades between 2005 and 2024, and stood at -2.9% over the last five years (2020-2024), including the period of global pandemic (Chart 1). A comparison of the past increases in the current account deficit during shifts to rate-cut cycles also provides a similar picture. For instance, over the four quarters following the start of policy rate cuts in 2019 and 2021, the ratio of current account deficit to GDP rose by 5.9 and 3 points, respectively. However, this ratio is projected to increase at a more moderate pace in 2025. Compared to previous years, the relatively favorable course of the current account balance is expected to continue in 2025.

² Foreign trade estimates rely on econometric model results for export and import demand functions as well as on export and import price assumptions.

2.4 Inflation

In January, consumer inflation fell to 42.1%, close to the midpoint of the forecast range presented in the previous Inflation Report. The disinflation process, which started in June, continues. As prices and wages in some services groups continue to adjust to the past inflation increases with some lag, inflation is still high despite some decline. The mild course of producer inflation became more evident, particularly in the last two months of the year, indicating that pressure from producer prices remained weak. Accordingly, annual producer inflation ended 2024 at 28.5%, lower than consumer inflation. In the last quarter, annual inflation in indicators B and C decreased, with a slightly more pronounced decline in B (Chart 2.4.1). An analysis of fourth-quarter developments by sub-items reveals that the services group made the most significant contribution to the fall in annual consumer inflation, followed by the energy group, while the downward impact of other main groups on annual inflation remained more limited (Chart 2.4.2, Zoom-In 2.3). In line with the forecasts, the rise in monthly consumer inflation in January was mainly driven by services items, which have a high tendency for time-dependent price-setting and backward indexation. Taking into account the changes in household consumption patterns, TURKSTAT made some revisions in the consumption basket and weight structure. Accordingly, the weight of the food group in the basket remained unchanged in 2025, while the weight of the services group increased by 3.11 points, led by rents and other services items. The effect of this development on January consumer inflation was 0.3 points upwards.

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

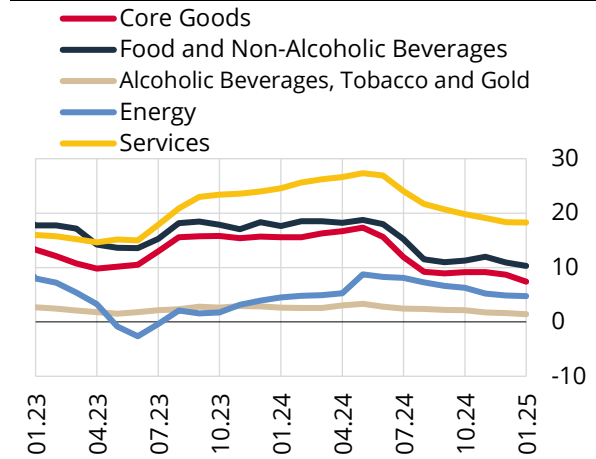


Source: TURKSTAT.

* B index: CPI excluding unprocessed food, energy, alcoholic beverages, tobacco and gold.

C index: CPI excluding food and non-alcoholic beverages, energy, alcohol-tobacco and gold.

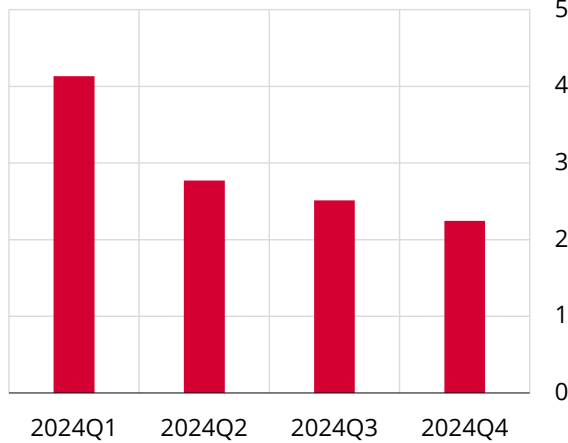
Chart 2.4.2: Contributions to Annual CPI (% Points)



Source: CBRT, TURKSTAT.

The underlying trend of inflation decelerated in the last quarter in line with the projections presented in the previous Inflation Report. The decline in the underlying trend of inflation continued in the last quarter. The seasonally adjusted quarterly average of the indicators monitored for the underlying trend decreased from 2.5% in the third quarter to 2.2% in the last quarter (Chart 2.4.3). Seasonally adjusted quarterly average increases in the underlying trend indicators B and C slowed down compared to the previous quarter. Distribution- and model-based underlying trend indicators followed a similar trend, confirming the outlook in core groups. Moreover, in the last quarter, the variation among underlying trend indicators increased, with distribution-based indicators taking lower values compared to permanent exclusion-based indicators such as B and C. In January, the underlying trend posted a rise due to a first-quarter-specific temporary increase (Chart 2.4.4).

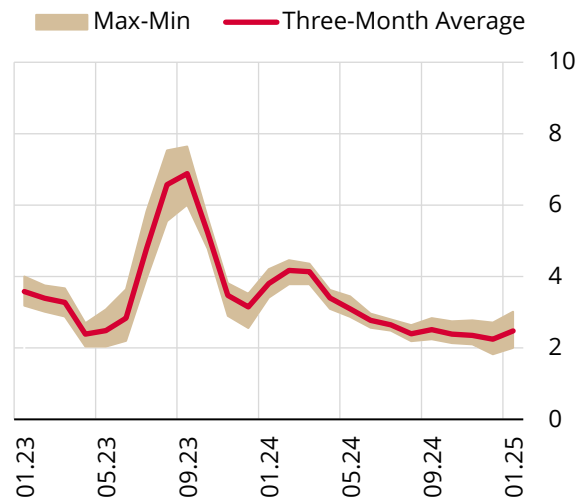
Chart 2.4.3: Indicators of Underlying Inflation* (Seasonally Adjusted, Monthly % Change, Quarterly Average)



Source: CBRT, TURKSTAT.

* Quarterly average of seasonally adjusted B and C indices and SATRIM, median inflation, exclusion of volatile items (V_1) and DFM indicators.

Chart 2.4.4: Indicators of Underlying Inflation* (Seasonally Adjusted, Monthly % Change, Three-Month Average)

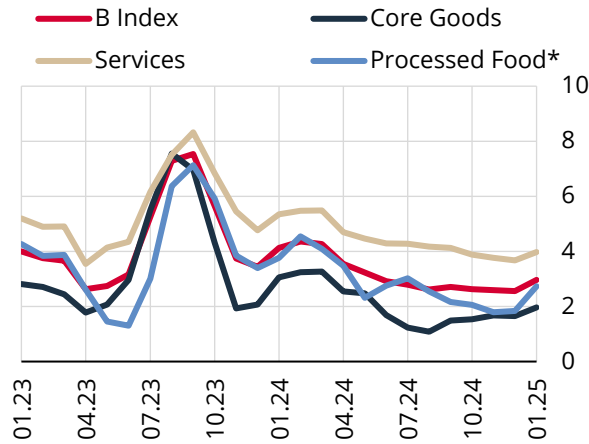


Source: CBRT, TURKSTAT.

* Three-month average of seasonally adjusted B and C indices and SATRIM, median inflation, exclusion of volatile items (V_1) and DFM indicators. Shaded area shows the maximum and minimum range.

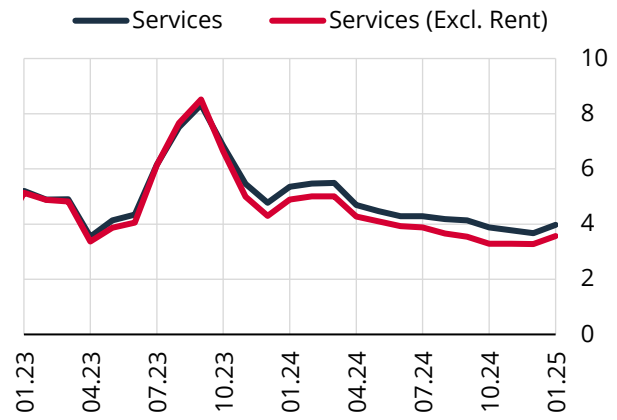
In the last quarter, price increases receded in the services and processed food groups constituting the B index but remained low in core goods (Chart 2.4.5). In this period, the mild outlook in durable goods prices reflected the favorable course of exchange rates and commodity prices as well as the slowdown in domestic demand, but there have been some exceptions in sub-items. In the last quarter, automobile prices remained relatively flat amid destocking campaigns, while inflation in the white goods sector strengthened despite the mild course of exchange rates. Similarly, price increases in consumer electronics and small household appliances were stronger compared to the previous quarter. Meanwhile, the downtrend in services inflation observed throughout the year became somewhat more pronounced in this period due to developments in demand and labor costs. Despite the decline in the reference rate of rent increases in new and renewed contracts, the highest price increase in the services sector in this quarter was recorded in the rent subgroup (Table 2.4.1). Inflation in services other than rents was lower (Chart 2.4.6). In the last quarter, restaurants-hotels inflation, which was also affected by demand conditions, lost momentum compared to the previous quarter due to the deceleration in the price increase in catering services and the decrease in accommodation services prices, while communication services was another group that displayed a weakening in price increases. The slowdown in other services group was led by education services, where the relative price adjustment has been completed, as well as health services with time-dependent price-setting and demand-sensitive recreation and culture services. In January, monthly services inflation increased due to subgroups with a high tendency for time-dependent price-setting and backward indexation, also reflecting adjustments in wages, administered prices and lump-sum tax (Chart 2.4.6, Box 2.3).

Domestic energy prices followed a mild course in the last quarter. Domestic energy prices inflation slowed down significantly by 2.83% in the fourth quarter (Table 2.4.1). After the hike in October, the international Brent crude oil price stabilized at around USD 74 in the last two months of the year. The currency basket remained stable in this quarter. On the back of these developments, fuel prices remained weak. In the energy group, quarterly inflation in other sub-items of the energy group, except for solid fuels, slowed down quarter-on-quarter, contributing to the mild outlook in energy inflation. In January, monthly energy inflation was driven by the rise in municipal water tariffs as well as the effects of the rise in international energy commodity prices. Although their impact was relatively low, lump-sum tax hikes were another factor that pushed fuel and bottled gas prices higher.

Chart 2.4.5: B Index and Subgroups of B Index (Seasonally Adjusted, Monthly % Change, Three-Month Average)

Source: CBRT, TURKSTAT.

* Processed food is not adjusted for seasonality due to absence of statistically significant seasonal effects

Chart 2.4.6: Services Prices (Seasonally Adjusted, Monthly % Change, Three-Month Average)

Source: CBRT, TURKSTAT.

