

inflation report

2016-IV

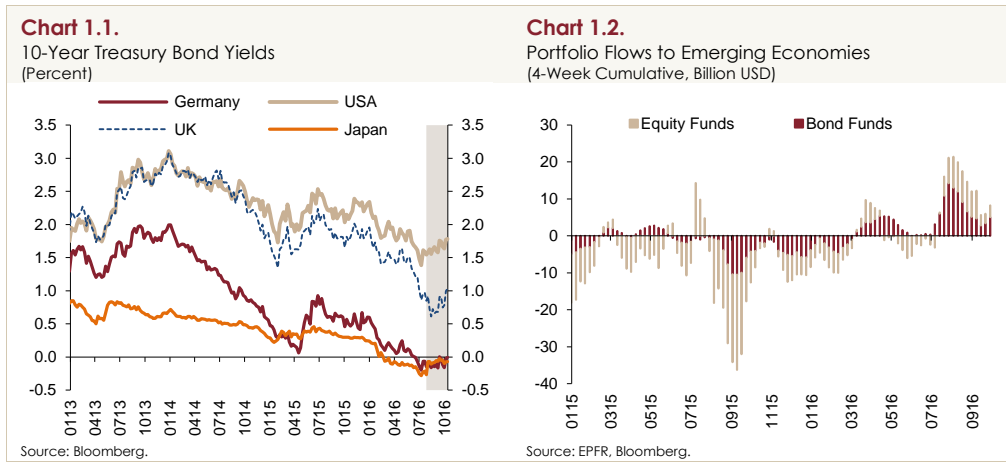


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1. Overview

In the third quarter of 2016, monetary policy developments in advanced economies were the major factor feeding into volatility in global markets. In this period, major central banks continued with monetary easing, yet growing expectations of a possible Fed rate hike and uncertainties surrounding monetary policies of central banks in advanced economies stopped the ongoing decline in bond yields (Chart 1.1). Thus, after a marked upsurge following the previous reporting period, portfolio flows into emerging economies have recently started to decelerate again (Chart 1.2).



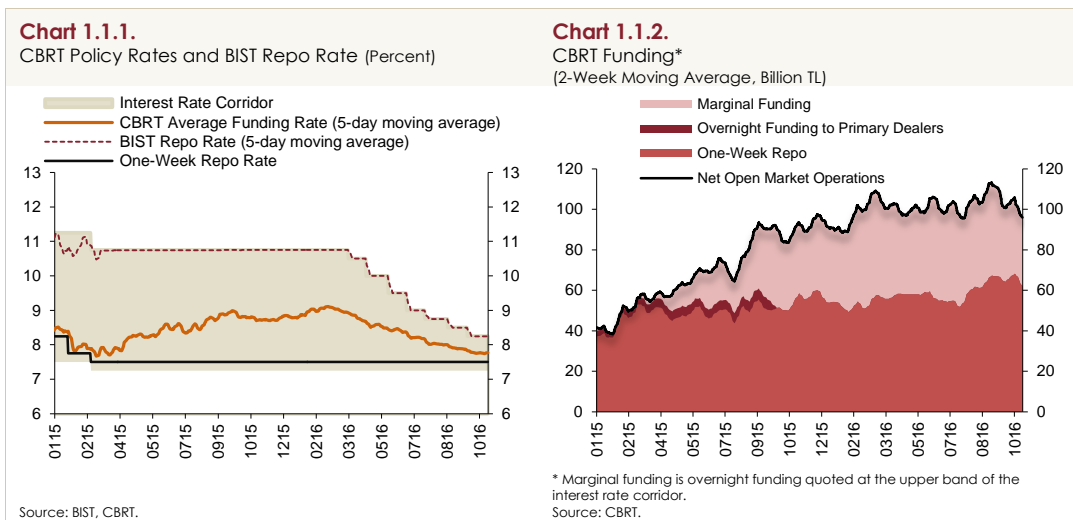
In addition to the volatility in global markets, both geopolitical developments and decisions of credit rating agencies caused domestic financial markets to fluctuate over the third quarter of 2016. In this period, Turkey attracted less portfolio flows than other emerging economies, while the Turkish lira depreciated against the US dollar and the country risk premium inched up. Overall financial conditions were supported by reduced tightness in monetary conditions, thanks to the CBRT's policy actions, and macroprudential measures. The gradual fall in the marginal funding rate has partially passed through to loan and deposit rates while consumer loans have edged up in recent months. Consumer inflation was in line with the forecasts of the July Inflation Report in the third quarter of 2016, with core goods and unprocessed food pulling underlying inflation down. Domestic demand was subdued in the third quarter but leading indicators signal that economic activity will pick up by the fourth quarter of the year. Moreover, despite downside risks to external demand due to geopolitical tensions, the external trade balance continues to improve amid increasing EU demand. On the other hand, developments regarding tourism revenues caused a slight widening in the current account deficit.

1.1. Monetary Policy and Financial Conditions

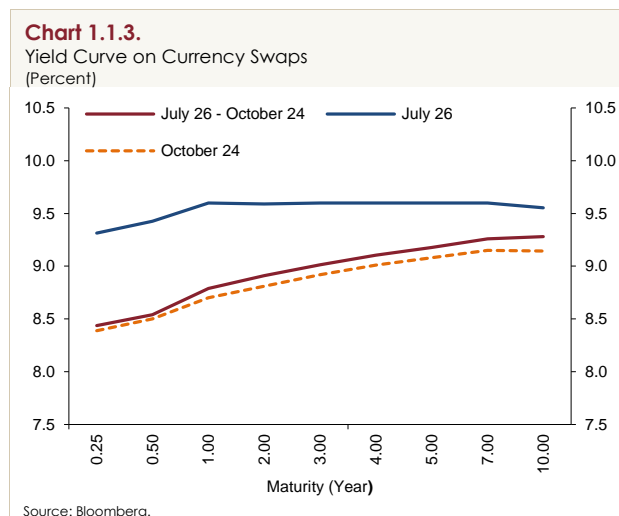
The CBRT continued with monetary policy simplification in the third quarter on the back of improved core inflation indicators, the favorable course of the global risk appetite and the effective use of monetary policy tools. Accordingly, the CBRT lowered the marginal funding rate to 8.25 percent by three consecutive reductions of 25 basis points in July, August and September. Policy rates were left unchanged in October in view of reduced tightness in financial conditions and possible spillovers of exchange rates and other costs to the inflation outlook. The marginal funding rate, one-week repo rate

and the overnight borrowing rate were kept constant at 8.25, 7.5 and 7.25 percent, respectively (Chart 1.1.1).

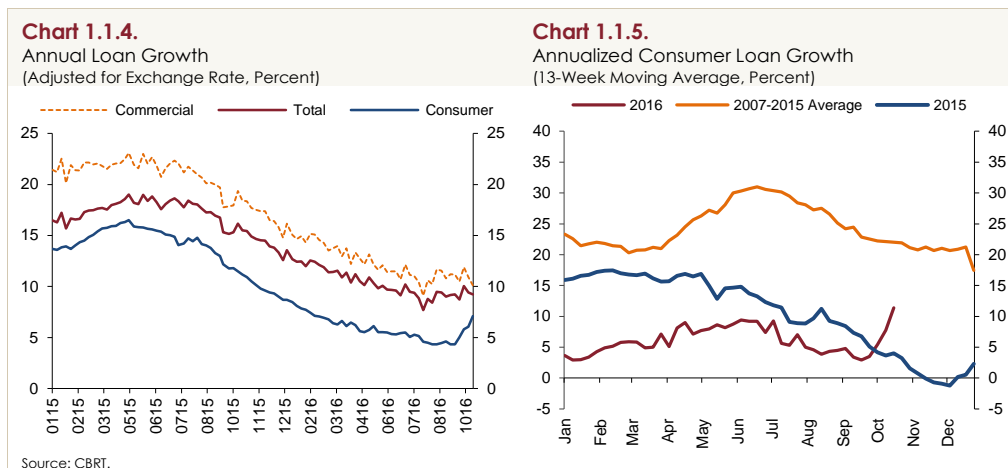
In this period, one-week repo auctions continued to be the main funding tool of the CBRT, while the share of marginal funding decreased (Chart 1.1.2). The weighted average funding rate dropped to around 7.8 percent in October. BIST repo rates remained on the decline in line with the reductions in the upper band of the interest rate corridor. In the upcoming period, the monetary policy stance will continue to depend on the inflation outlook. The CBRT will maintain its cautious monetary policy stance by taking into account the developments regarding inflation expectations, the pricing behavior and other factors affecting inflation.



Amid continued expectations for a prolonged low interest rate environment across advanced economies as well as the favorable course of domestic macroeconomic indicators and monetary policy simplification, the yield curve shifted downwards in all maturities from the previous reporting period (Chart 1.1.3). The fall was more pronounced in short-term rates due to the decline in the CBRT funding rate.



The slide in the annual growth rate of loans extended to the non-financial sector came to a halt in the third quarter of 2016 owing to reduced tightness in monetary conditions, the accommodative macroprudential measures and government incentives (Chart 1.1.4). Commercial loans, which have been growing faster than consumer loans since the start of 2014, continued to increase at a higher rate in this period as well. Although the gradual fall in the CBRT marginal funding rate partially passed through to loan and deposit rates, loan standards remained tight in the third quarter. However, consumer loans have recently rebounded amid the adoption of macroprudential measures and the liquidity policy, which improved banks' domestic funding conditions (Chart 1.1.5).



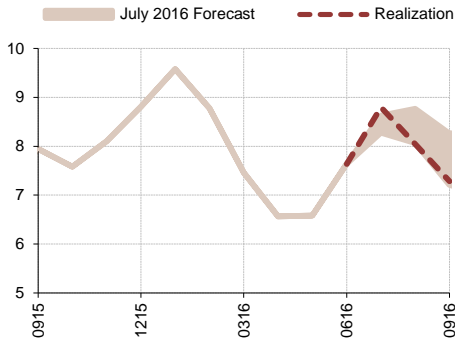
1.2. Macroeconomic Developments and Main Assumptions

Inflation

Consumer inflation ended the third quarter at 7.28 percent, remaining consistent with the lower bound of the July Inflation Report forecast (Chart 1.2.1). The fall in inflation was mostly driven by prices of core goods and unprocessed food, whereas annual inflation in tobacco and energy was up. Thus, inflation excluding unprocessed food and tobacco posted a smaller decline and ended up near the upper bound of the July Inflation Report forecast (Chart 1.2.2). The inflation outlook remained benign amid waning cumulative exchange rate effects, weakening demand conditions and modest import prices. Cost pressures driven by producer prices remained subdued in this period. On the other hand, rising tobacco prices and adjustments in fuel taxes hampered the improvement in inflation. Therefore, consumer inflation fluctuated while annual core inflation remained on a downward track through the third quarter.

Chart 1.2.1.

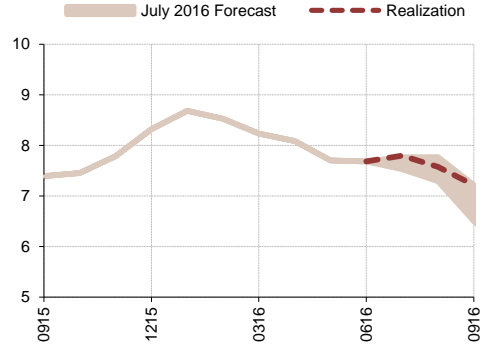
Inflation Forecasts and Realizations* (Percent)



* Shaded area denotes the 70 percent confidence interval for the forecast. Source: TURKSTAT, CBRT.

Chart 1.2.2.

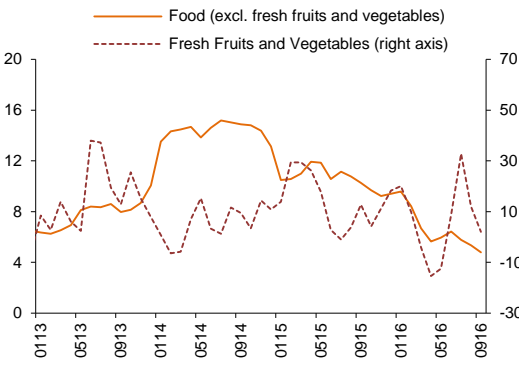
Inflation Forecasts and Realizations Excluding Unprocessed Food and Tobacco* (Percent)



After a slight increase in the second quarter, annual food inflation recorded a sharp drop in the third quarter, standing far below the path projected in the July Inflation Report. The slowing food inflation was attributed to the waning tourism demand, the contraction in exports to Russia and the measures placed on red meat. Food inflation excluding fresh fruits and vegetables fell to a five-year low of 4.78 percent in September (Chart 1.2.3). Meanwhile, despite the sluggish economic activity and slowing food inflation, services inflation remained high mostly due to rising real unit labor costs and rent.

Chart 1.2.3.

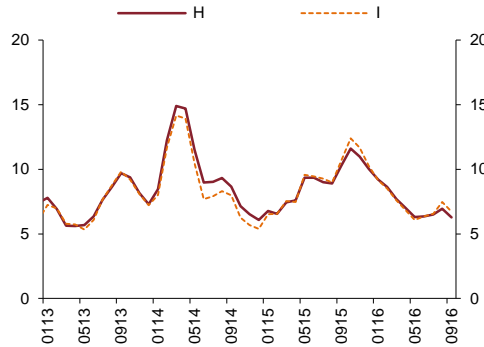
Food Prices (Annual Percent Change)



Source: TURKSTAT, CBRT.

Chart 1.2.4.

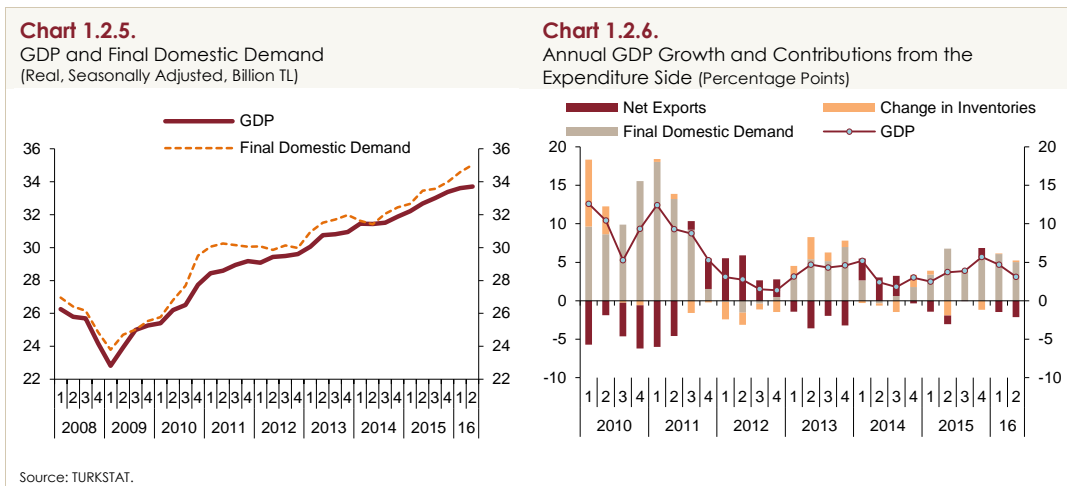
Core Inflation Indicators (Seasonally Adjusted, 3-Month Moving Average, Annualized, Percent)



The underlying core goods inflation slowed in the third quarter as a result of moderate exchange rates and weakening domestic demand. On the other hand, the underlying services inflation increased. Accordingly, the underlying core inflation indicators remained largely flat compared to the previous quarter (Chart 1.2.4). Meanwhile, the tendency to increase prices was down quarter-on-quarter as implied by the diffusion indices for core indicators, while alternative core inflation indicators followed by the CBRT posted a more solid decline. In sum, considering all indicators capturing the underlying trend and the pricing behavior, underlying inflation continued to improve in the third quarter.