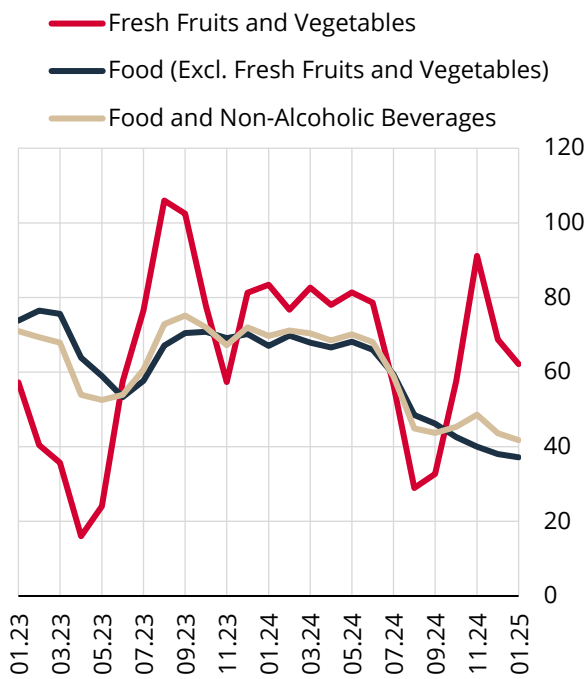
Table 2.4.1: Consumer Prices

	Quarterly % Change (Seasonally Adjusted)				Annual % Change			
	2024				2024			
	I	II	III	IV	I	II	III	IV
CPI	12.84	8.85	9.38	7.70	68.50	71.60	49.38	44.38
B	13.36	9.02	8.36	7.87	71.89	70.40	48.23	43.94
C	13.51	9.14	8.74	8.36	75.21	71.41	49.10	45.34
1. Goods	11.09	6.98	7.85	6.02	58.17	62.56	40.27	36.14
Energy	10.80	6.41	18.04	2.83	37.32	84.58	62.94	43.11
Food and Non-alcoholic Beverages	13.23	8.51	6.29	9.77	70.41	68.08	43.72	43.58
Unprocessed Food	13.84	8.54	5.89	14.47	84.14	70.50	43.34	50.29
Fresh Fruits and Vegetables	9.08	17.91	2.26	27.27	82.67	78.61	32.70	68.78
Other Unprocessed Food	16.81	3.09	8.30	6.43	85.02	66.30	50.07	38.78
Processed Food	12.68	8.48	6.64	5.61	58.97	65.89	44.05	37.67
Bread and Cereals	11.98	11.09	7.04	6.54	58.80	71.15	42.83	41.87
Other Processed Food	13.01	7.28	6.45	5.16	59.02	63.43	44.77	35.72
Goods Excl. Energy and Food	9.70	6.06	5.77	4.38	57.59	52.56	31.00	28.77
Core Goods	10.11	5.12	4.52	5.02	56.46	50.62	28.26	27.43
Clothing and Footwear	9.63	6.14	4.65	6.74	49.12	46.87	29.93	31.67
Durable Goods (Excl. Gold)	9.61	3.69	3.98	3.62	61.11	46.89	22.77	22.46
Other Core Goods	11.31	6.76	5.30	5.99	55.25	59.17	36.60	32.62
Alcoholic Drinks, Tobacco	5.42	14.84	15.16	-0.10	62.98	67.93	52.35	39.28
Gold	16.07	2.41	11.22	2.87	84.78	59.22	46.54	36.01
2. Services	17.38	13.43	12.91	11.43	96.48	95.27	72.92	65.73
Rents	24.69	18.35	20.44	16.05	123.95	123.64	117.43	105.82
Restaurants and Hotels	18.59	11.32	10.25	8.28	94.97	90.67	65.41	57.13
Transport	13.54	12.15	7.86	8.84	94.41	103.54	53.92	47.51
Communication	16.00	11.31	6.45	4.90	71.99	67.45	55.08	44.19
Other Services	13.93	13.35	13.77	13.33	90.41	89.06	68.49	62.55

Source: TURKSTAT.

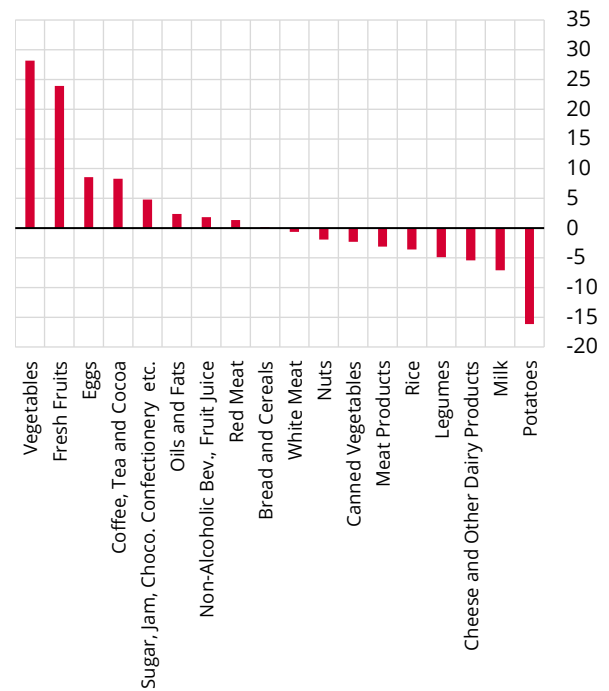
Food and non-alcoholic beverages inflation, which strengthened quarter-on-quarter, was led by developments in fresh fruits and vegetables. The decline in annual food inflation since June was interrupted in October and November due to unprocessed food (Chart 2.4.7). This was mainly driven by unprocessed food prices, which fall relatively outside the control of monetary policy and recorded a strong increase stemming from fresh fruits and vegetables that are sensitive to temporary supply conditions. Seasonally adjusted data show that prices of fresh fruits and vegetables, which had followed a mild course in the previous quarter, marked a sharp rise and increased by 27% in the last quarter due to supply conditions (Table 2.4.1). Accordingly, annual inflation in fresh fruits and vegetables rose by 36.08 points to 68.78%, while that in food excluding fresh fruits and vegetables fell by 8.09 points to 38.06% (Chart 2.4.7). The acceleration in fresh fruit and vegetable prices was the main factor preventing a more favorable course in consumer inflation (Zoom-In 2.3). Prices of fresh fruits and vegetables rose significantly above their historical averages in the last quarter, more markedly in vegetables, followed by egg prices due to supply-side developments. Reflecting also the rise in international commodity prices, price increases in items such as coffee-tea-cocoa and sugar-chocolate hovered above their quarterly trends in the past. In this period, prices of potatoes, milk, cheese and other dairy products stood out with price increases below their historical trends (Chart 2.4.8). As supply-side pressures on fresh fruit and vegetable prices faded in December, food inflation ended 2024 at 43.58% (Chart 2.4.7). The slowdown in annual food inflation continued in January as well.

Chart 2.4.7: Food Prices (Annual % Change)



Source: TURKSTAT.

Chart 2.4.8: Food Prices by Sub-Items* (2024Q4 % Deviation of Change from Historical Average, Ranked)



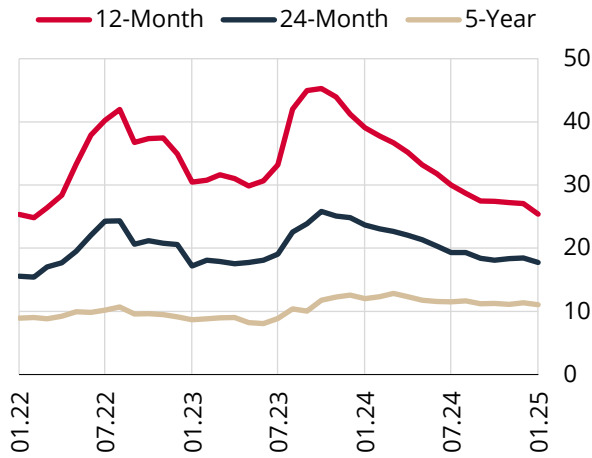
Source: CBRT, TURKSTAT.

* Based on food sub-items, the difference between the quarterly percentage change in 2024Q4 and the historical average (fourth quarter average of the 2012-2021 period).

Drivers of Inflation

The decline in inflation expectations continued in the last quarter. According to the January results of the Survey of Market Participants, 12-month-ahead inflation expectations dropped by 2.06 points to 25.38% (Chart 2.4.9). Despite the ongoing downtrend, the inflation expectation for end-2025 was 27.05%, above the mid-point of the Report projections. The five-year-ahead inflation expectation was measured at 11.04%. Downward revisions in households' and corporate sector's 12-month-ahead inflation expectations became more evident (Chart 2.4.10). Although inflation expectations and price-setting behavior have been improving, they continue to pose risks to the disinflation process.

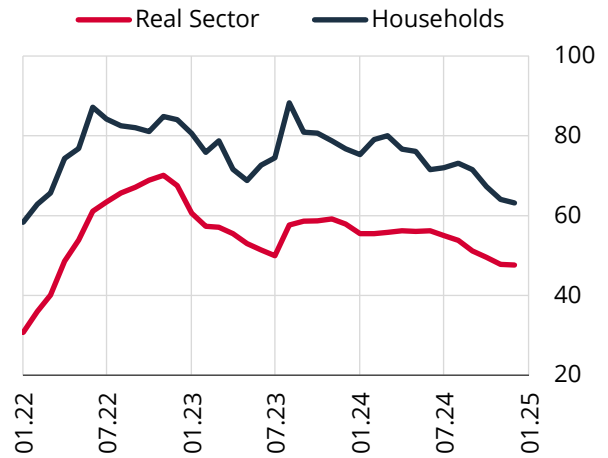
Chart 2.4.9: Consumer Inflation Expectations from the CBRT Survey of Market Participants* (%)



Source: CBRT.

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

Chart 2.4.10: Consumer Inflation Expectations of the Real Sector and Households* (Next 12 Month, %)



Source: CBRT, TURKSTAT.

* Inflation expectations of the real sector are obtained from the BTS, and those of households are obtained from the Consumer Tendency Survey.

There has been no significant change in the diffusion index in the last reporting period. Seasonally adjusted data and three-month moving averages suggest that the diffusion index remained flat. Thus, firms' price-setting behavior has not changed significantly (Chart 2.4.11). The services sector continued to be the group that pushed the diffusion index upwards. Both three-month and annual comparisons reveal that the distributions of price changes for items at the five-digit level shifted to the left, price changes concentrated around a smaller average value and high rates of increase at the right tail of the distribution decreased (Charts 2.4.12 and 2.4.13).

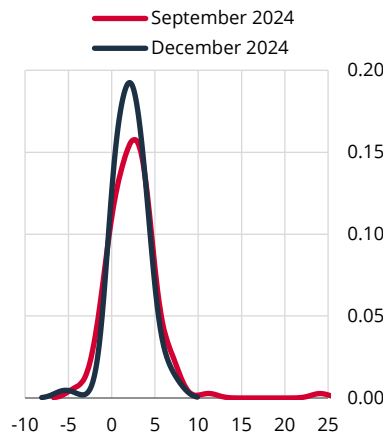
Chart 2.4.11: CPI Diffusion Index* (Seasonally Adjusted, Three-Month Moving Average)



Source: CBRT, TURKSTAT.

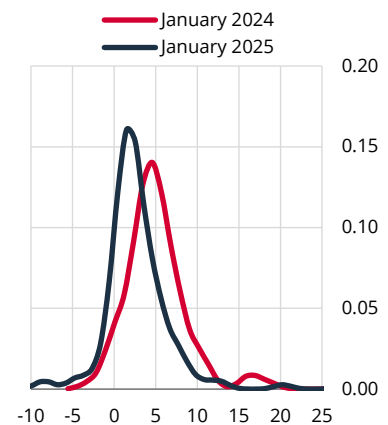
* Calculated as the ratio of the difference between the number of items with increasing prices and the number of items with decreasing prices to the total number of items.

Chart 2.4.12: Distribution of CPI Monthly Inflation (Seasonally Adjusted, Five-Digit, September 2024 - December 2024)



Source: CBRT, TURKSTAT.

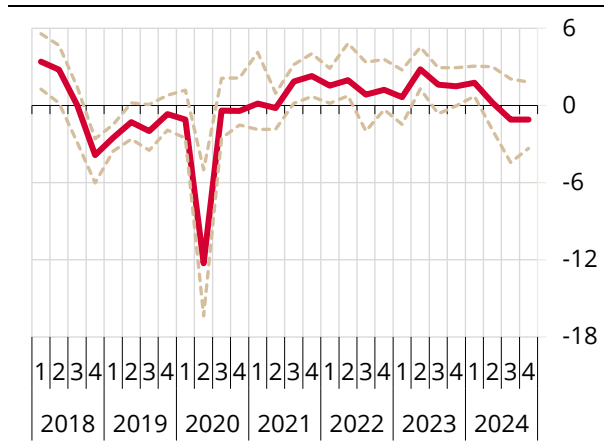
Chart 2.4.13: Distribution of CPI Monthly Inflation (Seasonally Adjusted, Five-Digit, January 2024 - January 2025)



Source: CBRT, TURKSTAT.

The output gap is estimated to have followed a flat course within the disinflationary zone in the final quarter of the year. Following the slowdown in aggregate demand conditions throughout the year, the output gap is estimated to have shifted into negative territory in the third quarter and remained almost flat in the following quarter (Chart 2.4.14). Consistent with this outlook, production indices followed a mild course in the last quarter (Chart 2.3.5), while retail sales volume (Chart 2.3.4) posted a quarterly increase, and the capacity utilization rate (Chart 2.3.6) declined slightly. In the final quarter, real credit use (adjusted for exchange rate effects) posted a limited increase, despite weakening slightly in January (Chart 2.4.15). The increase in consumer loan use was stronger than that in commercial loans. The rise in commercial loans was driven by FX-denominated loans.