Supply and Demand

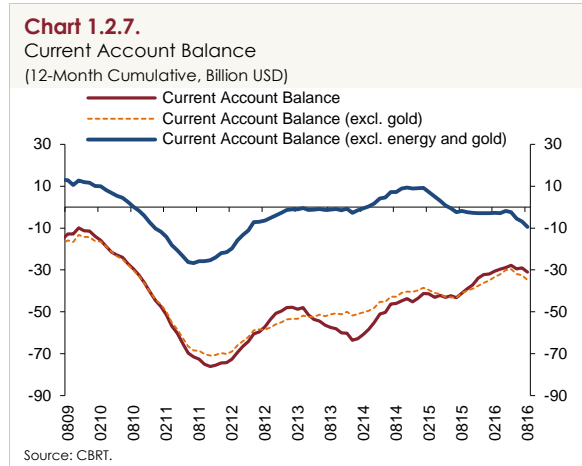
Economic activity slowed in the second quarter as predicted in the July Inflation Report. The GDP grew by 0.3 and 3.1 percent in quarter-on-quarter and year-on-year terms, respectively (Chart 1.2.5). The main driver of annual growth was final domestic demand, whereas net exports provided a more negative contribution to growth due to the tourism slump (Chart 1.2.6). The contribution of final domestic demand to growth was through both public and private consumption, while investments remained subdued. Public spending provided a large (1.7 points) contribution to growth as in the first quarter. On the other hand, value added gains were limited in industrial and services sectors with strong linkages to tourism.



Indicators for the third quarter of 2016 point to further deceleration in economic activity. In addition to the deepening tourism slump, the mid-July domestic turbulence and working day losses due to religious holidays dampened production activities. Therefore, although the sharp drop in July's industrial production was offset by a rapid recovery in August, production is expected to fall below the second-quarter level in the third quarter. Yet, working day losses caused by the religious holiday in September will make it difficult to track the underlying trend in production as in July. Despite weaker domestic demand, growing EU demand continued to bolster Turkey's exports in the third quarter. Turkey's market-shifting flexibility continues to cushion exports against the negative effects of geopolitical tensions on external demand.

Domestic demand and economic activity are expected to recover starting from the last quarter. Thanks to more accommodative monetary conditions and the adoption of other measures, the recovery in consumer loans in recent months supported the projected improvement for the last quarter of the year. Against this background, economic growth is expected to be mild in 2016, which has been marked by consecutive adverse shocks. In view of waning uncertainties in the upcoming period, producer and consumer confidence will be re-built, demand-stimulating policies will support consumption expenditures and negative contribution of net exports will fall, which will all contribute to economic recovery. In addition to the partial improvement both in tourism revenues and exports to Russia in the normalization process, recently released incentive packages are envisaged to support growth next year. On the other hand, uncertainties regarding the pace of global growth and monetary

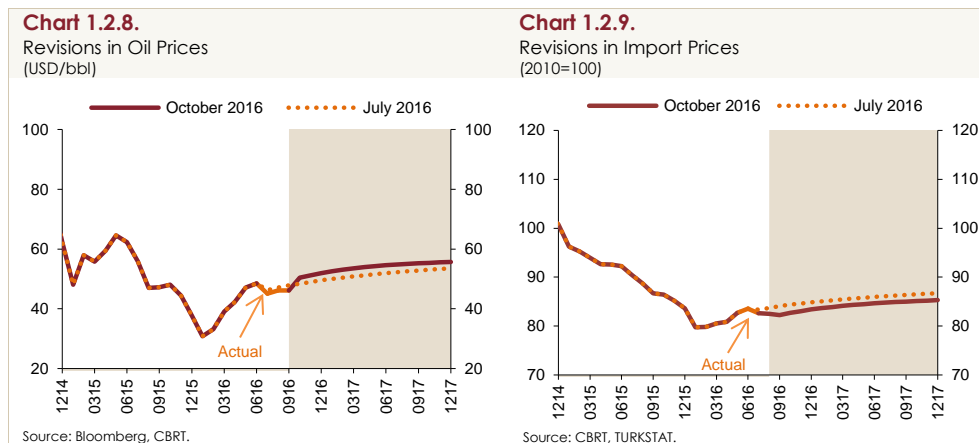
policies of advanced economies as well as the course of capital flows and geopolitical developments pose a downside risk to growth. Moreover, the persistent slump in tourism revenues and the gradual decline in the favorable effects of commodity prices are likely to cause some increase in the current account deficit in the short term (Chart 1.2.7).



Oil, Import and Food Prices

Owing to the recent developments, assumptions for crude oil prices for the upcoming period were revised upwards compared to the July Inflation Report, while assumptions for USD-denominated import prices saw some downward revision (Charts 1.2.8 and 1.2.9). In terms of annual averages, the crude oil price assumption was kept unchanged at 44 USD for 2016, and increased to 54 USD for 2017.

In the third quarter of 2016, food inflation remained far below the level envisaged in the July Inflation Report due to unprocessed food inflation. Taking into account the current trend of unprocessed food inflation as well as the decrease in the demand for food stemming from the fall in tourism revenues, food inflation, which was assumed to be 8 percent by end-2016 in the July Inflation Report, was revised downwards to 6 percent. Due to the measures taken by the Food and Agricultural Products Markets Monitoring and Evaluation Committee (Food Committee) and the ongoing weakness in food demand by the tourism sector, food price inflation is expected to be lower than its historical average in 2017 as well. Accordingly, the assumption for food price inflation was revised downwards from 8 percent to 7 percent for end-2017.

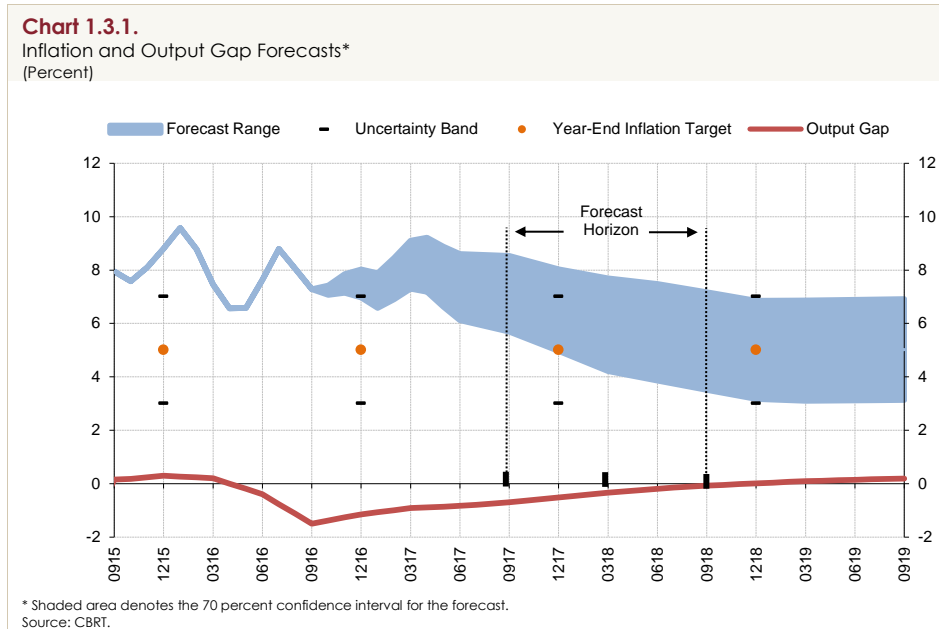


Fiscal Policy and Tax Adjustments

Medium-term forecasts are based on the assumption that adjustments to taxes and administered prices will be consistent with the inflation target and automatic pricing mechanisms. The medium-term fiscal policy stance depends on the MTP projections covering the 2017-2019 period.

1.3. Inflation and Monetary Policy Outlook

Given a cautious policy stance that focuses on bringing inflation down, inflation is estimated to converge gradually to the 5-percent target. Accordingly, inflation is likely to stabilize around 5 percent in 2018 after falling to 7.5 percent in 2016 and 6.5 percent in 2017. Hence, inflation is expected to be, with 70 percent probability, between 7 percent and 8 percent (with a mid-point of 7.5 percent) at end-2016 and between 5 percent and 8 percent (with a mid-point of 6.5 percent) at end-2017 (Chart 1.3.1).



The Turkish lira fluctuated following the July Inflation Report, while oil prices increased. In the upcoming period, TL-denominated import prices are estimated to be higher compared to the previous reporting period. On the other hand, the latest domestic developments are envisaged to curb domestic demand particularly in the short term. Accordingly, output gap forecasts were revised downwards. The year-end consumer inflation forecast for 2016 remained unchanged as downside and upside effects on inflation cancelled out each other. On the other hand, end-2017 consumer inflation forecast was revised upwards by 0.5 points as the upside effects driven by import prices outweighed the effects of the downward revision in the output gap and food inflation.

1.4. Risks and Monetary Policy

Overall financial conditions remain buoyed by reduced tightness in monetary conditions, thanks to the CBRT's policy actions, and macroprudential measures. The gradual fall in the marginal funding rate has partially passed through to loan and deposit rates. Supported also by the recently enforced macroprudential measures, consumer loans showed some recovery in the last couple of months. On the other hand, due to global and geopolitical developments that had effects on domestic financial

markets, loan conditions still remain tight. As the end-September downgrade of Turkey's sovereign credit rating to non-investment grade was largely anticipated by markets, the reaction of financial markets remained limited. Even though this downgrade weighs on external funding costs, loan conditions are supported by liquidity measures, macroprudential arrangements and other incentives. On the other hand, the CBRT may introduce accommodative adjustments to required reserves and other liquidity instruments in case of a higher-than-expected tightness in financial conditions.

The latest data indicate a remarkable economic slowdown in the third quarter. Accommodative incentives and measures are projected to stimulate a rebound in domestic demand starting from the last quarter. Accordingly, the Turkish economy is expected to grow mildly in the remainder of 2016 and throughout 2017. However, economic activity is exposed to downside risks stemming from tourism revenues, the global economic outlook, uncertainties regarding the monetary policies of advanced economies and geopolitical developments. The CBRT will continue to closely monitor the impacts of the developments in economic activity on price stability and financial stability.

In the third quarter of the year, inflation recorded a decline on the back of improvements in unprocessed food and core inflation indicators. While the lagged effects of the cumulative exchange rate developments on annual inflation continued to wane, slowing aggregate demand supported disinflation and the underlying trend of core inflation displayed some recovery. However, the tax rise in fuel products restrained the improvement in inflation through energy and transport prices. Although the developments in TL-denominated import prices are expected to push inflation upwards, the mild course of aggregate demand is projected to support the gradual decline in core inflation. Moreover, forecasts are based on the assumption that the year-end food inflation in 2016 and 2017 will be lower than the projections of the previous Report amid the tourism-induced slowdown in food demand and the actions taken by the Food Committee.

Inflation forecasts accommodate both upside and downside risks. Inflation may settle on a lower-than-expected path, should economic activity recover at a slower-than-envisioned pace in the upcoming period. On the other hand, uncertainties regarding oil prices and global markets pose an upside risk to inflation through the cost channel. Meanwhile, the volatility in food prices pose risks in both directions for 2017. The CBRT will closely monitor the developments affecting inflation and take necessary policy measures to achieve price stability.

Leading indicators for the third quarter of 2016 point to a mild improvement in global economic activity. However, the historically low levels of global growth and the trade volume lead to sustained environment of low interest rates in advanced economies. Accordingly, the risk appetite towards emerging economies has followed a robust course in recent months. On the other hand, uncertainties regarding global monetary policies cause fluctuations in portfolio inflows. In fact, amid strengthened perceptions about the Fed's possible rate hike coupled with the uncertainties regarding the monetary policies of other advanced economies, portfolio flows towards emerging economies have recently trended downwards after a surge following the previous reporting period.

Against this background, the marginal funding rate, which was lowered gradually under the simplification process as of March 2016, was kept constant in October. The completion of the simplification will ensure funding via a single rate, thereby bringing short-term market rates closer to the

CBRT funding rate. Simplification is believed to contribute to the effectiveness of the transmission mechanism by providing a more reliable assessment of the monetary policy stance. Therefore, simplification of the monetary policy will be finalized within a reasonable schedule. The direction and timing of simplification will depend on developments affecting the inflation outlook and financial stability.

Despite experiencing significant external shocks in recent years, the adopted policy framework proved successful in containing the deterioration in inflation and inflation expectations. However, price stability is yet to be achieved. Ten years of experience in inflation targeting showed that combatting inflation requires joint efforts. Thus, to reduce inflation to the 5-percent target permanently, all institutions must fulfill their duties under a holistic approach by also taking structural factors into account. In this respect, actions taken by the Food Committee set an invaluable precedent. In the upcoming period, the CBRT will bolster these efforts by undertaking extensive studies to raise awareness regarding structural issues in inflation dynamics.

Developments in fiscal policy and tax adjustments are monitored closely with regard to their effects on the inflation outlook. The baseline monetary policy stance is formulated under the assumption that fiscal discipline will be maintained and there will be no unanticipated hikes in administered prices. A revision of the monetary policy stance may be considered, should the fiscal policy deviate significantly from this framework, and consequently have an adverse effect on the medium-term inflation outlook.

In recent years, sustaining fiscal discipline has contributed significantly to lowering the sensitivity of the Turkish economy against external shocks. In the current environment of highly uncertain global markets, the gains from maintaining and further advancing these achievements are significant. Any measure to provide permanent fiscal discipline and reduce the savings deficit will support macroeconomic stability and contribute positively to social welfare by keeping the interest rates of long-term government securities at low levels.

2. International Economic Developments

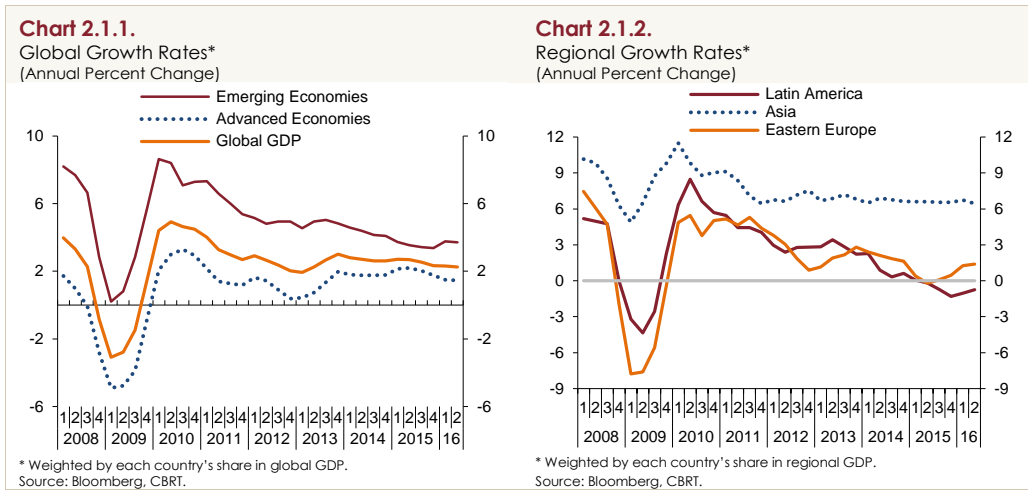
The global economic outlook hints that global growth performance, which was sluggish in the first half of the year, will remain weak in the second half and register only a gradual recovery afterwards. In June, Britain's decision to abandon the EU (Brexit) posed a notable downside risk to the growth performance of advanced economies. Possible macroeconomic consequences of Brexit on the UK and EU countries are yet to unfold. Financial markets did not react as adversely as expected to Brexit; yet the increased economic and political uncertainty in the UK and the anticipated decline in financial flows and trade between the UK and other EU countries weigh considerably on the medium-term macroeconomic prospects of both sides. Moreover, US growth performance remains below expectations, fueling the sluggish economic activity in advanced economies. Emerging economies are expected to witness a modest rebound in 2016, yet downside risks to growth are still brisk despite improving external financing conditions. In particular, emerging economies are exposed to downside risks stemming from the probable adverse impacts of the shift from investment-led growth to consumption-led growth in the Chinese economy, the negative effects of the low-income environment in commodity-exporting countries and the languishing demand in advanced economies.