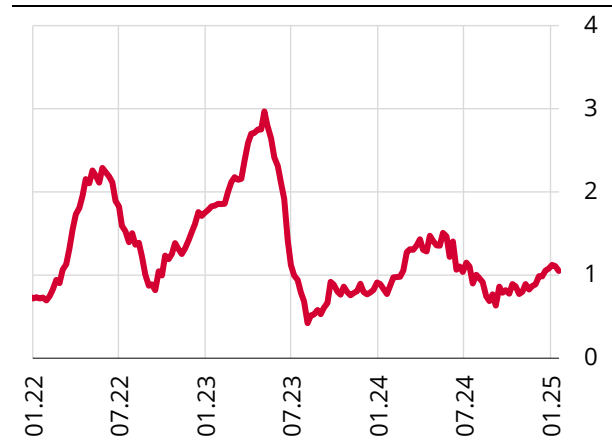
Chart 2.4.14: Output Gap* (%)



Source: CBRT.

* The average of eight output gap indicators calculated by using different methods are displayed with minimum and maximum values.

Chart 2.4.15: Total Credit Change* (13-Week Average, FX Adjusted, Real, Standardized Value)

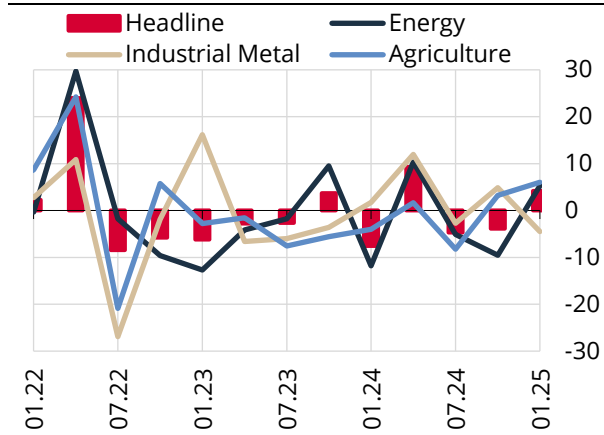


Source: CBRT.

* Weekly credit changes adjusted for exchange rates are deflated by the CPI. The 13-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.

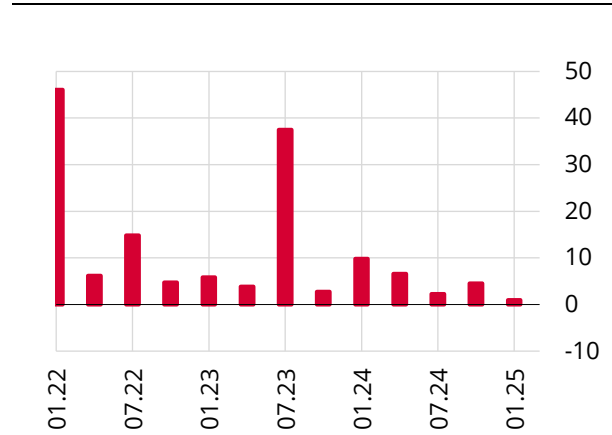
Commodity prices posted a limited rise, while exchange rates remained almost flat. The energy sub-index increased in the last reporting period. As of January, energy prices, particularly crude oil prices, increased significantly and these increases spread across the whole of the energy group in Türkiye. Industrial metal prices declined throughout the period, while agricultural commodity prices continued to rise moderately (Chart 2.4.16). In the final quarter, the Turkish lira followed a stable course and depreciated slightly (Chart 2.4.17). The course of the currency basket played an important role in the mild monthly increases in items that are highly sensitive to exchange rate developments in the reporting period.

Chart 2.4.16: Commodity Price Indices (Three-Month % Change)



Source: Goldman Sachs.

Chart 2.4.17: Currency Basket* (Three-Month % Change)

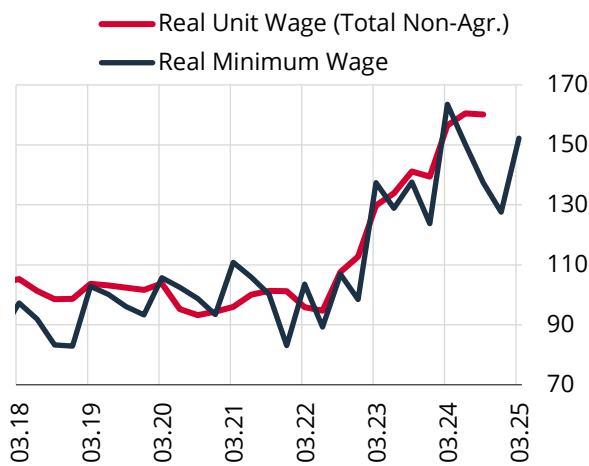


Source: CBRT.

* USD and euro have equal weights.

The weakening in the underlying producer inflation was interrupted in January. The real unit wage decreased slightly in the third quarter (Chart 2.4.18). Due to the slowdown in nominal wage increases, the real unit wage is estimated to have declined in the last quarter of the year and projected to rise again in the first quarter of 2025 following the minimum wage adjustment. In the last quarter, container rates posted a limited rise, while dry cargo transport costs declined significantly. In the same period, international commodity prices posted a limited increase mainly driven by price movements in the energy group in January. Meanwhile, the Global Supply Chain Pressure Index continued to hover slightly below its historical average. The stable course of exchange rates was another factor restraining cost pressures. Following these developments, producer inflation and the underlying manufacturing industry inflation weakened in November and December to increase slightly again in January (Chart 2.4.19). Despite the developments in January, the annualized course of producer inflation for the last three months, which was 17.81%, remained below the current annual producer inflation (27.20%). The loss of strength in services producer inflation is expected to support the slowdown in services inflation on the consumer side with a lag (Box 2.4).

Chart 2.4.18: Real Unit Wage per Hour Worked* (Value Added, 2021=100, Seasonally Adjusted) **and Real Minimum Wage**** (2021=100)

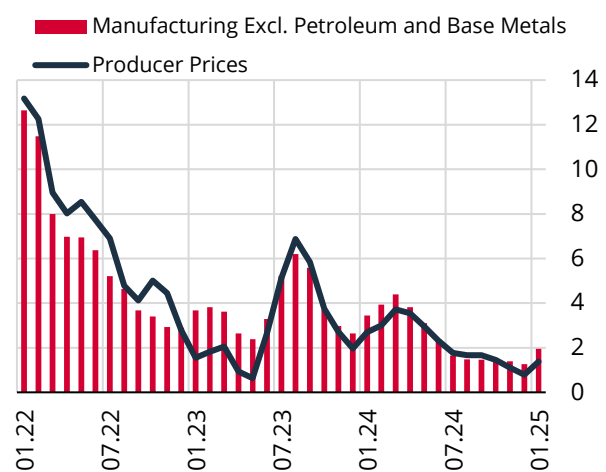


Source: CBRT, TURKSTAT.

* Deflated by the CPI. Real wage per hour worked/productivity.

** Net minimum wage data is deflated by the seasonally adjusted CPI. Forecast is used for the 2025Q1 inflation data.

Chart 2.4.19: Headline and Manufacturing (Excluding Petroleum and Base Metals) Prices (Monthly % Change, Three-Month Moving Average)



Source: CBRT, TURKSTAT.

The impact of taxes and administered items on headline inflation had weakened significantly by the end of the year but strengthened again in January. Package tour prices increased in November following the announcement of Haj pilgrimage fees. Almost half of the impact from the October revision in the euro reference rate for medicine prices was carried over into November. The inflationary impact of taxes and administered items, which was very moderate in the last period of the year, strengthened as of early 2025. In January, the rate of increase in the lump-sum special consumption tax (SCT) on fuel and bottled gas was limited to 6%. Following the wage adjustments and hikes in fuel prices in January, prices of urban transport items started to increase. Fees of intercity passenger transport by railway also rose sharply in January. However limited its direct impact may be, the increase in taxes and charges at the same rate as the revaluation rate has the potential to affect inflation adversely through expectations. Bridge and highway tolls were also increased at a rate close to the revaluation rate, which affects inflation through both the expectations and costs channels. In January, the hikes in maximum fee tariffs of the Turkish Medical Association and the Turkish Dental Association were reflected in health services prices. In addition, medical examination copayment amounts under the SSI's Health Practices Communiqué were updated as of mid-January. These developments led to a substantial increase in health services prices. The rise in medical examination copayment amounts pushed January inflation up by 0.56 points. It should be noted that the rise in the SUT tariff will also have carry-over effects in February. With the raw milk reference price raised,

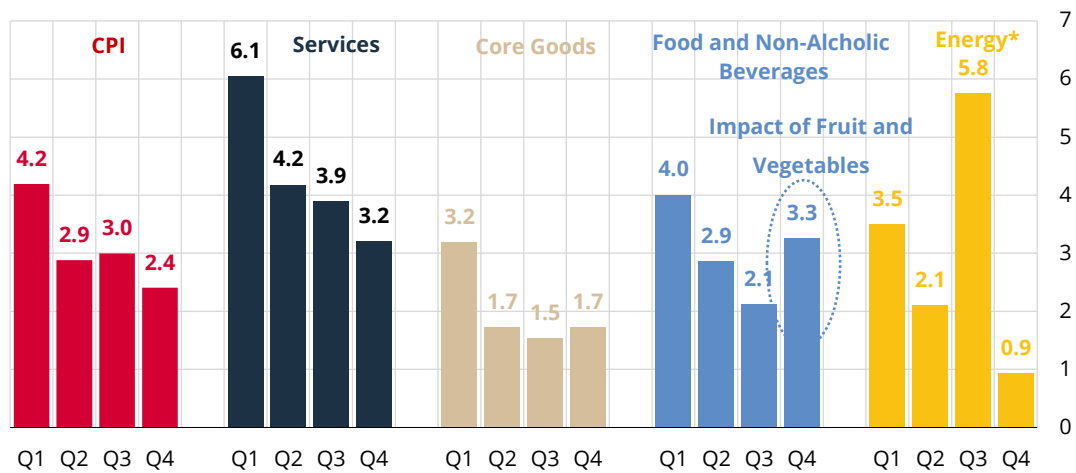
price increases in milk and dairy products are expected to strengthen in the first months of the year. The rise in producer prices over the second half of 2024 was reflected on specific SCT amounts, triggering price hikes in alcoholic beverages and beverages services. On the other hand, prices of tobacco products remained unchanged despite the revision in specific SCT amounts. Electricity prices in the CPI are expected to increase as of February as this heavily consuming group starts to be priced according to the end-source supply tariff.

Zoom In 2.3

2024 Course of Consumer Prices by Sub-Items in 2024

The slowdown in consumer inflation continued into the last quarter. Services inflation remained elevated in the first quarter of 2024, led by items with strong time-dependent price-setting and backward-indexation tendency. However, it followed a gradual downward course in the subsequent quarters on the back of weakening labor costs, the partial deceleration in food inflation (excluding fruits and vegetables) – particularly in red meat, alleviated pressures from fuel prices, and the mild course of the Turkish lira (Chart 1). Core goods inflation was relatively low in the last three quarters due to the favorable outlook in commodity prices accompanied by exchange rate developments. The slowdown in domestic demand observed especially in the second half of the year supported the fall in inflation in core groups. The rate of increase in prices of durable goods lost pace in the last quarter compared to the previous quarter, with subgroups displaying different courses. While automobile prices declined in the last quarter, relatively strong price hikes were notable in white goods and consumer electronics despite the moderate course of the exchange rate. Having posted a large increase in the third quarter of the year due to the lump-sum tax increase in fuel as well as the developments in administered items such as household electricity and natural gas, energy prices were milder in the last quarter. Meanwhile, food inflation grew stronger in the last quarter of the year compared to the previous quarter (Chart 1).

Chart 1: CPI Sub-Items (Seasonally Adjusted, Quarterly Average, 2024)

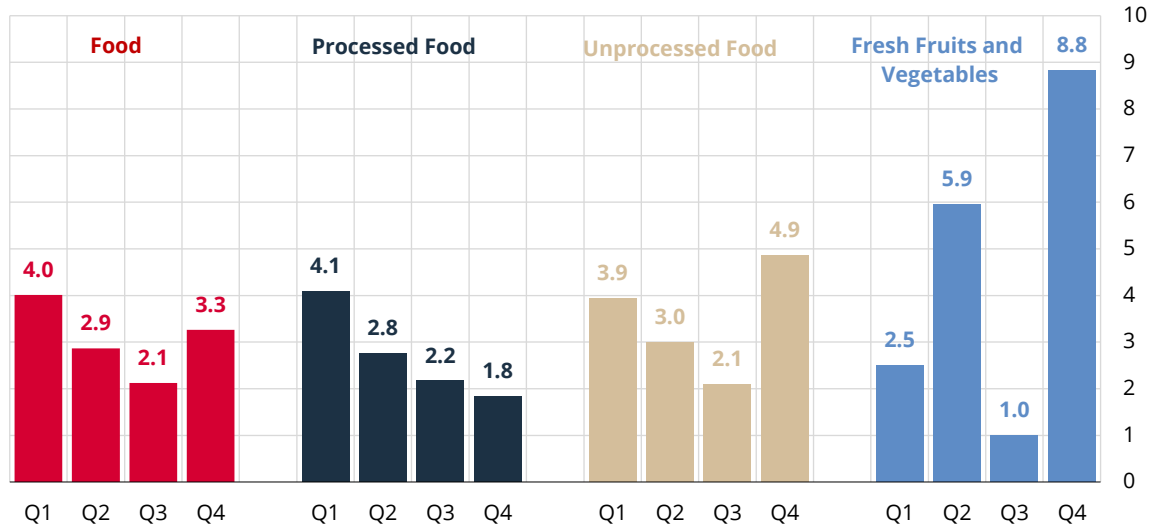


Source: TURKSTAT.

* No seasonal effect detected in energy.

In the last quarter, food inflation was driven by prices of fresh fruits and vegetables. In a breakdown of the food sector, processed food prices displayed a gradually downward course whereas unprocessed food prices rose markedly due to temporary supply conditions in fresh fruits and vegetables (Chart 2). Data from the Wholesale Market Registration System implied a lower supply of products, particularly of vegetables, in November compared to previous years. Against this background, prices of fresh fruits and vegetables increased considerably in the last quarter of the year, becoming the main factor that prevented a more favorable course in consumer inflation. .

Chart 2: Food and Non-Alcoholic Beverage Prices by Sub-Items (Seasonally Adjusted, Quarterly Average, 2024)



Source: TURKSTAT.

Box 2.1

Findings from Interviews with Firms

The CBRT holds face-to-face meetings with firms as part of the study of “**Economic Lens to the Real Sector**” (ELRS).¹ This Box summarizes the findings from the interviews conducted in the October-December 2024 period.

Economic activity recovered slightly in the fourth quarter of the year.

Total sales increased moderately driven mainly by domestic demand, while the recovery in production was limited compared to domestic demand. The investment stance continued to remain weak, and that was reflected in employment plans throughout the quarter. While cost pressures on the firms eased, the share of firms planning price increases rose due to seasonal pricing behavior.

Domestic demand was triggered by campaigns in the last quarter of the year, although factors limiting expenditures persist.

While tight financial conditions and loss of purchasing power as a result of price increases continued to limit expenditures, consumers responded positively to intensive promotions offered by the firms. In addition to that, consumers’ price sensitivity has increased, and sales weaken when the intensity of promotions declines or prices increase. In business-to-business trade, weak investment stance, cost of holding stock due to financial conditions and customer selectivity due to risks of collection continued to suppress business volumes.

In **food and fast-moving consumer goods**, the effect of the return to school and city mainly observed in September boosted sales, and sales volumes were maintained in November and December by promotions. In **apparel**, sales were in line with expectations due to the fact that the demand remained strong especially in the upper segment, campaigns were offered by firms and the winter began earlier in the middle regions. While sales in **white goods** were supported by extensive campaigns especially beginning from the second half of November, sales in **furniture** increased slightly due to affordable prices set by the firms aiming to compensate for a weak third quarter. **Automotive** sales closed the year at a record-high level as a result of competition pressures of Chinese firms and the increase in the number of automobiles directed to Türkiye because of weak demand conditions in the EU countries. **Housing** sales increased throughout the quarter due to improved financing opportunities, price increase expectations and utilization of financial returns.

Exports in the fourth quarter of the year did not change significantly compared to previous quarter.

While the external demand conditions and costs in TL terms continued to depress exports, the effect of geopolitical risks and international developments came to the fore. Signals in demand conditions remained weak due to the increasing political uncertainties in the EU countries, which are our major export destination, while presidential elections in the US caused a mild slowdown in the global trade. In addition, tensions in the Middle East persisted, causing instability in the exports to that region. Global competition conditions continued to limit firms' ability to create export opportunities through quality, fast delivery, access to new markets and product development.

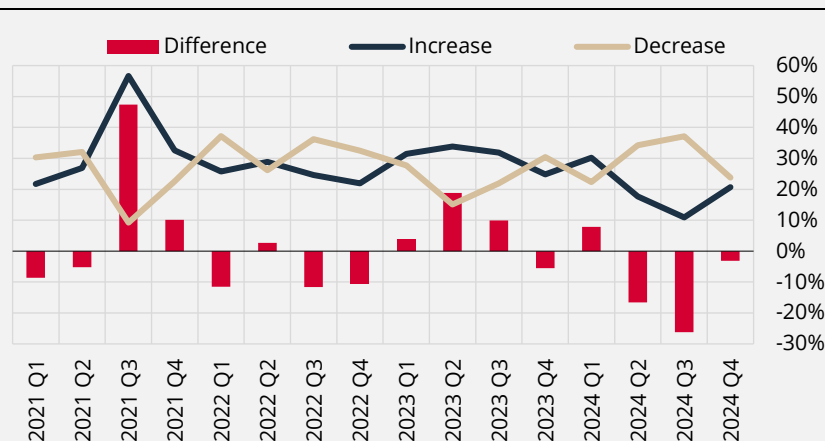
¹ The main purpose of this study is to obtain information on periodic production, domestic and international sales, investments, employment, credit conditions, and cost and price developments in a timely manner, to closely monitor economic activity, and to improve the communication between the CBRT and real sector representatives, through meetings with firms 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 firms 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 charts are produced by scoring the anecdotal information obtained from the firm interviews. This study includes evaluations and inferences based on interviews with firms and does not reflect the views of the CBRT. The information and findings obtained may differ from the official statistics, information and findings that will be published later.

Despite pricing difficulties and recession in Europe, **machinery** exports, with high market diversification, remained stable with support from demand in other market. **Basic metal** exports remained similar to the previous period and were shaped mainly by protectionism policies and competition with China. **Automotive industry** exports preserved the pace of the previous quarter. While weak demand conditions in Europe continued to depress specifically exports of heavy commercial vehicles, light commercial vehicles demand slightly recovered. **Automotive suppliers**, exports were able to reach to the level of last quarter with the support of spare parts and accessory sales. Weak demand conditions in main markets, China's pressure in the sector and harder competition conditions has limited firms' access to new projects. Firms stated that they lost market share to competitors in Central and Eastern Europe and North African countries, and those losses may rise. **White goods** exports remained flat, sale and price policies of firms in the Far East continued to depress exports in addition to weak demand conditions in Europe. Difficulties in pricing and lower than targeted profitable sales pressured supplier firms particularly in the Europe market while losses in the USA market were only partially made up for.

The weakness in **apparel** exports deepened slightly and competition difficulties spread to all segments. While the emphasis on the market and customer losses as well as pricing problems continued, firms tried to maintain their sales volumes by shifting to higher value-added products, reaching for new customers and markets and by sacrificing their profits. In **textiles**, a more positive trend compared to apparel was observed. The supportive effect of the big purchasing groups' tendency to replace decreased stocks was suppressed as a result of wider price gap with the competing countries.

The last quarter in **tourism** ended with occupancy levels above seasonal norms, especially in October. More affordable prices compared to high season and a warmer autumn increased occupancy level.

Chart 1: Demand Perception of Firms* (Compared to the Previous Quarter)



Source: CBRT ELRS.

* Demand perception shows the evaluation made by considering the current sales, orders and expectations of the firms. The difference series 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.

In the fourth quarter of 2024, the change in production was weaker compared to the limited recovery in the domestic demand.

The uncertainty regarding continuity of demand and increase in minimum wage, ongoing stock depletion, imported products and competition pressure from Chinese firms suppressed the activity of firms mainly producing for the domestic market in this quarter. For exporting companies, uncertainties about economic recovery in the European countries, the main market, and the fact that the instability in alternative markets has not ended had a negative impact on production.

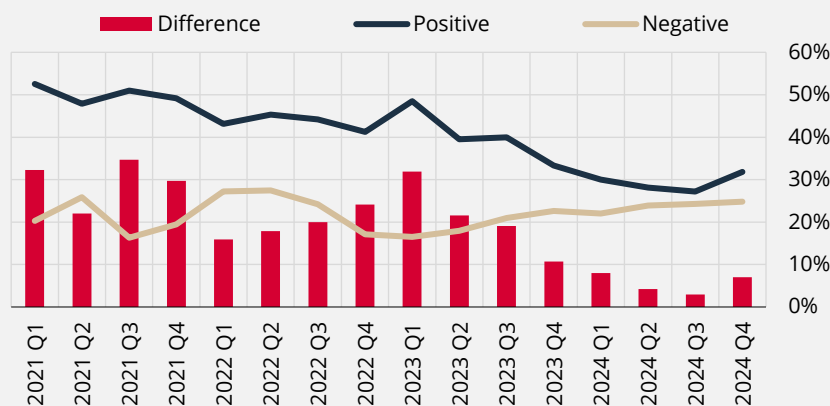
In terms of sectoral developments, in **automotive**, while weak foreign demand and tendency towards imports for supply continued to suppress production, while the preparation processes for the

commissioning of new models in the main industry support production. In **white goods**, current domestic demand met from stocks and weak foreign demand conditions continued to depress production. In **basic metal**, weakness in infrastructure activities in the domestic market and the slight increase in the manufacturing industry suppressed demand, while foreign demand remained unchanged. In **machinery and equipment**, sluggish investment expenditures in the domestic and foreign market continued to depress production. For **construction material producers**, moderate increase in first-hand housing sales had a slight impact on production, while an increase in consumers' demand for renovations and campaigns supported retail sales. In **chemicals**, the domestic market was negatively affected by the weak course of the manufacturing industry, especially in construction and textile-related areas, while foreign demand remained flat. In **textile and apparel**, weak foreign demand and increase in tendency towards imports suppressed production throughout the year. In **furniture**, while last quarter's increase in domestic demand was met mainly by stocks, it was stated by firms that the competitiveness difficulties in exports suppressed production.

The investment stance of firms continued to remain weak.

In this period, firms without investment plans highlighted uncertainties regarding demand conditions and high financing costs among the underlying reasons. On the other hand, in the current period, a slight change was observed in the investment stance of firms that see demand as relatively positive and have strong equity structure. Automation and modernization investments aimed at productivity enhancement and labor cost reduction are at the forefront of investment plans. It has been observed that firms' interest in solar energy investments continued to decline.

Chart 2: Investment Stance of Firms* (Next 12 Months)



Source: CBRT ELRS.

* Investment stance shows the evaluation made by considering the investment appetite of the firms for the next 12 months. The difference series 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.

On a sectoral basis, the investment stance was relatively positive in the **food, fabrication metal and automotive suppliers** sectors of manufacturing industry. Idle capacity in the **textile** sector, the continuing weakening in exports due to the inability in pricing and the unpredictability of the course of demand in the **apparel** sector have affected the investment stance negatively. In the **services and trade** sectors where the investment stance has been relatively positive recently, investing in stores and warehouses are at the forefront of investment plans. High land prices and current financing conditions continued to suppress investment appetite in the **construction** sector.

The weak course of investment stance continued to be reflected in employment plans throughout the quarter.

Although the majority of firms continue to maintain their current employment level, uncertainties regarding demand and automation investments suppressed their employment plans. The difficulties in finding employees and the motivation of firms to retain qualified personnel were effective in maintaining the employment level. The minimum wage increase for the year 2025 is mostly in line with firms' expectations.

In the fourth quarter of the year, firms continued to put less emphasis on financing needs.

Firms maintain their tendency to operate without creating additional financing needs, and they also try to manage their stock, production and sales plans accordingly. The decrease in cost pressure on firms throughout the quarter was effective in reducing the emphasis on financing needs mainly based on working capital. However, costs continued to form the main source of working capital needs. Due to the continued weakness in the investment stance, the investment financing needs remained stable compared to the previous quarter.

The gradual loosening in the credit conditions continued in terms of extending maturities and decreasing interest rate offers. Depending on interest rate cut expectations, banks' appetite for providing loans has increased compared to the previous quarter, and the banks mostly offer fixed interest and medium/long-term loans. However, a significant share of firms continued to state that financing costs were still high.

No additional deterioration was observed in the business-to-business trade conditions in the last quarter. Despite delays in receivable collections, the current collection problems are at a manageable level. In addition, as firms try to maintain their cautious stance against collection risk concerns that may spread throughout the market in the future, they continue to be selective in choosing customer by focusing on risk analysis, and continue to use the direct debit system, credit card, letter of guarantee and/or receivable insurance.