Weak economic activity and global trade volume lead to low commodity prices and inflation rates as well. This implies that loose monetary policy practices supporting economic activity will be maintained in the upcoming period, thus interest rates will remain low at a global scale. In this context, investors in search of high returns were oriented towards emerging economies amid improved risk sentiment, and emerging economies saw a considerable rise in portfolio inflows in the third quarter. In the upcoming period, portfolio inflows are expected to be sustained while also being subject to a downside risk due to the possible rate hike by the Fed.

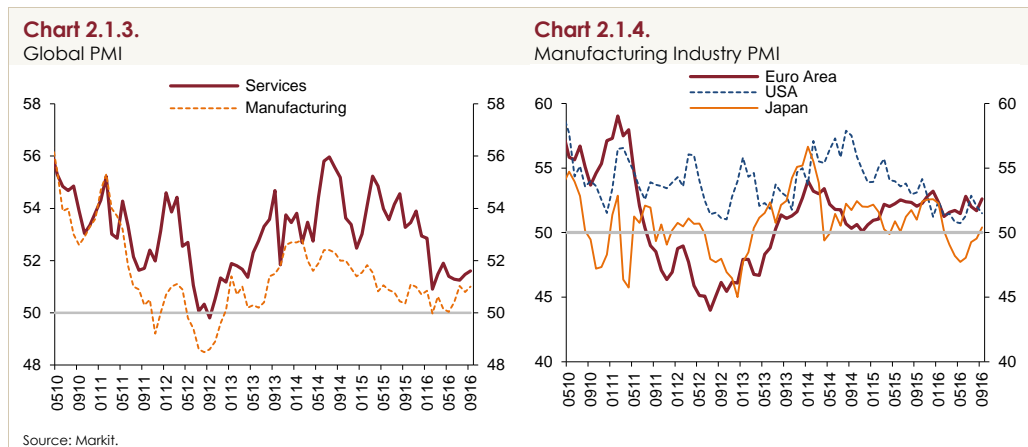
The decelerated global growth since the global crisis despite the implementation of a loose monetary policy proves that currently enforced accommodative monetary policies should be accompanied by expansionary fiscal policies in the form of higher public investments in growth-oriented sectors. Adopting structural reforms that will provide permanent improvement in the labor market and increase productivity in the long run is critical to enhance the effectiveness of the macroeconomic policies.

2.1. Global Growth

Global economic activity remained weak in the second quarter and the global growth was virtually unchanged compared to the previous quarter (Chart 2.1.1). Among advanced economies, the annual growth rate decreased in the US, the Euro area and Canada, but increased in the UK and Japan in this period. On the emerging economies front, growth in China, one of the major drivers of global growth, remained steady at 6.7 percent. On the other hand, recession in Russia and Brazil lost further pace, acting as a significant factor to spur growth in emerging economies in the second quarter of the year. Across regions, Latin America and Eastern Europe recorded more favorable quarter-on-quarter growth, while growth remained flat in Asian countries (Chart 2.1.2).



PMI data for the third quarter signal a more favorable growth performance in the global economy compared to the second quarter (Chart 2.1.3). The Euro area manufacturing industry PMI show that the positive outlook lasted through the third quarter, but growth rate has lost some momentum since the previous quarter. Meanwhile, the manufacturing industry PMI data of the US and Japan displayed a quarter-on-quarter improvement in the third quarter (Chart 2.1.4). Other leading indicators regarding the US and Japanese economies also signal accelerated growth in the third quarter, which will drive up the growth rate of advanced economies.



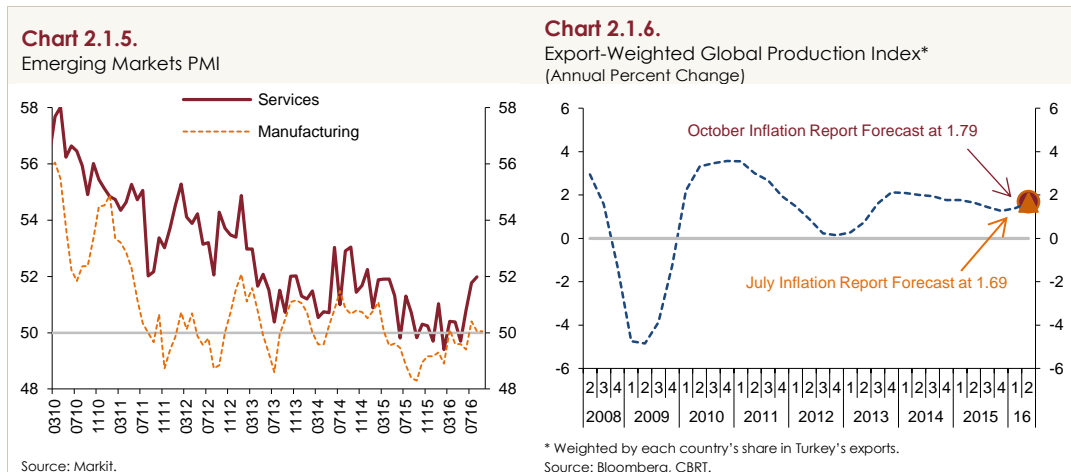
Manufacturing industry PMI in emerging economies exhibited an upsurge in the third quarter (Chart 2.1.5). In this period, the Chinese economy recorded a year-on-year growth by 6.7 percent, remaining unchanged from the previous quarter. The benign course of the Indian manufacturing industry PMI hints at a faster growth in the third quarter compared to the previous quarter. Similarly, the PMI data for Brazil and Russia indicate that economic contraction lost sizeable momentum in both countries. Therefore, in emerging economies, growth performance is expected to prove better mostly on the back of China and India, and the third-quarter growth may go above the second-quarter readings. Against this background, the economic outlook for advanced and emerging economies suggests a lingering weak global economic activity in the third quarter of the year; but the global growth rate may be higher compared to the previous quarter.

The global growth forecast for end-2016 has increased slightly since the previous reporting period, being revised upwards for Japan, the UK and the Euro area, and downwards for the US. On the emerging economies front, 2016 growth forecasts were revised mostly upwards compared to the previous reporting period (Table 2.1.1). Accordingly, the annual global growth rate of the export-weighted global production index, which was revised by the October Consensus Forecasts, has inched up since the July Inflation Report (Chart 2.1.6). Thus, the external demand outlook for Turkey remains sluggish in 2016, despite a slight improvement in the inter-reporting period.

Table 2.1.1.
Growth Forecasts for end-2016 and end-2017
(Average Annual Percent Change)

	July		October	
	2016	2017	2016	2017
Global	2.4	2.7	2.5	2.8
<i>Advanced Economies</i>				
USA	1.9	2.2	1.5	2.2
Euro Area	1.5	1.3	1.6	1.3
Germany	1.6	1.3	1.8	1.3
France	1.5	1.3	1.3	1.2
Italy	0.9	0.9	0.8	0.7
Spain	2.8	2.1	3.1	2.1
Japan	0.5	0.8	0.6	0.9
UK	1.6	0.7	1.9	0.9
<i>Emerging Economies</i>				
Asia-Pacific	5.6	5.5	5.7	5.6
China	6.5	6.3	6.6	6.3
India	7.6	7.6	7.6	7.7
Latin America	-0.5	2.0	-0.3	2.1
Brazil	-3.3	0.8	-3.2	1.2
Eastern Europe	1.3	2.3	1.5	2.3
Russia	-0.8	1.2	-0.6	1.2

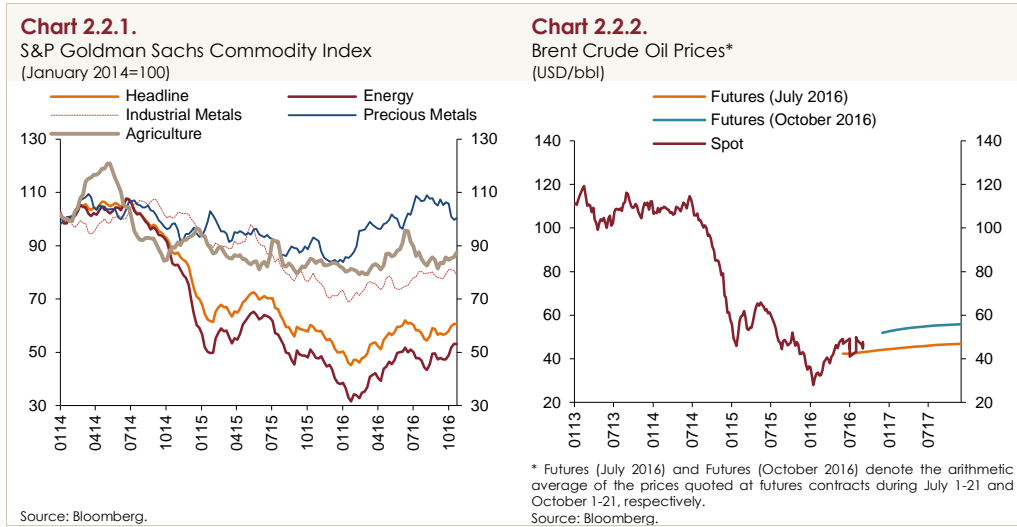
Source: Consensus Forecasts.



2.2. Commodity Prices and Global Inflation

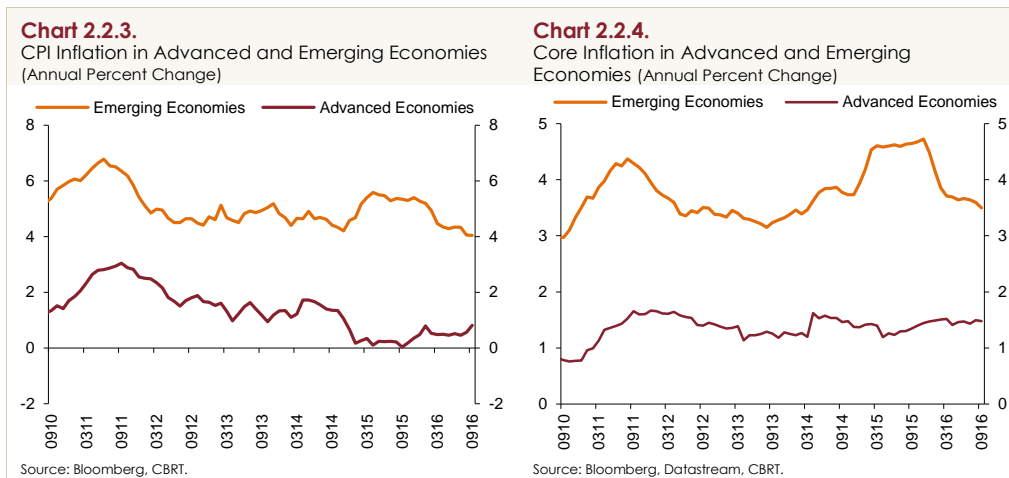
The headline commodity index followed a fluctuating course in the third quarter of 2016 and receded by 2.6 percent at the end of the second quarter. The agriculture index proved higher than expected owing to improved global weather conditions. Particularly due to the extraordinary rise in harvest in the US, the agriculture index tumbled by 5.2 percent in the third quarter of the year, leading to a decline in the headline commodity index. Meanwhile, industrial metals index increased by 4.1 percent in this period. The Chinese economy settled on a steadier path amid the adoption of accommodative measures, while the relatively strong growth performance of the Indian economy pushed up the industrial metals index. In the third quarter of the year, precious metals and energy

indices remained almost unchanged compared to the end of the previous quarter. It should be noted that the languishing course of global economic activity and sustained accommodative monetary policies by central banks led to a decline in financial yields. This supported gold demand and caused precious metals index to remain elevated (Chart 2.2.1).



Oil prices settled on a 40-50 USD band in the third quarter of the year. At the extraordinary OPEC meeting held in Nigeria on September 26-28, 14 member countries decided to cut down on production. This leading decision is expected to become clear and official at the ordinary OPEC meeting to be held in Vienna on November 30. A long-awaited consensus among OPEC members was welcomed by the market and Brent crude oil prices climbed to an average 50 USD in the third week of October. Consequently, December 2017 contracts for Brent crude oil, which were traded at 46.9 USD on average in July, have been traded at 55.8 USD on average since October 21 (Chart 2.2.2). At the World Energy Congress held in early October in İstanbul, Russia declared support for the suspension of production by OPEC. However, there are also downside risks to oil prices in the upcoming period. In particular, Iran was exempted from quantity limitations so that oil production can recover following the enforced sanctions. In addition, this decision by OPEC is projected to stimulate the US shale oil extraction, which is currently on the rise. Moreover, in line with the mitigated troubles in Nigeria and Libya, which emerged in early summer, oil production trended upwards. Thus, the rise in oil prices may remain limited in the upcoming period and the upward movement in prices following the September OPEC meeting may not last long.

Parallel to the sluggish global economic activity, global inflation rates also remained low. Compared to the July Inflation Report, headline and core inflation rates crept up in advanced economies, but inched down in emerging economies (Charts 2.2.3 and 2.2.4). Brazil, India and Russia contributed to the decline in the headline inflation of emerging economies, while Brazil, Russia and Turkey drove core inflation down. Year-end inflation expectations for 2016 and 2017 suggest downward revisions both in advanced and emerging economies from the previous Report (Table 2.2.1). Higher-than-targeted inflation rates are expected to decline in line with the waning depreciation of the exchange rate in Russia and Brazil, thereby contributing favorably to inflation prospects in emerging economies.



On the advanced economies front, the inflation rate inched up due to the fall in the positive base effect stemming from low oil prices. The decelerating appreciation of the US dollar since August 2015 impeded the fall in non-oil import prices in the US. In the upcoming period, the course of the US dollar, which shifts mood according to the Fed's expected policy actions, will remain as the leading determinant of imported inflation in the US. The Euro area may witness a slight rise in inflation due to the decline in the output gap, while Japan is expected to see a lower-than-targeted level in inflation. The depreciation of the British sterling, which was driven by uncertainties in the UK-EU relationship after the Brexit referendum, may pose an upside risk to inflation in the UK. Stable metal prices, on the other hand, restrict the possible pass-through from exchange rate to inflation. As a result, global inflation is expected to remain low in the upcoming period due to the weak global demand prospects. Among the factors to exert an upside risk to global inflation are the possible hikes in commodity prices, chiefly oil, and the potential increases in the exchange rate in emerging economies owing to the Fed's policy rate decisions.