While the cost pressure on firms eased, price increases slowed down in the last quarter of the year.

Input, labor and energy costs were less cited as cost factors compared to the previous quarter, while references to exchange rate and financing costs remained the same. In addition to the moderate course of demand conditions and costs, competitive pressures arising from the campaign period also affected the slowdown in price increases.

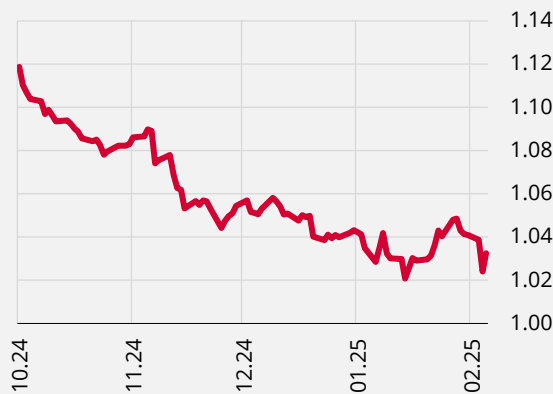
The wage adjustments to be made at the beginning of the year and the resulting expected increases in input prices play a major role in the price increases planned for the first quarter of 2025. On the other hand, demand and competition conditions are expected to limit the reflection of costs into prices.

Box 2.2

Foreign Trade Effects of Changes in Euro-Dollar Exchange Rate

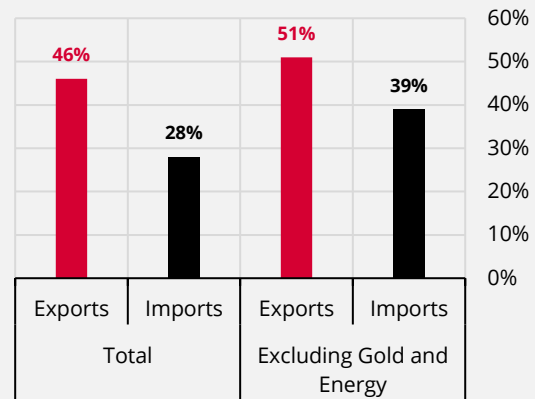
Since October 2024, the US dollar has appreciated by more than 8% against the euro (Chart1). While a significant portion of Türkiye's imports comes from countries outside the EU, EU countries have a significant share in Türkiye's exports. In 2023, 46% of total exports were denominated in euros, while only 28% of imports were denominated in euros, and excluding energy and gold, 51% of exports and 39% of imports were denominated in euros (Chart 2). This Box analyzes the impact of the change in the euro-US dollar exchange rate on Türkiye's foreign trade through this differentiation in the currency composition of foreign trade.

Chart 1: Euro-Dollar Exchange Rate



Source: CBRT.

Chart 2: Share of Euro in Türkiye's Imports and Exports



Source: Authors' calculations, TURKSTAT.

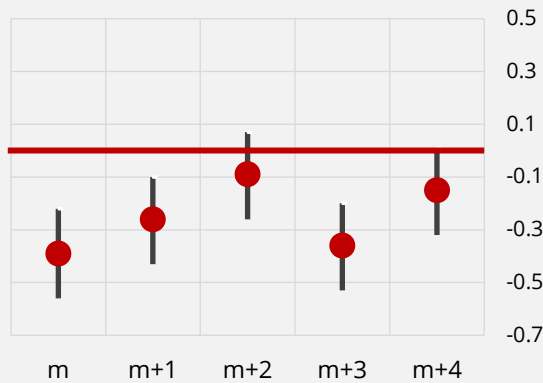
There are various factors that determine the impact of the euro's depreciation against the dollar on Türkiye's foreign trade balance. The most important of these is the extent to which importing and exporting firms pass the change in the exchange rate on to their dollar-denominated prices and the amount of trade they conduct with the adjusted price, depending on the competition conditions in foreign trade markets. In this context, firm-level foreign trade data were analyzed to examine the differential behavior of firms in response to changes in the value of the euro-dollar exchange rate. The pass-through of changes in the euro-dollar exchange rate to firms' unit import and export prices is estimated with the following fixed effects models, with monthly frequency data from January 2011 to October 2024 at the firm-product-country level.

$$Price_{i,c,t,m,p} = \alpha + \beta \text{Share of euro in exports (imports)}_{i,t-1} \times \sum_{a=0}^A \text{Depreciation of euro}_{t,m-a} + \partial_{c,t,m} + \gamma_{p,t,m} + \delta_{i,t} + \varepsilon_{i,c,t,m,p}$$

where i denotes the firm, c denotes the country, t denotes the year, m denotes the month and p denotes the product in 6-digit HS classification. The dependent variable is the unit price of exports (imports) in US dollars and the variable of interest is the interaction between the share of euro in the firm's exports (imports) in the previous year and the monthly depreciation rate of the euro against the dollar. The coefficient of interest (β) is the effect of a change in the depreciation of the euro against the dollar on the exports (imports) of a firm that makes all of its exports (imports) in euros. The regression uses a broad set of fixed effects, i.e. product-year-month, country-year-month and firm-year fixed effects. The analysis uses foreign trade observations at the firm-year-month-country-product level, with over 16 million (12 million for import regressions) observations. Firms whose annual sales and costs exceed 10,000 TL are included in the sample, and export (import) observations that exceed \$25,000 are included in the regressions.

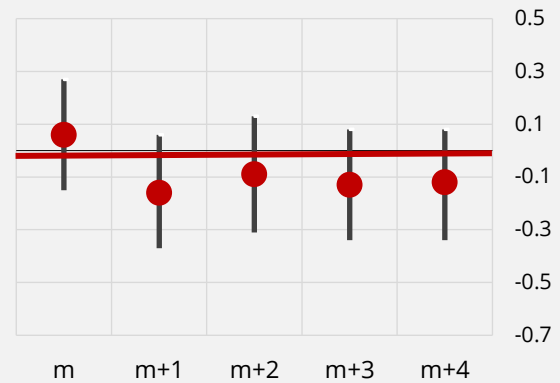
The β coefficients obtained from the regressions are shown in Charts 3 and 4, respectively. Following a 10% depreciation of the euro against the dollar, the dollar-denominated export prices of firms that conduct all of their exports in euros fall by 3.9% in the same month and by 2.6% in the first month following the depreciation (Chart 3). This implies that firms exporting in euros partially pass the depreciation of the euro on to their export prices. On the other hand, there is no statistically significant change in import prices (Chart 4). In other words, importer firms do not benefit from the exchange rate depreciation.

Chart 3: Pass-Through of Euro Depreciation to Export Prices*
(β coefficient)



Source: Authors' calculations.
* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

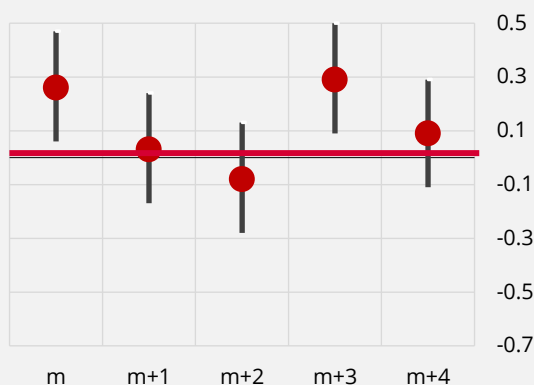
Chart 4: Pass-Through of Euro Depreciation to Import Prices*
(β coefficient)



Source: Authors' calculations.
* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

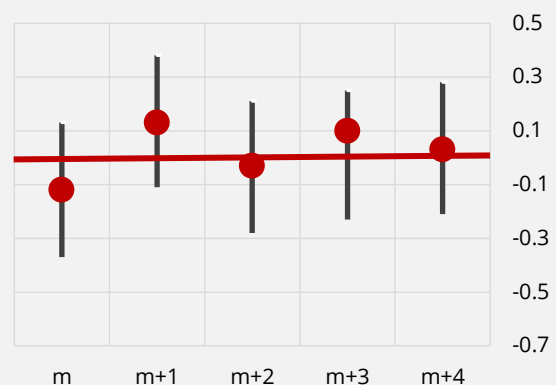
Another determining factor for both imports and exports is whether there is any change in trade volumes as a result of firms adjusting their prices. Therefore, the regressions are re-estimated with the dependent variable as quantity of exports (imports). The results indicate a partial increase in exports after the euro depreciation (Chart 5). Similar to the price, imports do not show a significant decline (Chart 6).

Chart 5: Pass-Through of Euro Depreciation to Export Quantities*
(β coefficient)



Source: Authors' calculations.
* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

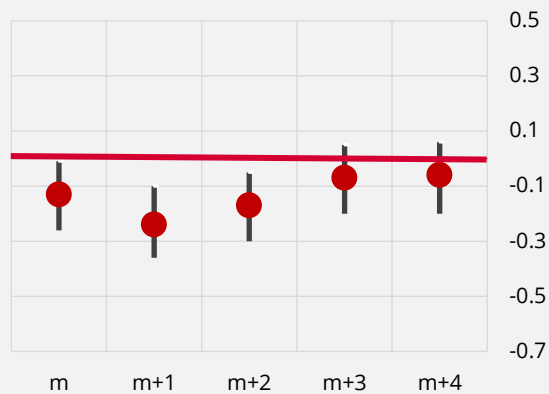
Chart 6: Pass-Through of Euro Depreciation to Import Quantities*
(β coefficient)



Source: Authors' calculations.
* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

Finally, in order to observe the consolidated effects on price and quantity, regressions are estimated where the dependent variables are foreign trade amounts (in US dollars). Accordingly, with a 10% decline in the euro-dollar exchange rate, exports decline slightly by 1.3% in the current month and by 2.4 and 1.7% in the following two months, respectively (Chart 7). In terms of import values, a smaller decline is observed compared to exports (Chart 8).

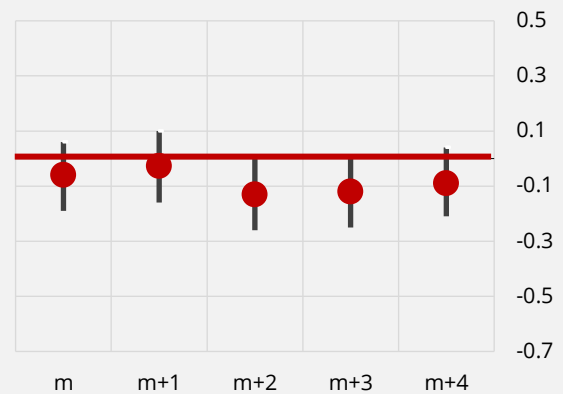
Chart 7: Pass-Through of Euro Depreciation to Export Value*
(β coefficient)



Source: Authors' calculations.

* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

Chart 8: Pass-Through of Euro Depreciation to Import Value*
(β coefficient)



Source: Authors' calculations.

* When longer-term coefficients are included in the model, statistically insignificant or economically small coefficients are obtained. Vertical lines indicate 95% confidence intervals.

In summary, the depreciation of the euro against the dollar leads to a decline in the dollar-denominated export prices of firms that export entirely in euros, while the impact on the quantity of total exports is limited since export volume increases as firms adjust prices. On the other hand, the depreciation of the euro also leads to a decline in imports, albeit weaker than exports. The results of the analysis imply that the recent depreciation of the euro-dollar exchange rate will have a limited impact on the foreign trade balance.

Box 2.3

Recent Inflation Trend from a Pricing Behavior Perspective

Although macroeconomic variables are constantly changing in an economy, it is known that consumer prices do not react immediately to these changes and can remain constant for relatively long periods of time. However, developments in macroeconomic variables (e.g. exchange rate, minimum wage, monetary policy interest rate, etc.) are reflected in inflation only when the prices of products in the consumer basket change. Therefore, understanding the processes behind price changes is critical for tracking inflation developments, constructing inflation forecasts and understanding the functionality of monetary policy.

In the economic literature, there are two main pricing behavior models explaining the timing of price changes: state-dependent (menu cost) pricing (Caplin and Spulber, 1987) and time-dependent pricing (Taylor, 1980; Calvo, 1983). The state-dependent pricing model assumes that firms incur a certain cost (menu cost¹) in the price adjustment process and change prices only if the additional revenue generated by the price change exceeds this cost. In other words, a firm updates its prices when the cumulative changes in demand and cost conditions since the last price adjustment exceed a certain threshold. Time-dependent pricing models, on the other hand, assume that each product's price has an average lifetime (e.g., a product's price changes once a year or every three months), that this lifetime is determined independently of macroeconomic conditions, and that it remains constant over time. The transition from macroeconomic conditions to inflation implied by these two pricing models differs significantly. For instance, in periods of large cost increases, the vast majority of firms in product groups with state-dependent pricing behavior will change their prices within a short period of time, thereby shortening the inflation pass-through process. On the other hand, in groups with time-dependent pricing behavior, firms will continue to change prices at their old routines, with no change in the duration of inflation pass-through.² Therefore, evaluating inflation developments alongside the pricing behavior of the relevant goods and services group allows for a more accurate interpretation of inflation trends.

Studies based on data from various countries find that firms set prices in line with state-dependent pricing behavior (menu costs) for a significant portion of consumer goods.³ Özcan-Kodaz and Yürek (2023) confirm this finding for Türkiye, showing that large cost shocks are passed on to prices more quickly in groups exhibiting state-dependent pricing. Indeed, as of 2025, it is estimated that 79.9% of products in the B index are subject to state-dependent pricing, while 20.1% follow time-dependent pricing.⁴ The purpose of this Box is to evaluate recent inflation developments within the framework of pricing behavior in relevant product groups. To this end, first, price change frequency and size indicators derived from micro price data collected by the CBRT are used to assess recent trends in state-dependent pricing groups. Second, after providing an overview of the inflation dynamics of time- and state-dependent pricing groups within the scope of the B index, recent developments in these groups are examined in detail.

¹ The menu cost includes all operational costs such as updating price lists, relabeling products on the shelf, planning and deciding on a price change and communicating with the distribution and sales network.

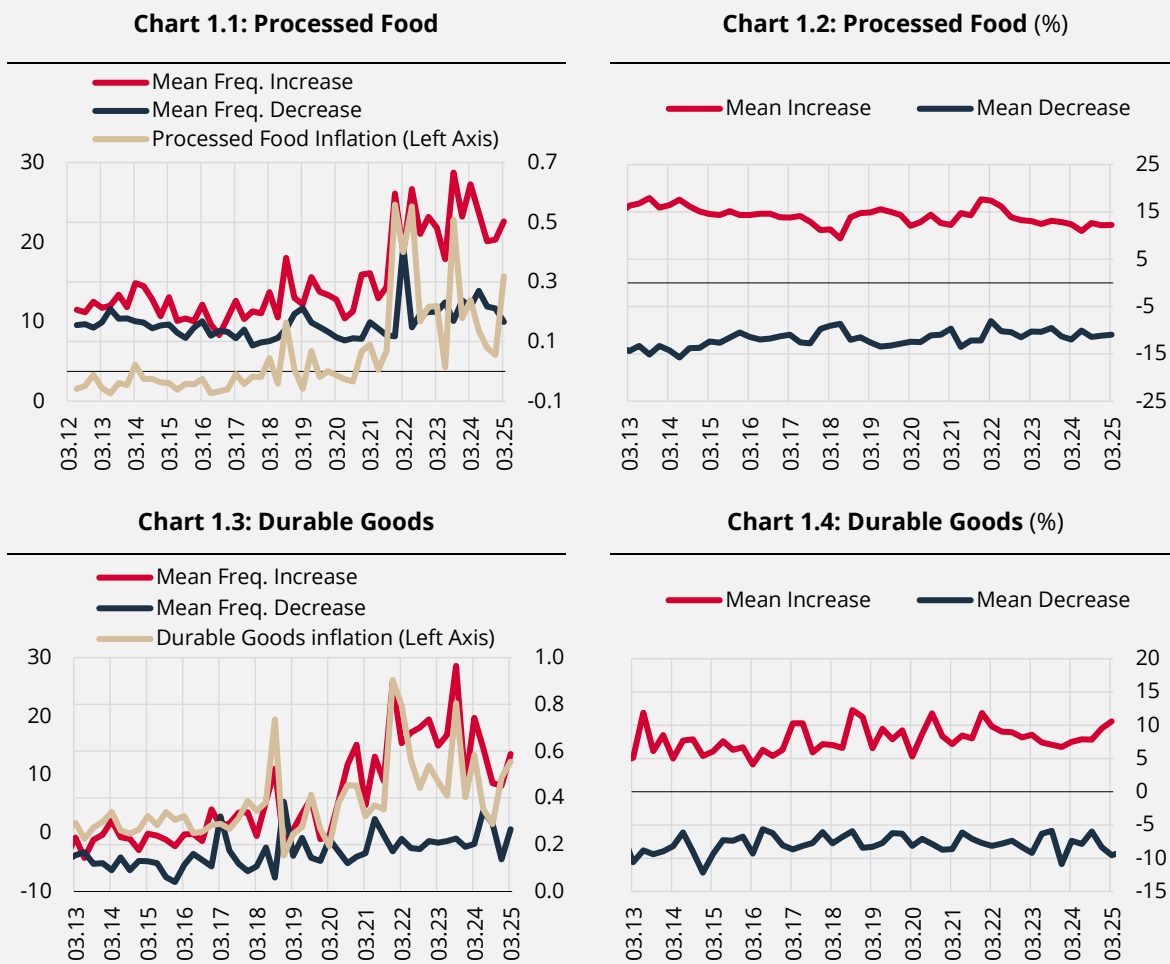
² Although the timing of price changes in time-dependent pricing items follows a certain routine by definition, there may be exceptional periods when the frequency of price updates varies, such as periods of major cost changes in the economy. For example, in recent years, with the high inflation environment, there have been interim updates in some items such as medicine prices, service fees and health services, which are normally updated once a year.

³ See Nakamura et al. (2018), Gautier et al. (2022), Gagnon (2009), Alvarez et al. (2019), Cavallo et al. (2024).

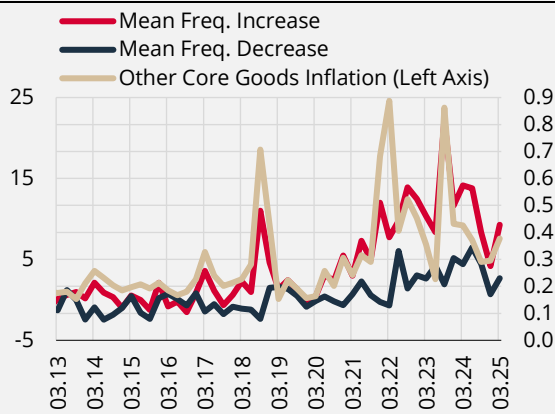
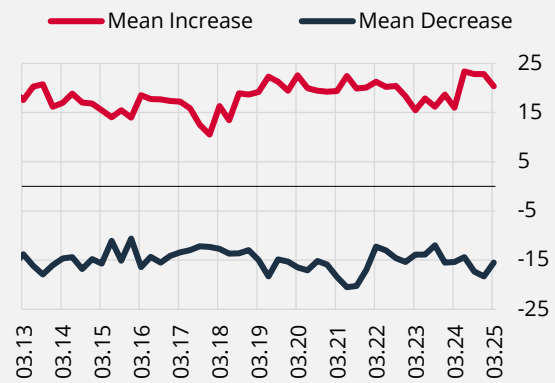
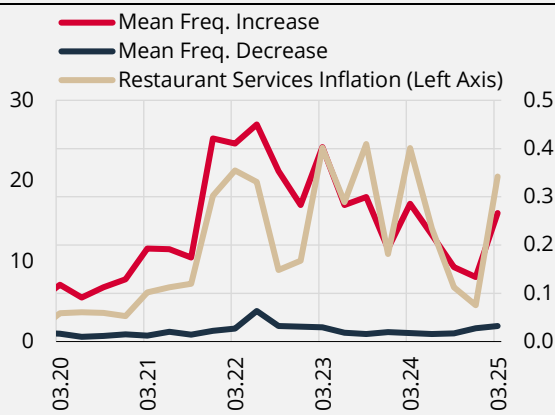
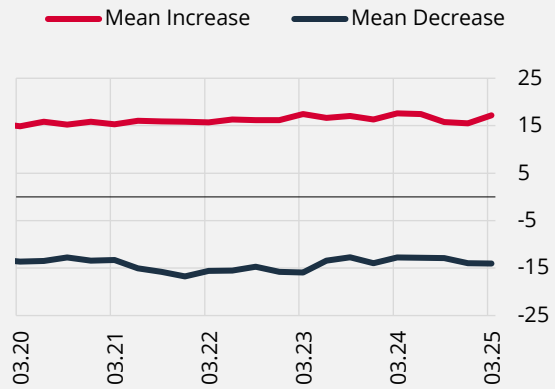
⁴ The calculation for weights is based on the classification presented in Özcan-Kodaz and Yürek (2024). In addition, the weights for 2024 were used in this study and the weights of the state-dependent and time-dependent groups were reported as 83.3 and 16.7, respectively.

Chart 1 shows indicators for the frequency and size of price changes obtained by aggregating retail micro price data for various subgroups with state-dependent pricing behavior (processed food, durable goods, other core goods, and restaurant services), along with official inflation data for these groups. The frequency of price change is the ratio of the number of products whose prices changed in a specific period to the total number of products⁵, while the size of price change is the average percentage change in the number of products whose prices changed in the relevant period. These indicators show that in periods of significant depreciation of the Turkish lira (2018Q3, 2021Q4, and 2023Q3), there were sharp increases in price change frequency, while changes in average size of price changes remained relatively limited. In parallel to this, in periods of large minimum wage increases in nominal terms (between 2022–2025), the frequency of price increases in all the analyzed groups, especially in restaurant services, increased before declining in subsequent periods. In the second and third quarters of 2024, the frequency of price changes displayed a significant downward trend in all analyzed groups and remained moderate in the last quarter of the year. However, in January 2025, the frequency of price increases increased in all analyzed groups. While this development is largely attributed to minimum wage adjustments, past observations suggest that the inflation trend is expected to decline in the upcoming period.

Chart 1: Average Frequency and Size of Price Changes*



⁵ The price increase frequency is calculated as the percentage of the prices of individual products tracked for each product at level 7-D that have increased compared to the previous period (for example, if 4 out of 10 individual products tracked for a specific product at level 7-D have increased in price compared to the previous period, the price increase frequency of the relevant product at level 7-D will be 0.4). Once the price increase frequency series for all 7-D level products are prepared, the weighted average of these series is calculated to obtain the price increase frequency for the relevant group.

Chart 1.5: Other Core Goods

Chart 1.6: Other Core Goods (%)

Chart 1.7: Restaurant Services

Chart 1.8: Restaurant Services (%)


Source: CBRT, TURKSTAT.

* Raw price data are at a bi-weekly frequency. The graphs show monthly averages for each quarter. The inflation data show the quarterly inflation in the official index, which is consistent with the micro data. There are also small differences in coverage between the micro data set and the official index. The latest data is for January 2025, and monthly inflation data for this month has been transformed to quarterly frequency. In order to ensure the consistency of the data over time, bread and automobiles were excluded from the processed food and durable goods groups, respectively. Detailed information on the scope of subgroups can be found in Özcan-Kodaz and Yürek (2023).

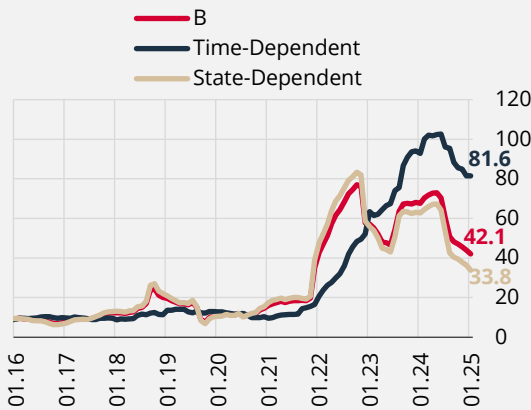
Following the classification⁶ presented in Özcan-Kodaz and Yürek (2024), an examination of annual inflation for the indices of both pricing groups constructed from official inflation reveals that inflation in the state-dependent pricing group increases sharply within a short period, while the rise in inflation in the time-dependent pricing group is spread over a longer period (Chart 2). This distinction arises because price changes in time-dependent pricing items (e.g. rent adjustments, items updated based on the revaluation rate) follow a specific calendar and occur only in certain periods of the year, rather than responding directly to changing inflationary conditions.⁷ A price adjustment in a time-dependent

⁶ The classification is based on a judgmental approach, taking into account the following conditions: i) the time of price change or the frequency of price change is limited by any regulation, ii) the price is fixed by contract for a certain period of time in purchase and sale transactions, iii) the price can only be determined at certain times of the year due to its nature, iv) the price is determined by the public and only at certain times of the year, and v) the price can change without any time restriction in free market conditions.