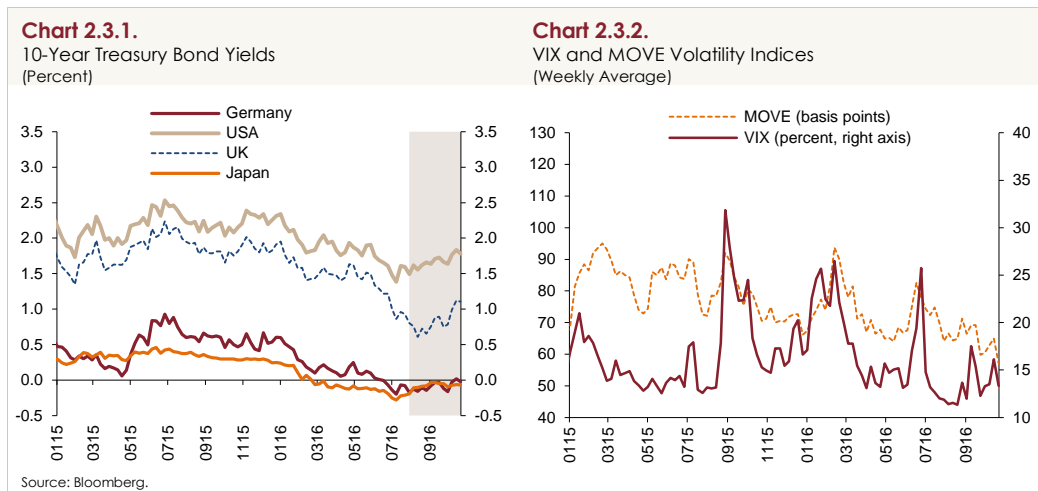
Table 2.2.1.
Inflation Forecasts for end-2016 and end-2017
(Average Annual Percent Change)

	July		October	
	2016	2017	2016	2017
Global	2.7	2.8	2.5	2.8
<i>Advanced Economies</i>				
USA	1.3	2.3	1.2	2.3
Euro Area	0.3	1.3	0.2	1.3
Germany	0.4	1.5	0.4	1.5
France	0.3	1.2	0.2	1.2
Italy	0.0	0.9	-0.1	0.8
Spain	-0.4	1.3	-0.4	1.3
Greece	-0.2	1.5	-0.1	0.8
UK	0.7	2.4	0.7	2.3
Japan	-0.1	0.6	-0.2	0.4
<i>Emerging Economies</i>				
Asia-Pacific	2.3	2.4	2.2	2.3
China	2.0	2.0	1.9	1.9
India	5.2	5.1	5.1	5.1
Latin America	15.7	9.8	14.1	8.9
Brazil*	7.2	5.4	7.1	5.2
Eastern Europe	5.5	5.0	5.1	4.9
Russia*	6.6	5.5	6.3	5.3

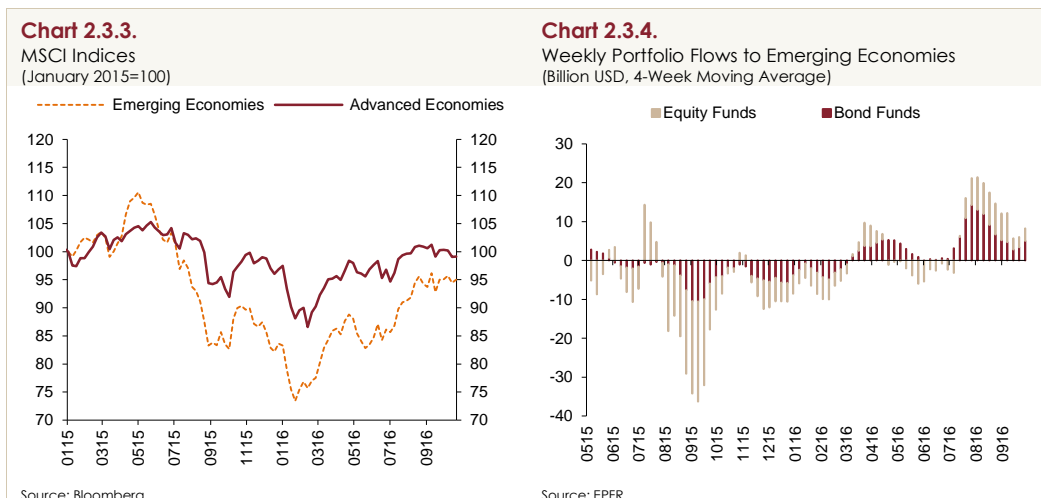
* December-on-December.
Source: Consensus Forecasts.

2.3. Financial Conditions, Risk Indicators and Portfolio Flows

In the third quarter of the year, long-term interest rates of advanced economies stopped falling further despite the languishing global growth outlook (Chart 2.3.1). In this period, central banks of advanced economies continued with monetary easing practices but the strengthened expectations that the Fed will raise policy rates led to an increase in long-term rates. In addition, recent signals that Brexit will prove faster than expected caused a depreciation in the British sterling and also an increase in long-term yields through the rise in expected inflation in the UK.



In the third quarter of the year, which witnessed persisting concerns over global growth, central banks of advanced economies maintained their loose monetary policy stance, preventing a deterioration in the global risk appetite (Chart 2.3.2). Risk appetite started to worsen as of mid-August due to the increased prospects for a Fed rate hike; yet it rebounded as the rate hike was postponed. Parallel to the elevated risk appetite and the still languishing global economic activity in advanced economies, stock prices in emerging economies saw notable increases compared to advanced economies in the third quarter (Chart 2.3.3).



In the third quarter of the year, sustained accommodative policies in advanced economies limited the adverse effects of fluctuations in the global risk appetite on portfolio flows towards emerging economies and risk perceptions regarding this country group remained benign. Hence, investors in search of high returns were oriented towards emerging economies in the third quarter of the year. Accordingly, portfolio outflows from emerging economies, which have been observed since the last quarter of 2014, decelerated considerably in the second quarter of 2016 and were reversed in the third quarter (Chart 2.3.4). On a monthly basis, portfolio flows, which proved quite high immediately after the Brexit decision, declined slightly in the second half of August amid increased prospects for a Fed rate hike, and re-settled on a high course as of the first week of September. Portfolio inflows towards emerging economies hit a two-year high in the third quarter of 2016. However, having soared notably in the inter-reporting period, portfolio inflows towards emerging economies have recently assumed a weakening track.

The analysis of the composition of portfolio flows reveals that inflows towards emerging economies were mostly composed of bond funds in the third quarter. In addition, inflows to equity funds also proved considerably high compared to the previous quarter. With regard to regional distribution, portfolio inflows were oriented mostly towards Asian and Latin American markets (Table 2.3.1). Asian countries saw a balanced distribution between bond funds and equity funds, while Latin American countries, which have higher interest rates, attracted inflows for mostly bond funds.

Table 2.3.1.

Composition and Regional Distribution of Fund Flows to Emerging Economies
(Quarterly, Billion USD)

		Total	Fund Composition		Regional Distribution			
			Bond Funds	Equity Funds	Asia	Europe	Latin America	Middle East and Africa
2015	Q1	-8.6	1.9	-10.5	-8.1	2.2	-2.4	-0.2
	Q2	-8.0	1.4	-9.4	-6.9	0.4	-2.0	0.4
	Q3	-45.3	-16.5	-28.8	-23.8	-6.5	-10.8	-4.1
	Q4	-22.3	-12.7	-9.6	-11.1	-3.0	-6.4	-1.9
2016	Q1	-4.5	-2.9	-1.6	-2.5	-1.4	-0.3	-0.3
	Q2	-1.4	7.3	-8.7	-4.5	0.7	1.9	0.6
	Q3	42.4	26.1	16.3	17.9	7.5	12.4	4.7

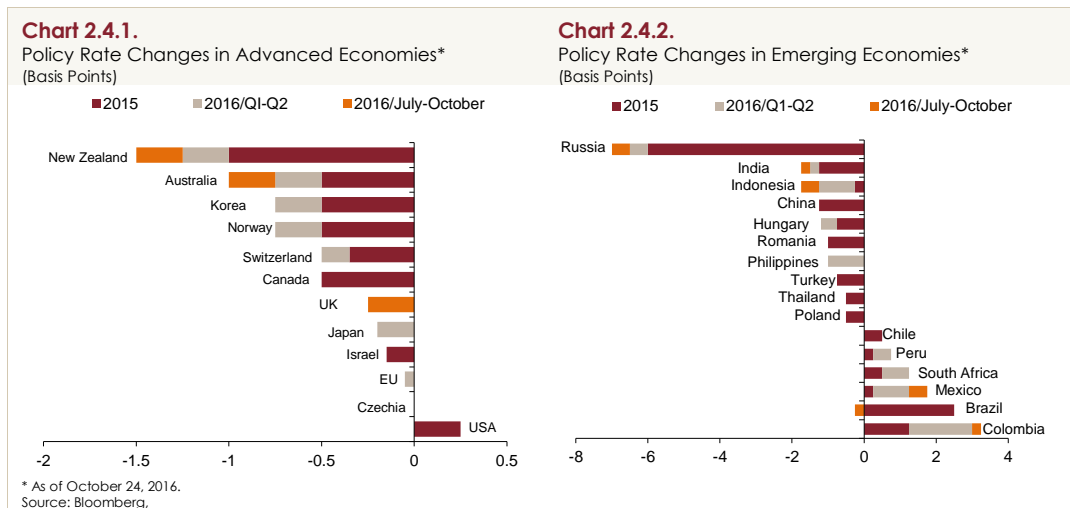
Source: EPFR.

Overall, portfolio flows towards emerging economies are likely to fluctuate in the upcoming period. Sustained high levels in global liquidity, the continuing tendency of international investors to take risks and high interest rate returns in emerging economies pose an upside risk to portfolio flows towards these countries. On the other hand, the possible rate hike by the Fed and the persisting weak growth in emerging economies are the foremost downside risk factors to portfolio flows.

2.4. Global Monetary Policy

The global monetary policy stance remained increasingly accommodative in the third quarter of 2016. The uncertainty regarding the Fed rate hike and shifting expectations were influential in the monetary policy decisions at a global scale. The Fed kept the policy rate unchanged in the July-October period, while among other major central banks, the Bank of England, the Reserve Bank of Australia and the Reserve Bank of New Zealand reduced policy rates by 25 basis points (Chart 2.4.1). Similarly, on the emerging economies front, policy rates were lowered by 25 basis points by the Reserve Bank of India and the Central Bank of Brazil, and by 50 basis points by the Bank of Indonesia and the Central Bank of Russia. Recently, the Fed's monetary policy stance diverged more remarkably from

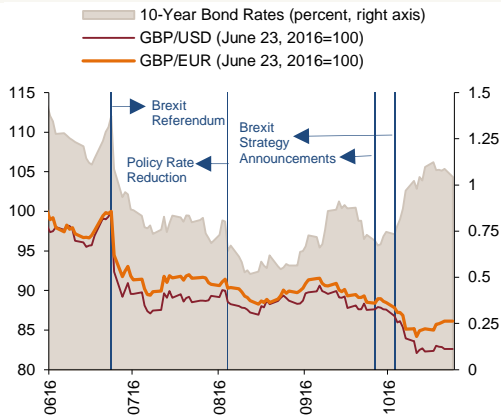
that of other major central banks. Accordingly, central banks of Latin American countries, which are more directly affected by the US economy, and the South African Reserve Bank, which has troubles with inflation, differed from the central banks of other emerging economies in a tightening way with respect to their policy stance. In the same period, the Central Bank of Colombia and the Bank of Mexico raised policy rates by 25 and 50 basis points, respectively (Chart 2.4.2).



Out of the largest four central banks that adopted accommodative policies previously, the Bank of Japan and the ECB were accompanied by the Bank of England following the Brexit decision, as expected. The Bank of England not only delivered a policy rate cut but also adopted a new bond-buying program, which included commercial bond purchases. Moreover, the Bank of England hinted at another rate cut in November if the outlook at that time is judged to be broadly consistent with the August projections. The impact of Brexit on the macroeconomic outlook remains vague, yet the recently increased perception that the exit will occur under more severe conditions led the British sterling to depreciate (Chart 2.4.3). All these developments hint at a possibly further loosening in the monetary policy stance of the Bank of England. Having implemented an extensive accommodative monetary policy for a long time, the Bank of Japan adopted the unconventional “yield curve control” in the September meeting in order to target yields on 10-year government bonds. It is expected that the currently negative policy rate imposed by the Bank of Japan will even be lower in the upcoming period.

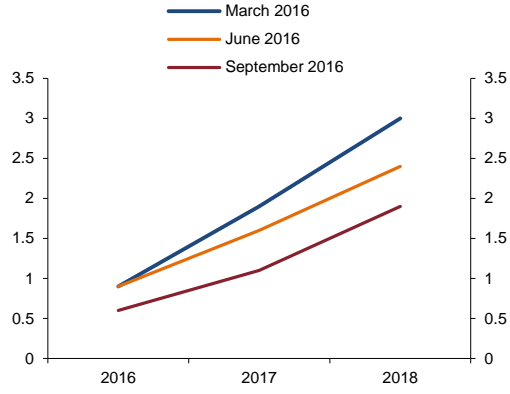
There is a growing expectation that the Fed will deliver a rate hike in December following the presidential elections. This is confirmed by the upward trend in core and headline inflation rates, despite mixed signals from the real sector data. In this respect, the announcement at the September FOMC meeting hints at a policy rate hike, which is expected to be lower than projected previously by FOM members (Chart 2.4.4). Accordingly, even if the Fed raises the policy rate in December, the medium and long-term monetary policy will prove relatively less tight than anticipated in the previous Report. Growth forecasts for the US economy have recently been revised downwards, supporting this outlook. In sum, the global monetary policy is expected to remain loose in the upcoming period. However, a possible steepening in the Fed's rate hike path, depending on the US labor market and inflation developments, is the most evident upside risk factor on this outlook.

Chart 2.4.3.
British Sterling and Bond Rates



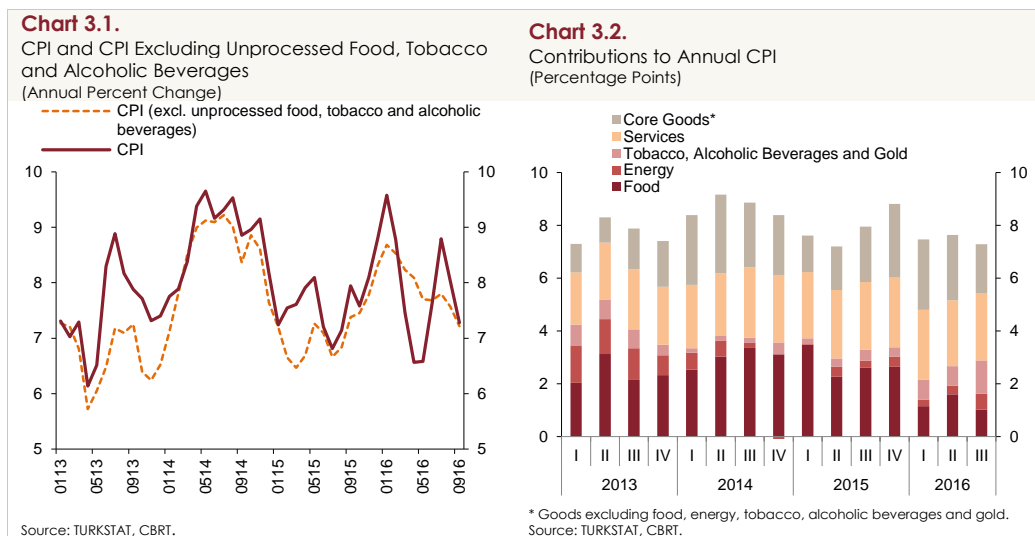
Source: Bloomberg.