⁷ It covers rent, internet fees, private primary, high school and university fees, dormitory fees, school bus service, football match season tickets, money transfer fees, medicine prices, compulsory traffic and earthquake insurances, service fees related to transportation vehicles (vehicle inspection and emission measurement fees), service fees related to official documents (notary fees and documents related to court proceedings), health services, veterinary fees, lawyer fees and pilgrimage fees. For detailed information: See Özcan-Kodaz and Yürek (2024), Table Annex-1: Time-based Pricing Items.

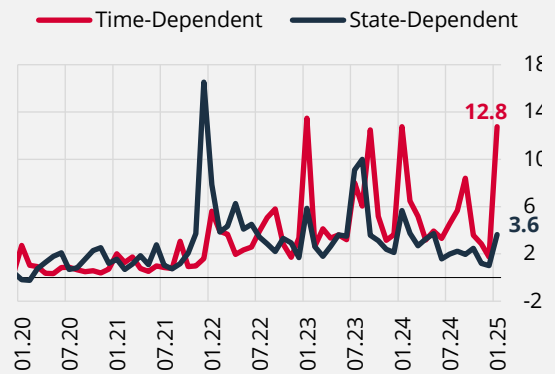
pricing item reflects changes in inflationary conditions over approximately one year, whereas a price change in a state-dependent pricing item reflects economic conditions since the previous price update. Therefore, the state-dependent pricing behavior group has a stronger signaling power regarding recent inflationary conditions. In fact, an analysis of the monthly changes in the time- and state-dependent pricing indices reveals that in periods of large cost shocks, monthly inflation in the state-dependent pricing group rises rapidly and then declines within a short time period, while inflation in the time-dependent pricing group remains elevated for a prolonged period (Chart 3). Against this backdrop, the course of the state-dependent pricing group in 2024 points to a more favorable outlook for near-term inflationary conditions than that implied by the B index.

Chart 2: Time- and State-Dependent Priced Items Index (Annual % Change)



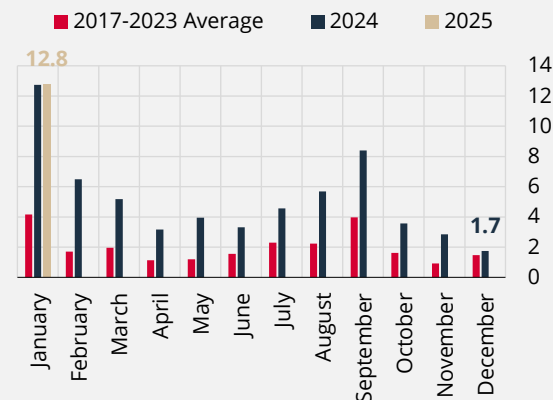
Source: CBRT, TURKSTAT.

Chart 3: Time- and State-Dependent Priced Items Index (Monthly % Change)



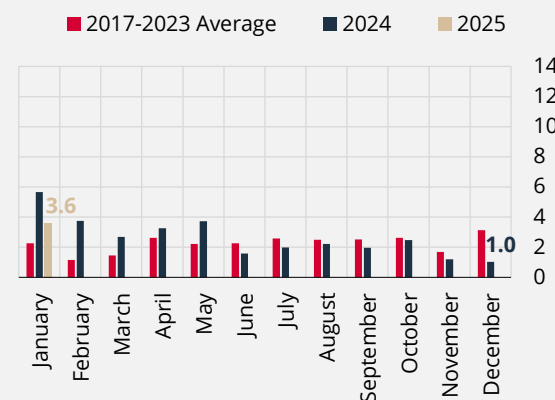
In January 2025, monthly inflation increased in both the state-dependent and time-dependent pricing groups. An analysis of the historical averages of these groups reveals that January monthly inflation in the time-dependent pricing group was significantly higher (compared to the state-dependent pricing group) (Charts 4 and 5). It is assessed that the rise in monthly inflation in the state-dependent pricing group was largely driven by wage adjustments (as indicated by the rise in the frequency of price increases) and that the increase in the group's inflation trend was temporary. The high monthly increase in the time-dependent pricing group is attributed to the timing of price revisions in January for a significant portion of the products included in the index.

Chart 4: Time-Dependent Priced Items Index (Monthly % Change)



Source: CBRT, TURKSTAT.

Chart 5: State-Dependent Priced Items Index (Monthly % Change)



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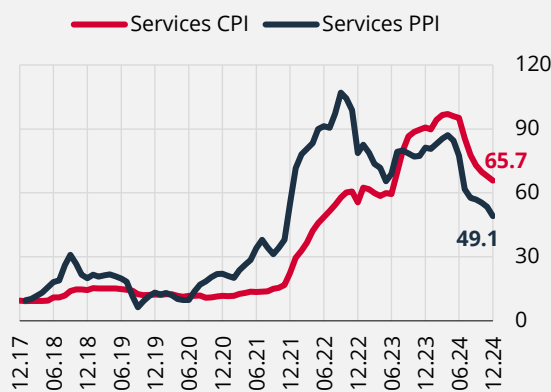
Box 2.4

The Relationship Between Producer and Consumer Prices in Services

In the services group, consumer prices are released under the CPI, while producer prices are published under the Service PPI (S-PPI). While the services item in the PPI is calculated based on the consumption expenditures made directly by households, the S-PPI data covers all sales (B-to-All) from producers to businesses (B-to-B), producers to consumers (B-to-C) and producers to abroad (B-to-E). When we look at the relationship between these two indices, producer and consumer price movements can differ significantly in some periods (Chart 1). This divergence is influenced by factors such as (i) the fact that producer prices are compiled excluding tax, (ii) differences in definition and scope between the two indices (for example, S-PPI does not include education services), (iii) differences in weight between sub-items and (iv) position in the supply chain.¹ In order to compare the indices more accurately, this Box calculates an S-PPI, matched S-PPI (M-SPPI) compatible with the scope and weights of the service CPI, taking into account possible sources of divergence.²

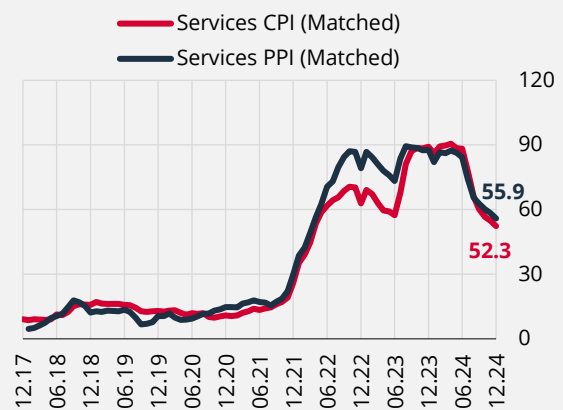
When the matched indices are examined, the consistency between CPI-Service and M-SPPI inflation has increased significantly (Chart 2). As of December 2024, the annual increases of the matched CPI-Service and M-SPPI are calculated as 52.3% and 55.9%, respectively. In Chart 2, the difference between the two series is affected by the level of inflation and may appear wider in high inflation periods. In this context, to normalize based on the level, it may be more reasonable to examine the percentage difference between inflation rates by dividing the absolute value of the difference between the annual change in the M-SPPI and CPI-Services by the M-SPPI. While the average of this measure was 32.1% before Covid, it was calculated to be 13.6% after Covid. Therefore, it can be said that the coherence between the series increased after the pandemic compared to the pre-pandemic period. This consistency between the series indicates that M-SPPI may have explanatory power for CPI-Services data. In this context, simple estimation models are constructed to test whether there is any additional information coming from producer prices for the service CPI indicator.

Chart 1: Services CPI and Services PPI
(Annual % Change)



Source: TURKSTAT.

Chart 2: Services CPI and Services PPI with Matched Indices
(Annual % Change)



Source: Authors' Calculations, TURKSTAT.

¹ While producer prices are at the earlier stages of the supply chain, consumer prices are at the final stage; therefore, producer prices respond more quickly to international price and exchange rate developments that affect Türkiye, which is an open economy.

² In order to construct an S-PPI index compatible with CPI-Service, CPA 4-digit H-PPI data were obtained from TURKSTAT. Then, COICOP 7-digit items included in CPI-Service were matched with Service PPI items. Of CPI service items, 52% could be matched with Service-PPI. There are no appropriate Service-PPI equivalents for rent, education, health and maintenance-repair services subgroups.

The services CPI series is modeled at a quarterly frequency using explanatory variables such as inertia, output gap, exchange rate basket, real unit wage and import prices as well as the lagged value of M-SPPI, and the results are shared in Table 1. According to the findings, the lagged value of the quarterly changes in the matched service producer prices provides additional information to explain the service CPI inflation. When the out-of-sample forecast performance is examined, the new model including M-SPPI reduces the root mean square error (RMSE) after 1 period from 0.43 to 0.37. Similarly, it reduces the mean absolute error (MAE) from 0.50 to 0.41. Accordingly, the inclusion of the lagged value of the M-SPPI provides around 6 to 9 percentage points improvement in forecast errors compared to the base model. The second lagged value of M-SPPI is also tested considering the data release schedule, and it is observed that it improved the model performance, albeit less than the one lagged value.

Table 2: Services CPI Forecast Model Results (Seasonally Adjusted, Quarterly % Change)

	Dependent Variable:			
	Services CPI	Services CPI	Services CPI	Services CPI
Services CPI(-1)	0.41 (0.13)***	0.39 (0.03)***	0.17 (0.06)**	0.36 (0.03)***
Services CPI(-2)	0.45 (0.11)***	0.31 (0.03)***	0.32 (0.03)***	0.15 (0.06)*
M-SPPI (-1)			0.20 (0.05)***	
M-SPPI (-2)				0.19 (0.06)**
Output Gap		0.09 (0.04)*	0.10 (0.04)**	0.09 (0.03)**
Exchange Rate Basket		0.06 (0.01)***	0.05 (0.02)**	0.06 (0.01)***
Real Unit Wage		0.27 (0.07)***	0.24 (0.06)***	0.22 (0.06)***
IUWI (PM)		0.08 (0.02)***	0.06 (0.02)***	0.07 (0.02)***
Year-End YoY Inf. (To the First Quarters)		0.04 (0.01)***	0.04 (0.01)***	0.04 (0.01)***
Sample	2006Q1-2024Q4	2006Q1-2024Q4	2006Q1-2024Q4	2006Q1-2024Q4
Number of Observations	76	76	76	76
RMSE (Out-of-Sample, 1 step)	1.00	0.43	0.37	0.42
MAE (Out-of-Sample, 1 step)	1.00	0.50	0.41	0.46

Notes: The periods of 2021Q4, 2022Q2 and 2023Q3 are controlled with dummy variables in all four models. The RMSE and MAE values of the first model (ARIMA 2,1,0) are taken as 1, and the mean errors of all other models are reported compared to the error values of this base model. Except for the Output Gap and Year-End YoY Inf. indicator, all series are used as seasonally adjusted quarterly percentage change. The Output Gap indicator is used as the level. The average of the US dollar and euro exchange rates is used for the Exchange Rate Basket. Real Unit Wages are used in the three-quarter moving average form. In the "Year-End YoY Inf." indicator, the year-end CPI annual inflation values are used to explain the first quarter of the next year. This series aim to capture items such as products subject to the Revaluation Rate, whose prices are determined in January every year, and health services, which make high updates in January by looking at the past period. All remaining series are used as seasonally adjusted quarterly percentage change. In order not to reduce the sample, the quarterly changes of the Service PPI series after 2017 are used. The 2019-2024 period is used for the RMSE and MAE calculations, and the estimates in the periods of extreme values (2021Q4, 2022Q2, 2023Q3) excluded from the model were not included in this calculation. * p<0.05; ** p<0.01; *** p<0.001.

In sum, when the differences in scope and weight between the producer and consumer service price indices are eliminated, it is observed that the consistency between these indices increases significantly. The examined series indicate that M-SPPI can be a good explanatory variable for CPI-Service data. According to the econometric models constructed, the lagged value of M-SPPI has additional explanatory power on the services consumer price estimate.