Chart 2.4.4.
Median Policy Rate Projections of the FOMC Members (Percent)



3. Inflation Developments

In the third quarter of 2016, consumer inflation inched down by 0.36 points quarter-on-quarter to 7.28 percent (Chart 3.1). This drop is attributed to core goods and food inflation, while annual inflation in tobacco and energy increased. Core goods inflation was substantially lower due to waning cumulative effects of exchange rate and weaker demand conditions. In addition, modest import prices also contributed to a more benign inflation outlook. The slowing food inflation was mainly due to the tourism slump and the reduced exports to Russia. Food inflation excluding fresh fruits and vegetables plunged to a five-year low of 4.78 percent in September. On the other hand, despite the sluggish economic activity and slowing food inflation, services inflation remained high amid rising real unit labor costs and rents. After January's tax-driven price hike in tobacco products, cigarette companies raised their prices again in July. Thus, tobacco products added 1.1 points to consumer inflation over the past one year, surpassing historical averages. Meanwhile, despite moderate oil prices, energy prices were up due to the SCT adjustment to fuel products in September. Despite the volatile third-quarter consumer inflation, annual inflation in core indicators continued to slow for the second consecutive quarter. Core indicators, diffusion indices and producer prices all hinted at an improved consumer inflation outlook in this period.



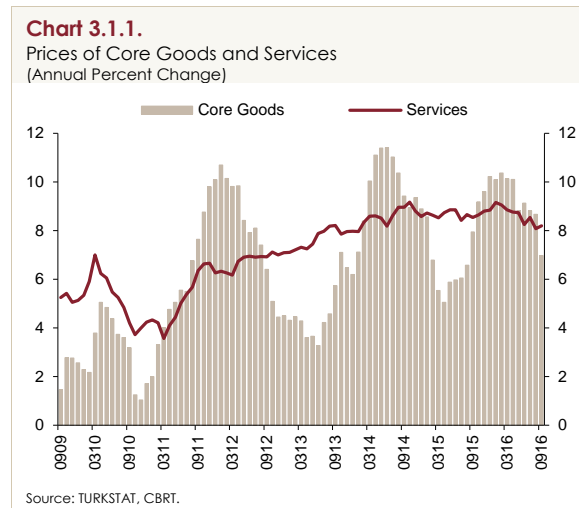
In the third quarter, the contribution of tobacco, alcoholic beverages and energy to annual inflation rose by 0.5 and 0.3 points, respectively, while the contribution of core goods and food was down 0.6 points each (Chart 3.2). The contribution of services, on the other hand, remained unchanged. Therefore, the contribution of core indicators to consumer inflation improved on the back of core goods.

In short, rising fuel taxes and changing prices of tobacco products restricted the improvement in consumer inflation during the third quarter but waning cumulative effects of the exchange rate and slowing domestic demand helped bring core inflation down gradually. The tourism slump kept a lid on prices of food and services such as accommodation and catering. Meanwhile, the contribution of wages to consumer inflation posted a year-on-year increase, which had particular implications for the

services industry and labor-intensive sectors such as furniture.¹ Volatile exchange rates cause risks to the core inflation outlook to remain on the upside for the upcoming period. In addition, the indirect effects of rising oil and fuel prices on the overall economy, particularly transport, pose another upside risk. Nevertheless, the October drop in natural gas prices is expected to have a -0.16 points direct contribution to annual inflation. Lastly, domestic demand may also pose downside risks to inflation given a possible economic slowdown.

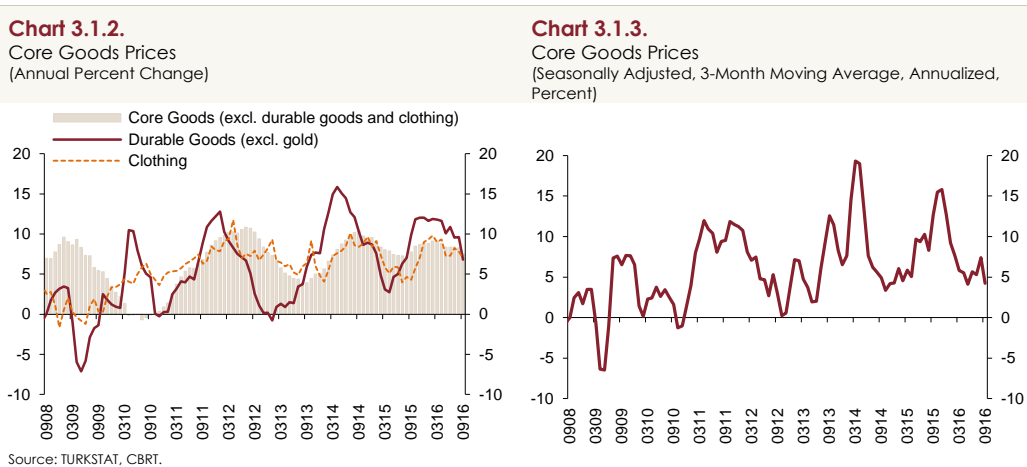
3.1. Core Inflation Outlook

Annual core goods inflation fell by 2.2 points to 6.97 percent in the third quarter (Table 3.1.1, Chart 3.1.1). The fall was evident across all subcategories, albeit less markedly in clothing (Chart 3.1.2). This outlook for core goods was mostly driven by moderate exchange rates and the slowdown in demand.



Annual durable goods inflation fell by 4.06 points amid base effects and waning cumulative exchange rate effects in the third quarter. This fall was the main driver of the improvement in core goods inflation (Chart 3.1.2). Prices in this category were up in August due to increases in automobile prices, yet remained moderate throughout the quarter. In line with the developments in producer prices, furniture prices saw a cumulative increase up to 8 percent by September and followed a modest track in the past two months after the July upsurge. Clothing prices decreased at a faster rate than seasonal averages due to slowing aggregate demand, driving annual clothing inflation down to 6.99 percent. Falling by 0.86 points, annual core goods inflation excluding clothing and durables also reflected waning exchange rate effects.

¹ For a detailed analysis on the main determinants of inflation, see Box 3.1.



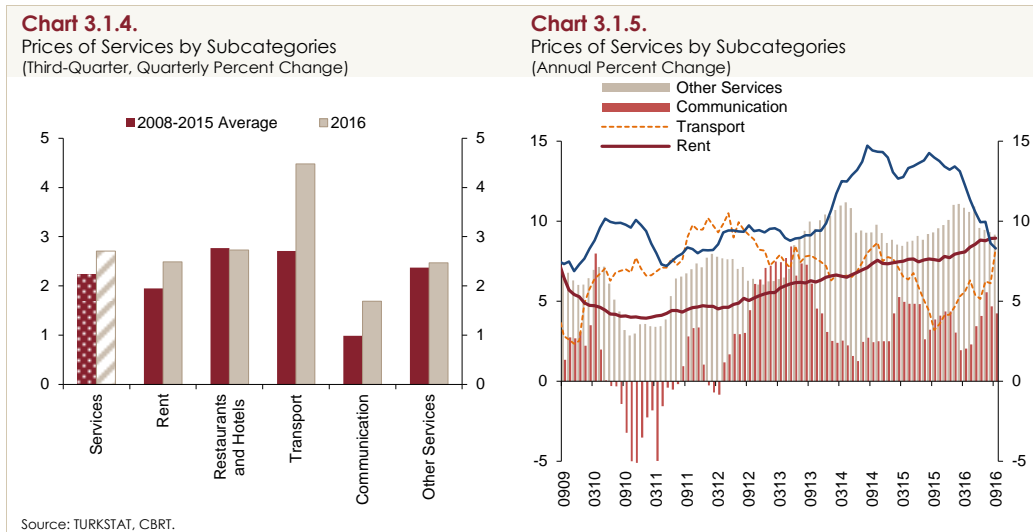
Against this backdrop, the contribution of core goods to annual consumer inflation edged down by 0.61 points to 1.87 points in the third quarter, while the underlying trend of core goods inflation decelerated compared to the previous quarter (Chart 3.1.3). All in all, the third quarter of the year was marked by a downturn in both the annual inflation and the underlying trend of core goods prices.

Table 3.1.1.Prices of Goods and Services
(Quarterly and Annual Percent Change)

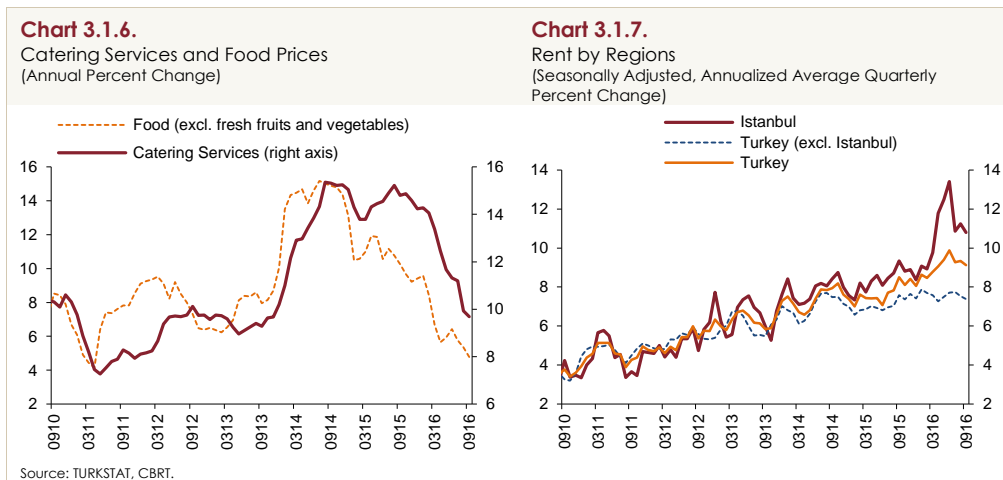
	2015			2016			
	III	IV	Annual	I	II	III	Annual
CPI	1.39	2.44	8.81	1.75	1.84	1.05	7.28
1. Goods	0.81	3.02	8.79	1.51	1.85	0.32	6.85
Energy	-0.70	0.24	2.96	0.85	1.94	1.46	4.56
Food and Non-Alcoholic Beverages	2.85	3.03	10.87	2.65	-1.97	0.46	4.16
Unprocessed Food	3.56	4.07	13.83	2.49	-5.29	-0.48	0.54
Processed Food	2.22	2.11	8.33	2.80	1.01	1.25	7.35
Core Goods	-0.57	5.15	10.22	-1.18	5.63	-2.54	6.97
Clothing and Footwear	-11.81	15.34	9.00	-12.42	20.44	-12.06	6.99
Durable Goods (excl. gold)	4.57	1.66	12.05	3.70	0.57	0.74	6.80
Furniture	3.20	2.32	10.70	5.72	1.03	0.98	10.36
Electrical and Non-Electrical Appliances	4.00	1.96	9.69	1.38	-1.04	-0.46	1.83
Automobile	5.71	1.07	14.01	4.95	1.28	1.45	8.98
Other Durable Goods	2.61	2.94	12.28	0.87	2.40	1.11	7.51
Core Goods (excl. clothing and durable goods)	2.25	2.32	8.79	2.06	1.48	1.44	7.51
Tobacco, Alcoholic Beverages and Gold	2.32	-0.94	6.56	11.14	0.35	10.20	21.75
2. Services	2.76	1.10	8.85	2.33	1.83	2.71	8.19
Rent	2.38	1.90	7.73	1.80	2.48	2.49	8.95
Restaurants and Hotels	4.29	1.34	13.23	2.53	1.46	2.73	8.31
Transport	1.41	0.56	4.17	1.47	1.61	4.48	8.32
Communication	1.53	0.63	4.36	0.00	1.87	1.69	4.24
Other Services	2.87	0.92	10.09	3.65	1.84	2.47	9.16

Source: TURKSTAT, CBRT.

In the third quarter, prices of services increased above past averages by 2.71 percent, and annual services inflation remained elevated at 8.19 percent (Charts 3.1.1 and 3.1.4). Price increases in restaurants and hotels were close to historical averages in this period, but annual inflation eased further in this category (Chart 3.1.5). On the other hand, prices in rent, transport and communication not only increased at a rate above historical averages in the third quarter but also saw higher annual inflation (Charts 3.1.4 and 3.1.5).



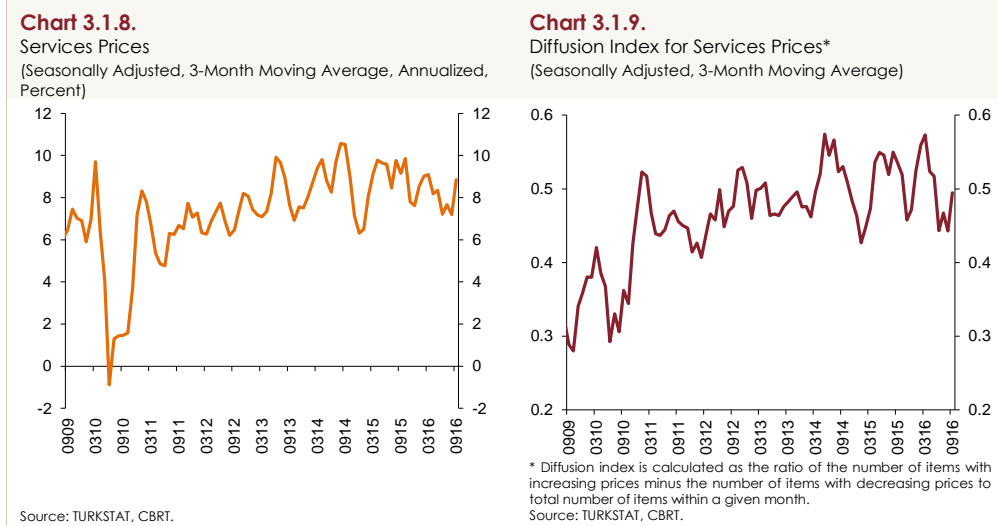
The decreasing food inflation and the tourism slump drove inflation down in restaurants and hotels. Annual inflation in catering services declined further amid developments in food prices (Chart 3.1.6). The drastic fall in the number of tourists caused the annual inflation in accommodation services to hit an all-time low of -2.68 percent. Meanwhile, annual inflation in other services dropped by 0.43 points quarter-on-quarter due to subsiding cumulative exchange rate effects, yet remained elevated due to high inflation expectations (Table 3.1.1). Price hikes in fuel products posed a cost pressure on transport prices in this period, pushing annual transport inflation up to a two-year high of 8.32 percent. Moreover, the upsurge in labor costs driven by the minimum wage increase weighed on the inflation in services, a labor-intensive sector.



Another key driver of services inflation was rent, which has been on the rise since early 2011 (Chart 3.1.5). The underlying rent inflation in seasonally adjusted terms diverged across regions, with Istanbul recording the largest increase in 2016 (Chart 3.1.7). In other provinces, however, underlying rent inflation remained on an almost horizontal path through the past one year. In the third quarter, the underlying trend of rent inflation edged down in Istanbul yet remained elevated.

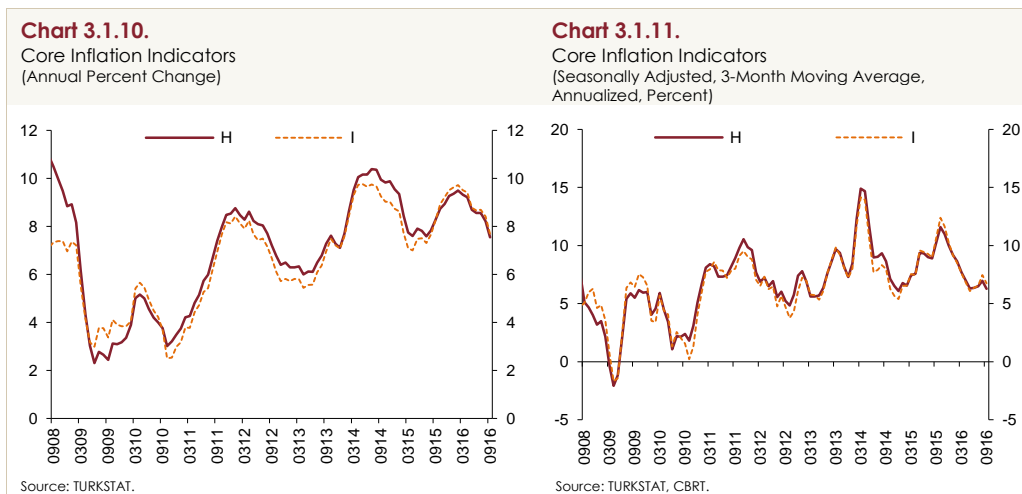
Accordingly, indicators for the underlying trend of services inflation saw a deterioration in the third quarter. In particular, both the underlying trend of inflation, which is captured by seasonally

adjusted 3-month moving averages, and the price increasing tendency, which is implied by the diffusion index, recorded an increase (Charts 3.1.8 and 3.1.9).



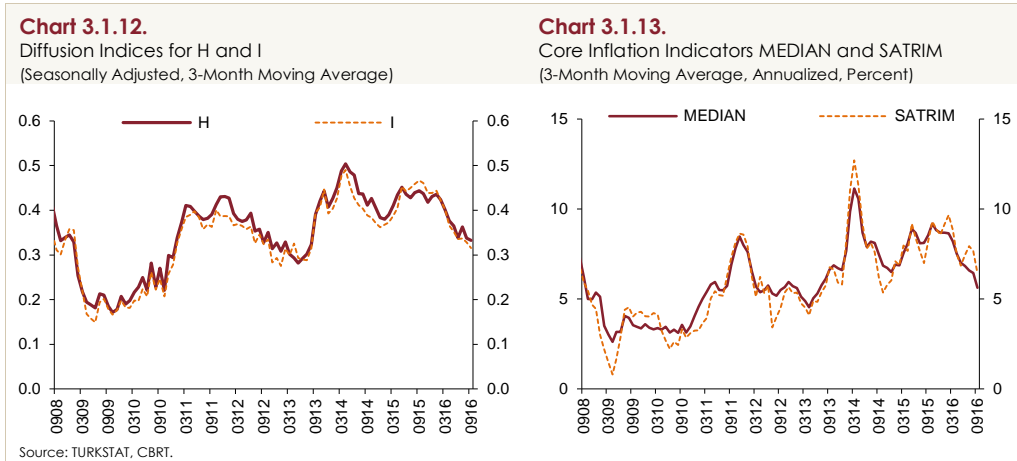
In sum, the improvement in cost factors driven by food prices and the exchange rate as well as the falling tourism demand caused services inflation to decelerate in this period, especially through accommodation and catering services. On the other hand, rising fuel prices, accelerating rents and wage developments put a lid on a more favorable outlook in services inflation. Additionally, services inflation still remains high amid the headline inflation rate and the current course of inflation expectations.

Annual inflation in core indicators remained on a downtrend in this period. Annual inflation in H and I core inflation indicators was down 1 point quarter-on-quarter to 7.56 and 7.69 percent, respectively, on the back of lower core goods inflation (Chart 3.1.10). Meanwhile, the underlying trend of core inflation indicators was flat quarter-on-quarter amid the minor fall in September (Chart 3.1.11).



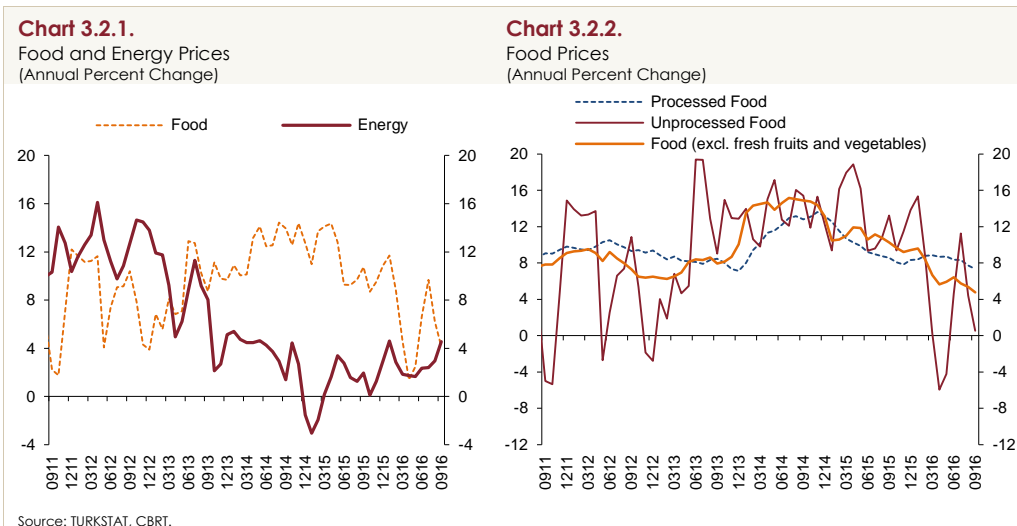
On the other hand, the likelihood for prices to rise was down from the second quarter as captured by the diffusion indices for core indicators (Chart 3.1.12). SATRIM and MEDIAN, the alternative

core inflation indices monitored by the CBRT, posted a more remarkable decline than in the previous quarter (Chart 3.1.13). In sum, indicators for tendency and pricing behavior all pointed to an ongoing deceleration in the underlying trend of inflation for the third quarter.



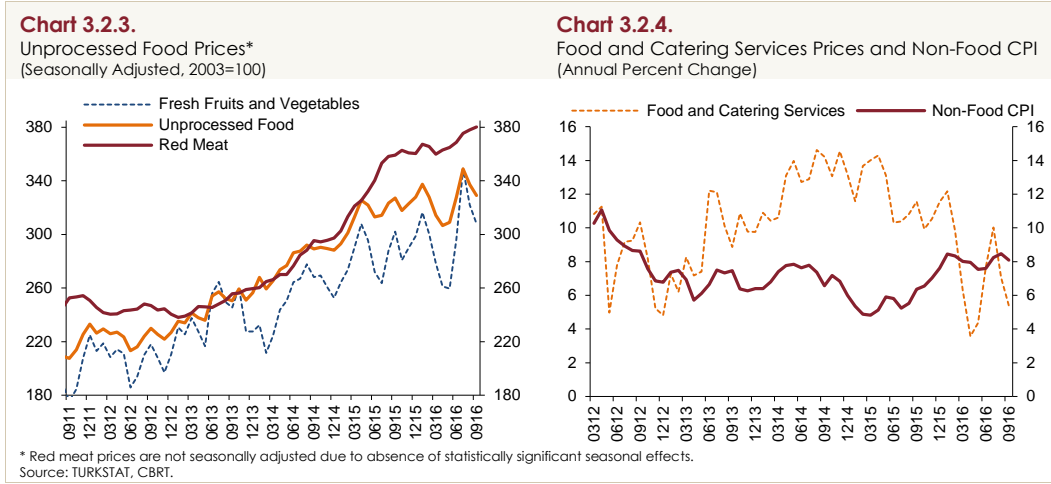
3.2. Food, Energy, Tobacco and Alcoholic Beverages

After rising slightly in the second quarter, annual food inflation decreased by 2.47 points to 4.16 percent in the third quarter (Chart 3.2.1). Thus, annual food inflation remained well below the July Inflation Report forecast. This slowdown was partly attributed to the plunging tourism demand, the reduced exports to Russia and the adoption of measures for red meat.



Unprocessed food inflation followed a highly volatile path in this period due to prices of fresh fruits and vegetables (Chart 3.2.2). Annual unprocessed food inflation dropped to as low as 0.54 percent at the end of the third quarter, while seasonally adjusted prices recorded a marked fall in August and September after the July climb (Chart 3.2.3). Moreover, annual inflation in food prices excluding fresh fruits and vegetables retreated to a five-year low of 4.78 percent (Chart 3.2.2). Red meat prices were on a relatively modest uptrend after April (Chart 3.2.3). However, thanks to new

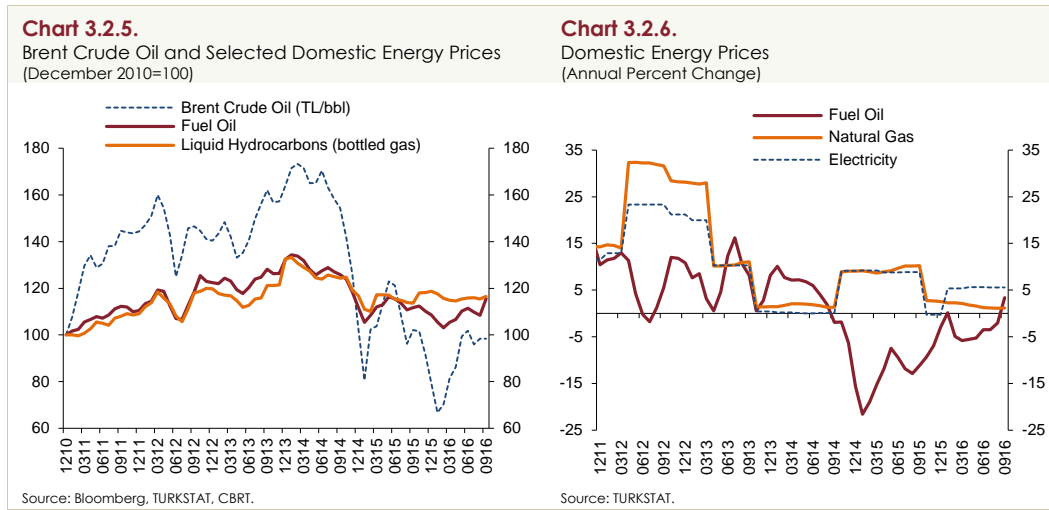
measures, annual inflation in red meat prices continued to fall in the third quarter. These measures are expected to support the moderate course of red meat prices in the upcoming period.



On the processed food front, annual inflation slid by 1.03 points to 7.35 percent in the third quarter (Chart 3.2.2). Annual inflation in oils, fats and tea went down mainly owing to a high base effect in this period. Despite slight price hikes, annual inflation in bread and cereals remained elevated. In addition, with their annual inflation on the decline amid a lower inflation in red meat prices, processed meat prices continued to contribute favorably to the inflation outlook.

Annual inflation in food and catering services prices decreased by 2.26 points to 5.39 percent, while non-food CPI inflation rose by 0.50 points to 8.09 percent in the third quarter (Chart 3.2.4). The drop in food and catering services inflation was largely driven by the tourism slump (Box 3.2). Pulling inflation down to target-consistent levels in food-related categories is critical. In this respect, actions taken by the Food Committee set an invaluable precedent.

Energy prices surged by 1.46 percent in the third quarter (Table 3.1.1). Having soared since February and increased at a stronger pace through the second quarter, international oil prices dropped in July, with Brent crude oil prices falling down to around 45 USD per barrel before remaining flat in the following months. This drop had positive implications for energy prices, which was evident in falling fuel prices during July and August. However, fuel prices were up 3.63 percent in the third quarter due to the September increase of 0.20 TL in the lump-sum SCT on fuel products (Charts 3.2.5 and 3.2.6). Therefore, annual energy inflation rose by 2.23 points from the end of the second quarter to 4.56 percent in September, mainly due to the tax hike. The tax hike will continue to weigh on fuel prices in October, albeit to a lesser degree, and will have a total direct effect of around 0.3 points on consumer inflation. On the other hand, the reductions in natural gas prices, effective October 1, are expected to have a direct impact of about -0.16 points on consumer inflation.



Prices of tobacco and alcoholic beverages jumped by 10.73 percent in the third quarter amid price increases imposed by cigarette producers in July. Accordingly, including the January tax hike, prices of tobacco products posted a cumulative upsurge of 23.1 percent in the first three quarters. The contribution of tobacco and alcoholic beverages to annual inflation increased to 1.1 points, which is well above historical averages.

3.3. Domestic Producer Prices

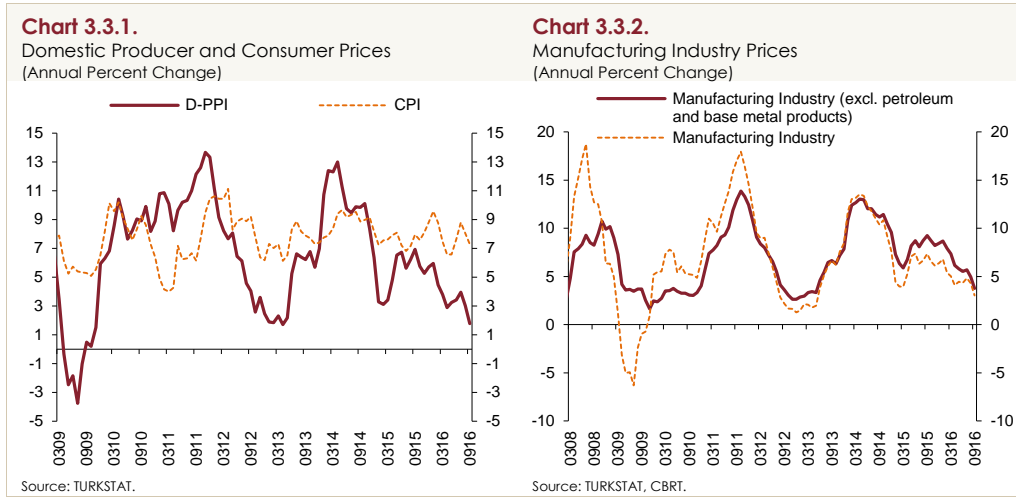
Domestic producer prices rose by a modest 0.58 percent in the third quarter amid manufacturing price developments. Meanwhile, annual inflation in domestic producer prices declined by 1.63 points quarter-on-quarter to 1.78 percent, hinting at weak producer price pressures (Table 3.3.1, Chart 3.3.1). Yet, subcategories of domestic producer prices diverged in this period. In fact, energy prices were below the previous year's readings, whereas durable goods were subject to stronger producer price pressures during the past one year (Table 3.3.1).