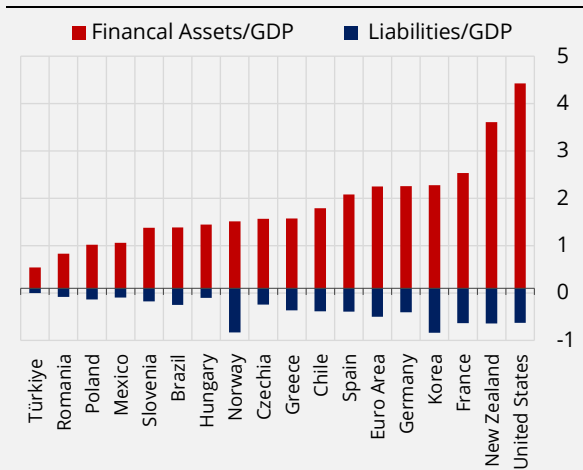
Box 2.5

Valuation Effect on Household Assets

Households can invest their savings in different instruments, such as deposits, stocks, gold, and housing. The total size of these assets varies with households' buying/selling transactions as well as the valuation effect on their existing assets. Valuation is mainly driven by the exchange rate movements for foreign currency/gold assets and the market price movements for assets such as stocks, securities and housing. The appreciation in the value of household assets may have an effect on the economic growth and inflation by influencing domestic demand through the consumption channel.¹ This study analyzes the appreciation in the value of financial and non-financial assets (such as physical gold and rental housing) held by households.

According to Financial Accounts statistics, the ratio of households' financial assets and liabilities to GDP is quite low in Türkiye compared to the selected OECD countries (Chart 1). This is mainly due to households' traditional tendency for non-financial assets, such as physical gold and housing in Türkiye. As of the third quarter of 2024, households' stock of financial assets was USD 505 billion, the value of rental housing² was USD 701 billion and the estimated value of physical gold savings³ was USD 311 billion (Table 1). The higher share of non-financial instruments in households' investments may stand out as a factor delaying the impact of monetary policy on households' propensity to consume.

Chart 1: Household Financial Assets and Liabilities, Country Comparison* (GDP)



Source: CBRT, OECD, TURKSTAT.

* Other country data is as of 2024Q2.

Table 1: Household Assets (USD Billion)

	2024Q3
Financial Assets	505
Physical Gold	311
Rental Housing Stock	701

Source: CBRT.

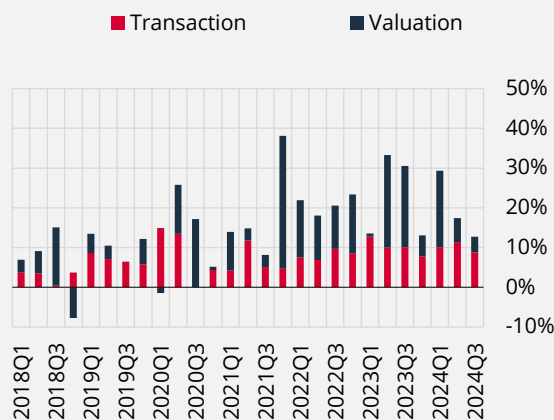
¹ Ando, A. and Modigliani, F. (1963). The "Life Cycle" Hypothesis of Saving Aggregate Implications and Tests. The American Economic Review, 53(1), 55-84.

² The number of rental houses by province was calculated by using the number of households from TURKSTAT-Family Statistics and the tenant rate data from TURKSTAT- Survey on Building and Dwelling Characteristics by Province. The value of the number of rental properties by province was calculated by using the median unit housing prices by province from the CBRT-Housing Price Index data. In the calculations, it is assumed that the dwellings are 100 square meters. By summing the province-based values, the total value of rental housing for Türkiye as a whole was determined by quarters.

³ The physical gold stock held by households is calculated using the method described in "Box 4.2. Calculation of Türkiye's Gold Stock" of the 2012-IV Inflation Report. Accordingly, the physical gold stock in the relevant quarter is calculated by adding the amount of gold production and gold imports in the relevant quarter to the previous quarter's gold stock figure and subtracting gold exports. Data from the Ministry of Energy and Natural Resources are used for gold production, while TURKSTAT-Foreign Trade Statistics are used for gold import and export figures. In the series starting from 1985, the 1984 gold stock is assumed to be zero.

Chart 2a shows nominal change in households' financial assets in terms of transactions and valuation as a share of quarterly GDP. Chart 2b shows the composition of households' financial assets⁴ and the change in the composition over time under four sub-categories depending on their sensitivity to price and exchange rate changes. As expected, items which are sensitive to exchange rate changes stand out in periods of high depreciation in the Turkish lira, while financial assets sensitive to price movements stand out in periods of intense price movements in the stock market. In the last quarter of 2021, the valuation-driven increase in financial assets reached 33.4% of quarterly GDP. The valuation effect remained high in the following period and started to lose momentum in the second quarter of 2024.

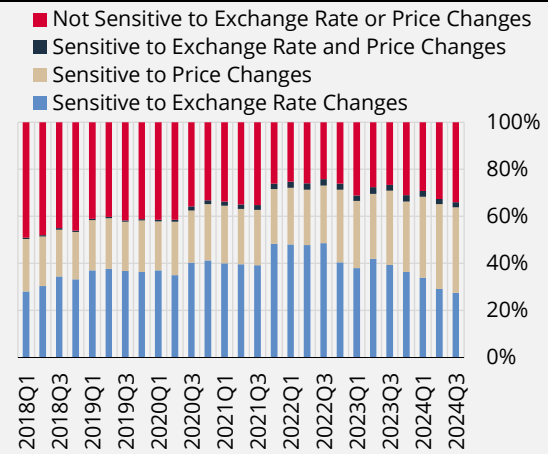
Chart 2a: Quarterly Change in Household Financial Assets* (Quarterly GDP)



Source: CBRT, TURKSTAT.

* The change in value of exchange rate protected deposit and participation accounts is included in the valuation calculation.

Chart 2b: Composition of Financial Assets (Share)



Source: CBRT.

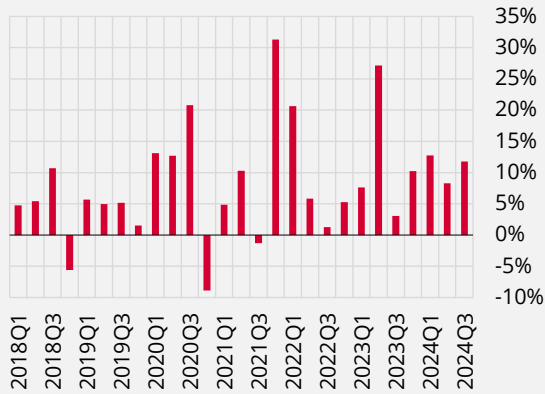
The household financial asset figures in the Financial Account statistics are compiled from the counterpart-sector data and therefore excludes physical gold and rental housing. In this study, the valuation effect on physical gold and rental housing assets, which are observed to have a significant share in household assets, are included in the analysis.⁵ The ratio of the valuation effect in physical gold assets to quarterly GDP is presented in Chart 3, while the share of the valuation effect in rental housing is presented in Chart 4. Accordingly, the ratio of the valuation effect in gold to quarterly GDP reached its highest value of 31% in the fourth quarter of 2021, as was the case for financial assets. In the following periods, there was a continuous positive appreciation in gold, while the second quarter of 2023, when the Turkish lira depreciated sharply, saw a second jump in the appreciation of gold. Unlike currency-indexed financial assets, the appreciation effect in physical gold assets was also high in the second and third quarters of 2024 due to the rise in international prices.

An analysis of the ratio of the change in the value of rental housing to quarterly GDP reveals that the valuation effect, which was below 10% in the pre-pandemic period, increased rapidly in the post-pandemic period and reached 70% in the first quarter of 2022. By 2024, the increase in value weakened and converged to the pre-2021 period (Chart 4).

⁴ Items that are not sensitive to exchange rate and price changes consist of TL-denominated currency and TL deposits excluding exchange rate protected deposit and participation accounts, TL-denominated loans and other receivables. Items sensitive to exchange rate changes include FX-denominated currency and deposits, FX-hedged deposits including FX-protected deposit and participation accounts, derivative assets and FX-denominated loans. Items sensitive to price changes include equities and mutual funds, TL-denominated debt securities and insurance technical reserves; items sensitive to exchange rate and price changes include FX-denominated debt securities.

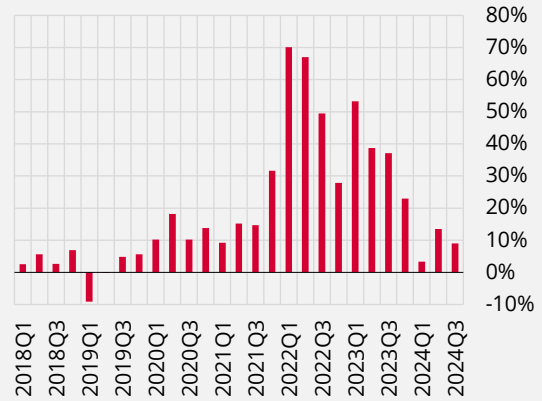
⁵ The quarterly price changes in the rental housing stock are taken as the valuation effect by assuming other variables constant. The valuation of physical gold stock in ounces is calculated by subtracting the net transaction from the quarterly change between the two stock values.

Chart 3: Valuation Effect of Physical Gold (Quarterly GDP)



Source: CBRT, TURKSTAT.

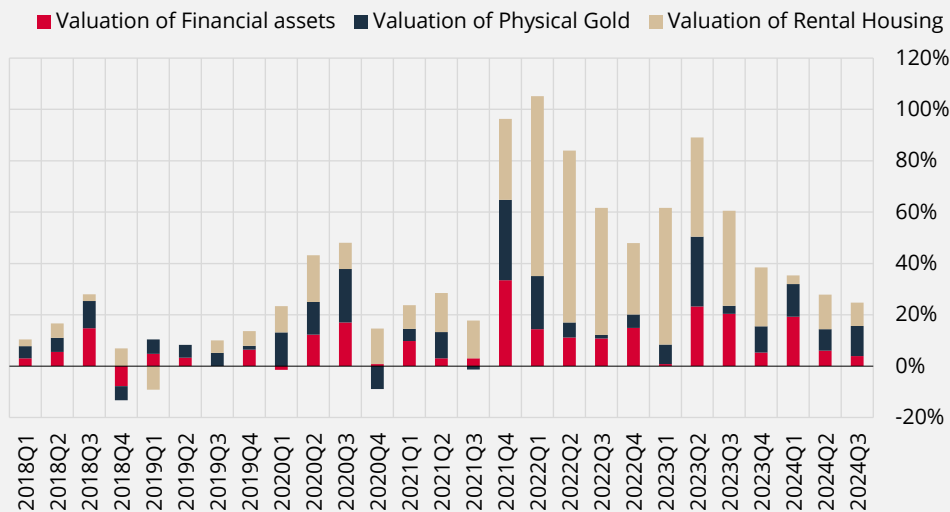
Chart 4: Valuation Effect of Rental Housing (Quarterly GDP)



Source: CBRT, TURKSTAT.

The analysis reveals that starting from the fourth quarter of 2021, the ratio of the appreciation in assets to GDP has been considerably higher compared to previous periods, and the price increase in physical gold and rental housing outpaced the appreciation in financial instruments in the period analyzed. The quarterly ratio of asset appreciation to GDP reached its highest level with 105% in the first quarter of 2022, while the appreciation in the value of rental housing dominated the appreciation in household assets in this period. As a result of the recent stabilization in exchange rates, gold and house prices, individuals' valuation-driven asset growth has lost momentum and started to converge to pre-2021 rates (Chart 5).

Chart 5: Valuation Effects in Household Assets (Quarterly GDP)



Source: CBRT, TURKSTAT.

In sum, physical gold and rental housing have a higher share in household assets than financial assets in Türkiye, and the significant increase observed in the stock value of these assets between 2021 and 2024 were due to exchange rate and price movements. On an item-by-item basis, the highest increase in the value of household assets in the period analyzed came from rental housing, followed by physical gold. Financial assets, on the other hand, provided a positive but relatively lower level of appreciation in this period. The aggregate appreciation in the stock value of household assets is considered to have been effective in the delayed realization of the slowdown driven by the tightening in demand by increasing expenditures through the asset effect channel, i.e. in the resilience of demand. Nevertheless, the weakening in the asset appreciation effect that started in the second quarter of 2024 is expected to accelerate the disinflation process by increasing the effectiveness of monetary policy.