Table 3.3.1.
D-PPI and Subcategories
(Quarterly and Annual Percent Change)

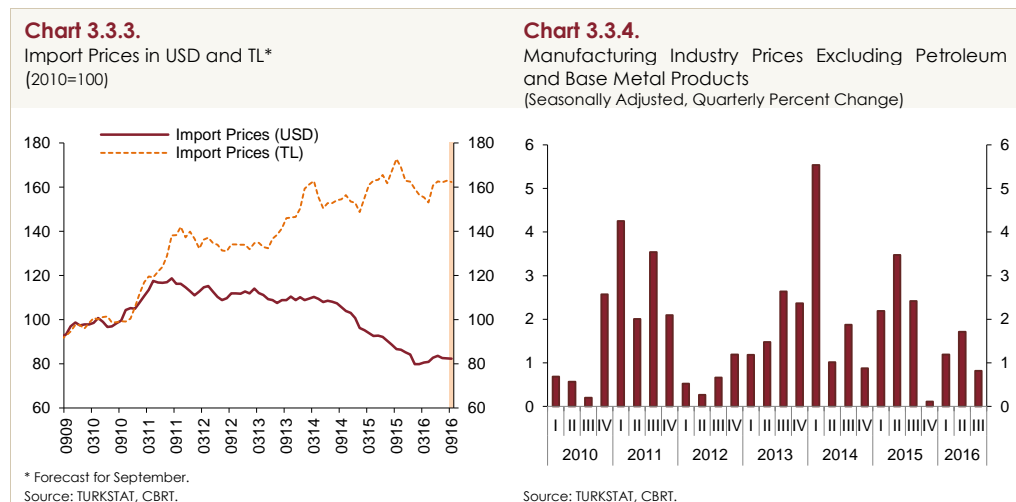
	2015			2016			
	III	IV	Annual	I	II	III	Annual
D-PPI	2.20	-1.94	5.71	0.75	2.43	0.58	1.78
Mining	-3.41	-1.08	-0.69	-1.36	6.49	-0.17	3.72
Manufacturing Industry	2.12	-1.89	6.38	1.33	2.75	0.84	3.02
Manufacturing Industry (excl. petroleum products)	2.70	-1.32	7.28	1.56	2.14	0.87	3.25
Manufacturing Industry (excl. petroleum and base metal products)	2.88	-0.57	8.44	1.66	1.49	1.16	3.77
Electricity and Gas	5.38	-3.39	0.19	-4.99	-2.96	-2.20	-12.89
Water	0.27	2.89	19.95	3.27	1.52	0.27	8.17
D-PPI by Main Industry Groups							
Intermediate Goods	3.05	-2.30	5.69	1.19	2.59	0.43	1.86
Durable Goods	4.07	-0.40	12.48	4.76	2.56	2.15	9.32
Durable Goods (excl. jewelry)	2.87	2.54	11.78	3.31	0.97	0.59	7.59
Non-Durable Goods	0.60	-0.52	6.73	1.55	1.81	0.88	3.75
Capital Goods	5.15	-0.45	10.08	1.59	1.03	1.61	3.82
Energy	-0.49	-5.54	-2.57	-4.86	4.46	-1.31	-7.35

Source: TURKSTAT, CBRT.

Manufacturing industry prices increased by 0.84 percent quarter-on-quarter while annual inflation fell to 3.02 percent (Table 3.3.1, Chart 3.3.2). Similarly, manufacturing industry inflation excluding petroleum and base metal products continued to edge down (Chart 3.3.2). In the third quarter, import prices were slightly down in USD terms, but remained flat in TL terms amid developments in exchange rates (Chart 3.3.3).

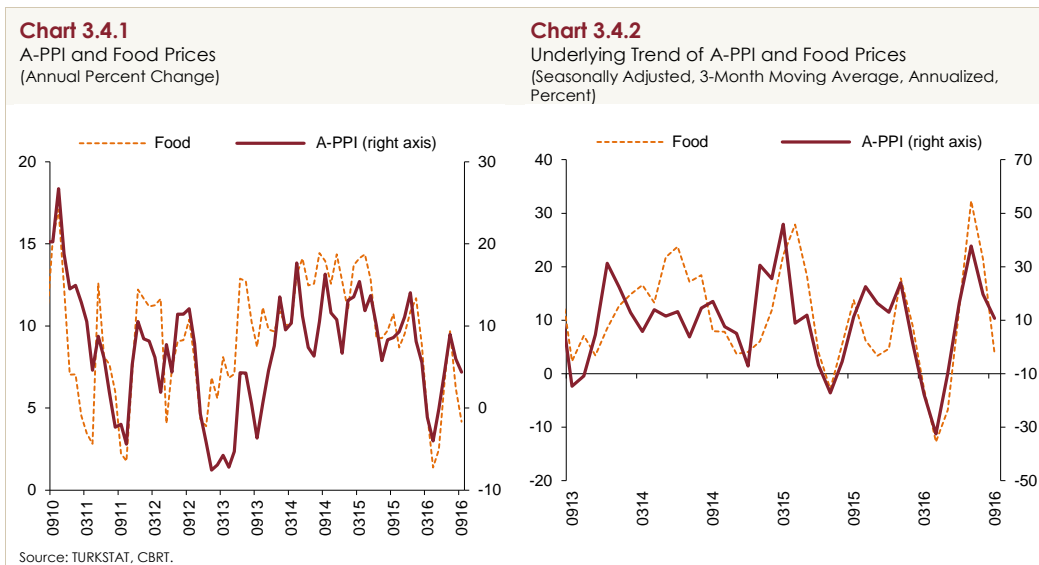


Among main industrial categories, prices were significantly higher on a quarter-on-quarter basis in durable goods and capital goods (Table 3.3.1). Prices of durable goods were mostly affected by developments in gold prices, yet prices of durable goods excluding jewelry were only up a mere 0.59 percent due to furniture prices. On the capital goods front, prices increased owing to prices of motor vehicle accessories and special purpose machines. Prices of non-durable and intermediate goods rose moderately in the third quarter. Energy prices went down by 1.31 percent on the back of falling prices of power generation and distribution. Accordingly, the underlying inflation in manufacturing industry prices excluding petroleum and base metal products, which entails information on the underlying trend of producer prices, recorded a quarterly slowdown, while cost pressures driven by producer prices remained subdued (Chart 3.3.4).



3.4. Producer Prices of Agricultural Products

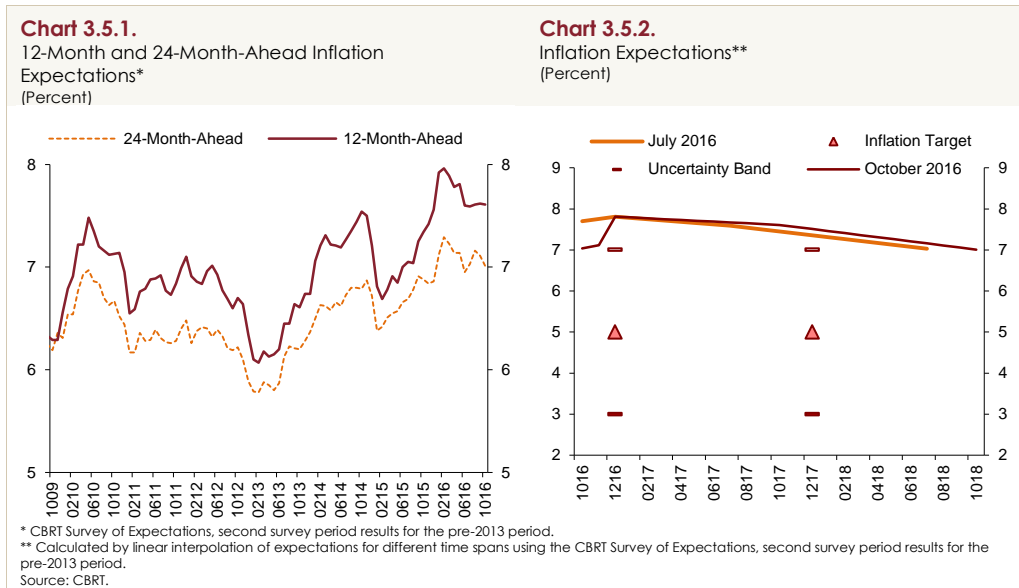
In the third quarter of the year, the A-PPI fell by 0.41 percent, while annual inflation in this category remained flat at 4.39 percent compared to the end of the second quarter (Chart 3.4.1). Annual inflation in fruits and vegetables was more moderate than in the previous quarter. On the other hand, live cattle prices remained on the rise, while cereal prices rose slightly owing to higher wheat and barley prices. Moreover, legumes, particularly chickpeas, saw significant price hikes. Additionally, producer prices for hazelnuts surged due to an output shortage.



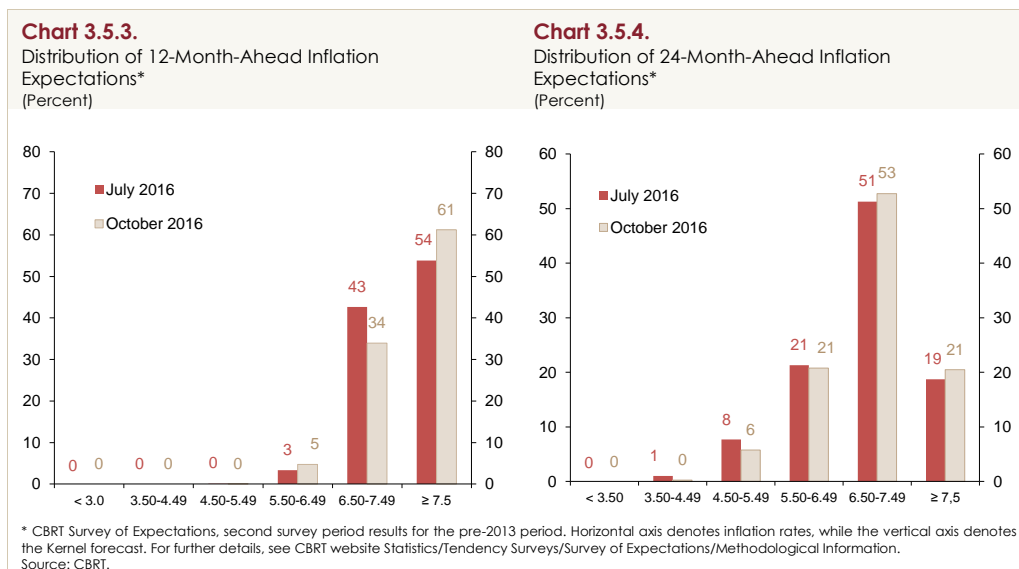
The underlying trend of A-PPI based on seasonally adjusted data in 3-month moving averages reveals a notable downturn, which was also evident in the third quarter's consumer inflation for food (Chart 3.4.2).

3.5. Expectations

Medium-term inflation expectations remained flat quarter-on-quarter in the third quarter. 12-month and 24-month ahead expectations remained above the inflation target by standing at 7.6 and 7.0 percent, respectively, as of October (Chart 3.5.1). Despite exhibiting a volatile pattern throughout the quarter, year-end expectations remained basically unchanged from the previous quarter at 7.8 percent. Across maturities, inflation expectations for 2017 and onward barely changed in the inter-reporting period (Chart 3.5.2).



The dispersion of medium-term inflation expectations points to some deterioration in inflation expectations in October compared to July (Charts 3.5.3 and 3.5.4). More specifically, the percentage of respondents expecting 12-month-ahead inflation to be between 6.5 and 7.49 percent decreased, whereas those expecting it to be 7.5 percent or above increased (Chart 3.5.3). However, this change in the dispersion had a small effect on average expectations.



Box
3.1Inflation Dynamics over the Past Decade: A Historical Accounting²

During the inflation targeting period from 2006 to 2015, annual consumer inflation in Turkey remained high with an average rate of 8.2 percent, significantly exceeding the targets. In terms of year-end inflation realizations, the lowest inflation rate was 6.2 percent in 2012 while the highest was recorded in 2011 with 10.5 percent. An inquiry into the question of which fundamental macroeconomic variables have been more influential on inflation developments over the last decade might provide insight into policy options for maintaining price stability in the upcoming period. Hence, by analyzing the effects of main macroeconomic variables during the inflation targeting period in Turkey, this box documents the changes in inflation dynamics via a quantitative historical accounting perspective.

The model used in decomposing the factors influencing inflation is based on a 2-equation model in the spirit of Yellen (2015). The first equation divides the CPI into four categories as unprocessed food, tobacco and alcoholic beverages, taxes and CPI excluding these categories (CPIX). The second equation is a reduced-form time-varying parameter Phillips curve estimated to explain the CPIX by using quarterly data. To explain the CPIX inflation in this equation, major explanatory variables are included such as lagged inflation, USD-denominated import prices, exchange rate (USD/TL), the output gap and real unit wages. Unprocessed food inflation excluding fresh fruits and vegetables is also used to capture the indirect effects of food prices on catering services.

Contributions to consumer inflation are calculated by multiplying the relevant variable by its corresponding time-varying coefficient and cumulated to obtain yearly figures. The part of inflation that cannot be explained by fundamental macroeconomic variables (import prices, exchange rate, output gap, unit labor costs, food prices and tax adjustments), which is therefore estimated as a constant term is called "rigidity".

Historical Accounting: A Decomposition Analysis on Consumer Inflation

Table 1 presents contributions to consumer inflation in average terms for the entire inflation targeting period and also by sub-periods for the former and the latter half, while Chart 1 displays these contributions individually for each year. During the inflation targeting period, unprocessed food prices provided one of the highest contributions (with its direct and indirect effects) to consumer inflation. Accordingly, the annual contribution of unprocessed food prices to inflation was 1.4 percentage points on average, reaching a total of 2.2 points when indirect effects, especially through catering services, are also taken into account (Table 1). Yet, the magnitude of the contribution fluctuated heavily from one year to another, which thus marks unprocessed food prices as one of the major drivers of uncertainty in inflation. For instance, the contribution went down from 3.5 points in 2009 to -0.1 point in 2012 (Chart 1).

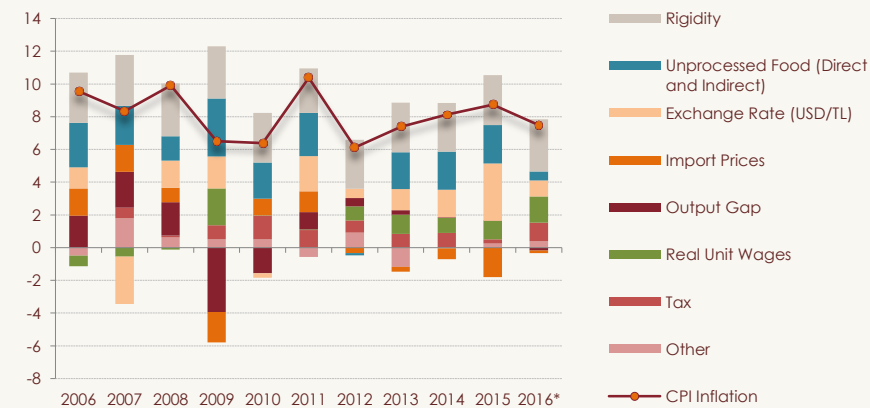
² This box is based on Kara et al. (2016).

Table 1. Average Contributions to CPI Inflation
(Percentage Points)

	Rigidity	Unprocessed Food (Direct and Indirect)	Exchange Rate (USD/TL)	Import Prices	Output Gap	Real Unit Wages	Tax	Other*	CPI Inflation
2006-2015	3.0	2.2	1.1	0.2	0.3	0.5	0.7	0.2	8.2
2006-2010	3.1	2.5	0.4	0.7	0.1	0.2	0.6	0.6	8.2
2011-2015	3.0	1.9	1.8	-0.4	0.4	0.8	0.8	-0.1	8.2

* Includes the contribution of non-tax price changes in tobacco and alcoholic beverages as well as the effect of the residual term and the dummy variable used for the last quarter of 2007.

Exchange rate developments, tax hikes and unit labor costs were other main drivers of inflation with a contribution of 1.1 points, 0.7 points and 0.5 points each (Table 1). While the contribution of import prices has changed substantially each year mainly due to oil price fluctuations, import prices provided a mere contribution of an average 0.2 points to inflation in the entire inflation targeting period. The contribution of the output gap on inflation also varied over years, while on average, the contribution was only 0.3 points since the effects were cyclically offset by each other by definition. It should also be noted that the part of inflation that cannot be explained by fundamental macroeconomic variables, which is therefore attributed to rigidity, is around 3 points (Chart 1).

Chart 1. Contributions to CPI Inflation
(Percentage Points)

* Forecast. It should be noted that the estimated contributions may vary depending on model specification and the sample size.
Source: Authors' calculations.

Inflation Dynamics in the First and the Second Half of Inflation Targeting Period

A comparison between the period of conventional inflation targeting regime from 2006 to 2010 and the subsequent unconventional policy episode from 2011 to 2015 with multiple objectives and multiple tools reveals that the average inflation is similar during both periods, yet the decomposition of inflation differs widely between these episodes. In order to have a better understanding of these differences, Chart 2 presents the contribution of fundamental macroeconomic factors to inflation as well as that of other factors in aggregated terms. It is striking that the contribution of fundamental macroeconomic factors

to inflation was up 1.4 points in the second five-year episode (Chart 2), whereas non-core drivers such as unprocessed food, tobacco and alcoholic beverages made a smaller contribution. Chart 3 provides a breakdown of the contribution of fundamental variables by five-year episodes. Accordingly, inflation dynamics were highly affected by exchange rate and real unit wages in the second episode, which is marked by the use of macroprudential policies.

Chart 2. Average Contributions to CPI Inflation from Fundamental Macroeconomic Components and Other Factors (Percentage Points)

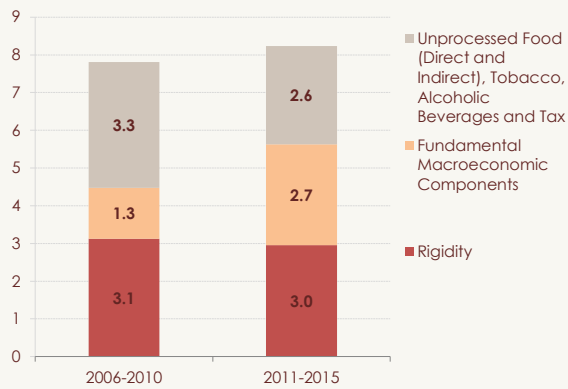
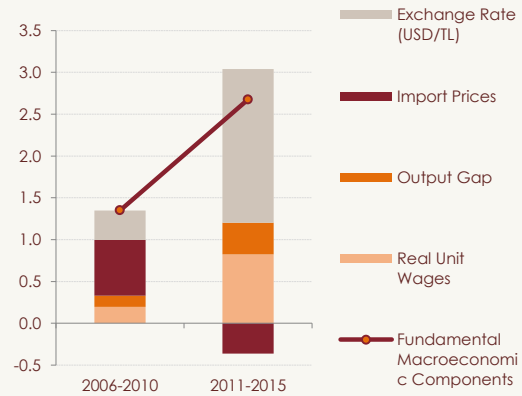


Chart 3. Decomposition of the Contribution of Fundamental Macroeconomic Components (Percentage Points)



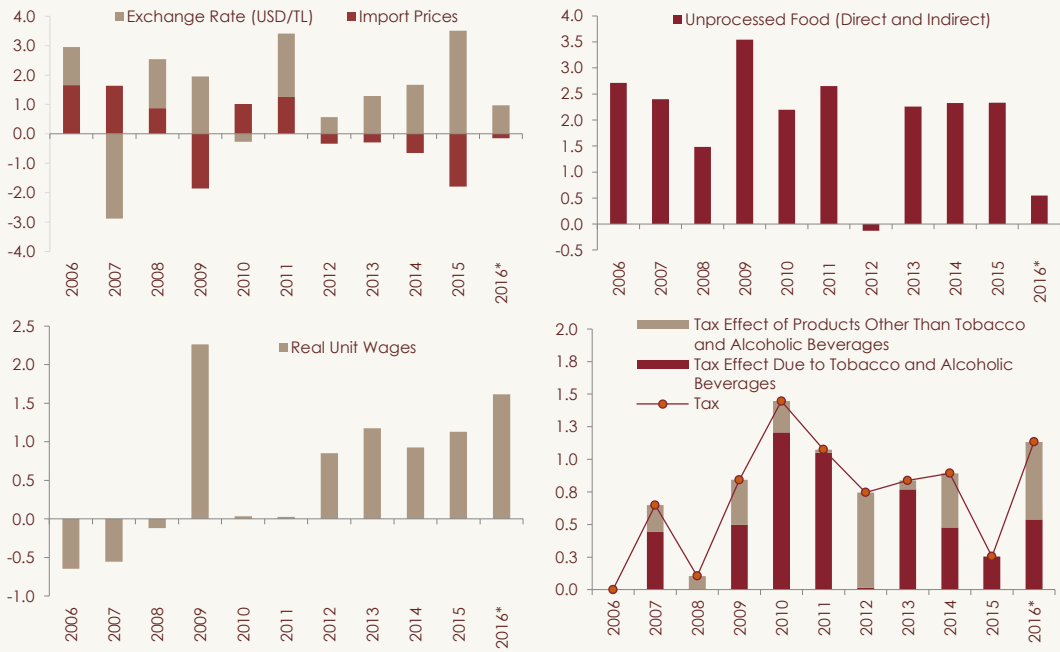
Source: Authors' calculations.

The first half of the inflation targeting regime includes the periods of strong global growth as well as the global crisis and the rapid recovery period observed after the crisis. Except for 2009, this five-year episode is characterized by strong pressures on commodity prices driven by global demand pressure; hence, it witnessed a substantial contribution (an average of 0.7 points) from USD-denominated import prices to consumer prices (Table 1). In the second half of the inflation targeting period, the global economy started to slow down while commodity prices, oil prices in particular, fell remarkably. Thus, unlike the first period, import prices brought inflation down by -0.4 points on average in this period.

While the weakening of global growth and the risk appetite since 2013 affected inflation favorably through commodity prices, it exerted upward pressure through capital flows and the exchange rate channel. For better tractability of the contributions in recent years, Chart 4 shows the contribution of the main determinants to inflation by years. Accordingly, especially after the Fed's tapering signal in May 2013, capital flows towards emerging market economies lost pace, which determined the course of exchange rates. Moreover, measures taken to contain macrofinancial risks were another factor affecting exchange rates. In this period of both nominal and real depreciation of TL against foreign currencies, the contribution of exchange rates to annual inflation increased by approximately 1.4 points from the previous five-year episode and reached 1.8 points on average.³ In other words, during the period of 2011-2015, the upward effect of exchange rate developments on inflation outweighed the favorable contribution of external prices (Chart 4).

³ In the three-year period following the Fed's tapering decision (2013-2015), exchange rates added an average of 2.2 points to annual inflation.

Chart 4. Contributions to CPI Inflation
(Percentage Points)



* Forecast. Estimations for 2016 include tax adjustments in January 2016 as well as the electricity price adjustment of 0.16 points. Price changes in tobacco and alcoholic beverages are decomposed as tax and non-tax changes.
Source: Authors' calculations.

Unprocessed food prices made a major contribution to consumer inflation through their direct and indirect effects in both periods of inflation targeting. The average contribution was 2.5 points in the first period but was lower in the second period due to the moderate course of unprocessed prices in 2012. However, with an average contribution of 2.3 points and the persisting volatility in unprocessed food prices, predictability declined remarkably in the following period of 2013-2015, suggesting that price developments in this category have a structural dimension as well (Chart 4).

Another macroeconomic driver of inflation, which has had an increasingly higher contribution to inflationary pressures in recent years, is the real unit wages. In the first period of inflation targeting, the contribution of real unit wages to inflation was relatively limited at 0.2 points on average amid rapid growth and productivity gains. During the second half, inflationary pressures driven by labor cost increased significantly due to heightened nominal wage increases and subdued productivity growth. Real unit wages posed no inflationary pressures during 2011, which was marked by robust growth and productivity gains, but added about 1 point to inflation per year in the following four years due to accelerating nominal wages (Chart 4).

An additional driver of inflation in Turkey is tax adjustments to maintain fiscal balance. The contribution of tax adjustments on inflation fluctuates through years, which makes tax adjustments a significant factor adding to inflation uncertainty. This contribution was 0.6 and 0.8 points, respectively, in the first and second half of the inflation targeting period (Table 1). It is estimated that the contribution of fiscal measures and the tax adjustments to products such as tobacco and alcoholic beverages in January and the September tax hike in fuel oil to inflation will exceed 1 percentage point in 2016 (Chart 4).

Conclusion and Assessment

Although various approaches were adopted in the first and second five-year periods of inflation targeting in Turkey, price stability could not be achieved completely, which caused inflation to hover around 8.2 percent on average during the last decade. Yet, in terms of main determinants, inflation dynamics changed dramatically over the first and second half of the inflation targeting period. In the first five-year episode of conventional inflation targeting, inflation was mostly driven by external factors, whereas in the second five-year period, fundamental macroeconomic variables, which are also linked to inflation expectations such as wages and exchange rates, were more influential. This observation suggests how critically important it is to manage expectations effectively to achieve price stability in the upcoming period. Therefore, the CBRT's price stability oriented policy stance as well as the support from other relevant parties to expectation management may minimize, to some extent, the trade-offs resulting from the fight against inflation.

Findings of this study confirm the need to show joint efforts in tackling structural challenges to see real progress towards price stability. In this regard, also considering this historical accounting of inflation, other policy implications are summarized as follows: (i) The role of food prices in the inflation process points to the importance of addressing structural issues, especially of the work done by the Food Committee; (ii) The predominant role of the exchange rate on core inflation reveals that issues such as improving the current account balance by increasing the savings rate and reducing dollarization and dependency on imported inputs are at least as important as demand management policies; (iii) The high and volatile contribution of taxes on inflation highlights the importance of fiscal and monetary policy coordination in the disinflation process; (iv) The increasing unit labor cost pressures on inflation in recent years suggest that structural regulations to bolster productivity and increase labor market flexibility are crucial for price stability.

In sum, findings indicate that price stability can be achieved not only by a decisive policy stance by the CBRT but also by steps to be taken on the structural front. Therefore, a holistic approach incorporating joint efforts of all agents in the disinflation process will ease policy trade-offs and make a significant contribution to the achievement of lasting price stability at a lower cost.

REFERENCES

- Kara, H., F. Öğünç and Ç. Sankaya, 2016, Inflation Dynamics Over the Past Decade: A Historical Accounting, Paper in progress.
- Yellen, J.L., 2015, Inflation Dynamics and Monetary Policy, Remarks delivered at the Philip Gamble Memorial Lecture, University of Massachusetts.

Box
3.2

The Impact of the Tourism Slump on Food Inflation

Spending on food and beverages constitutes a significant portion of the tourism revenues. Hence, changes in the number of tourists may cause fluctuations in the overall food demand. According to 2016 tourism statistics, the total number of tourists was down 32 percent year-on-year in the January-August period. Therefore, food demand fell across the whole country and inflation excluding fresh fruits and vegetables posted a marked slowdown through 2016. In light of these observations, this box gives an analysis of the relation between the number of tourists and domestic food prices.

Tourism activities and the number of tourists may differ across regions. Thus, the impact of the tourism-driven decline in food demand on food prices should better be analyzed through a breakdown of the number of tourists and food prices by regions. Regional food prices are obtained from the TURKSTAT's monthly regional food prices index, while the food demand of tourists can be captured by the monthly food spending of tourists by regions. However, due to the absence of such data, the monthly number of tourists by regions is used as a proxy. Assuming that food expenditures are rather autonomous compared to other expenditures and average per capita spending on food barely changes over years, the number of tourists is assessed to be a plausible indicator for food spending.

Instead of the current number of tourists, the year-on-year change in the number of tourists per region is used in the estimations. This is due to the strong seasonality observed in the number of tourists as well as the fact that expected number of tourists for a specific month is generally determined by the number of tourists for the same month of the previous year. In this respect, supply conditions are dependent on tourism expectations for the relevant region and month, while the actual number of tourists to be below or above these expectations causes food prices to change. Therefore, using the year-on-year change in the number of tourists may capture any effect that may be observed due to changes in the numbers of tourists (particularly for 2016). Also, using numbers of tourists in year-on-year terms remedies the non-stationarity of the series.

The effect arising from the changing number of tourists might vary based on the supply of regional food products. For example, in a region with relatively larger supply, prices are expected to be less affected by a demand shock. Due to the impossibility to measure food supply per region, regional demand is proxied by regional population assuming that an equilibrium exists between supply and demand. In sum, the key explanatory variable in the regression equation is the year-on-year change in the ratio of the number of tourists per region to regional population. For simplicity, this variable is called the yearly change in the relative number of tourists.

The independent variable used in the equation is the monthly change in regional food prices. Assuming a New Keynesian framework, the Phillips curve equation for food inflation includes the yearly change in the relative number of tourists, marginal costs represented by the cyclical component of the food production index (the deviation of food production from the path estimated by the Hodrick-Prescott filter),

and the food import price index to capture import costs. In addition, to control for effect driven by the domestic supply, the fresh fruit and vegetable price index was also included in the model. In fact, prices in this subcategory fluctuate usually due to supply conditions and might affect other food prices. The model uses the seasonally adjusted price indices for food and fresh fruits and vegetables.

The analysis is based on a fixed effects panel data model where the standard errors are clustered by region. The model also includes seasonal dummy variables. The panel data model can be represented as follows:

$$\pi_{i,t}^{food} = \alpha + \beta_{1,i}xrelnumtur_{i,t} + \beta_2\pi_{i,t}^{fruitveg} + \beta_3foodp_t + \beta_4\pi_t^{foodm} + \sum_j \delta_j d_j + \varepsilon_{i,t}$$

In the equation, i and t denote region and time; $\pi_{i,t}^{food}$ stands for the monthly food inflation, while $\pi_{i,t}^{fruitveg}$ denotes the monthly inflation in fresh fruits and vegetables; $xrelnumtur_{i,t}$ is the yearly change in the relative number of tourists; $foodp_t$ represents the cyclical component of the food production index; π_t^{foodm} denotes the monthly inflation rate in the imported food prices, d_j refers to seasonal dummies and $\varepsilon_{i,t}$ is the error term. All data are obtained from the TURKSTAT. The estimation period is from January 2005 to July 2016. Given that the effect of tourists on food inflation changes by region, $\beta_{1,i}$ coefficient is allowed to vary across regions.

The effect of the tourism slump on food inflation can be calculated using the estimation results. To calculate the effect on end-2016 food inflation, the number of tourists in 2016 is assumed to drop by 30 percent on an annual basis in line with the projected decline in tourism revenues for 2016. To this end, Table 1 shows countrywide effects as well as regional effects for selected regions including Istanbul, Antalya, Izmir and Muğla, where economically significant and sizeable effects are observed (Table 1). According to the findings, regions with a higher relative number of tourists (the ratio of the number of tourists to regional population) experience a more marked contraction, while Istanbul is hit hardest by the slump.

Chart 1. Annual Food Inflation in Selected Regions (Percentage Points)

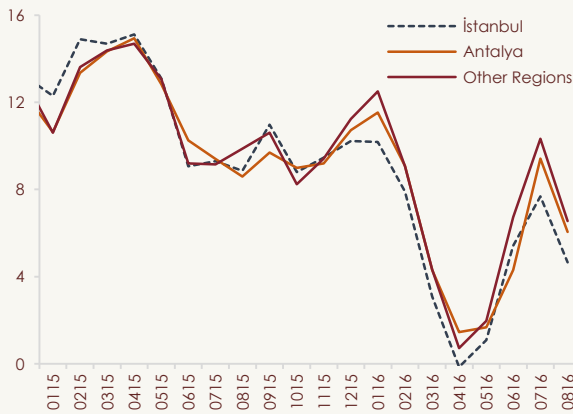


Table 1. Contribution of Tourism Slump to Food Inflation in Selected Regions (Percentage Points)

Regions	Contribution to Regional Food Inflation	Contribution to National Food Inflation*
Istanbul	-5.56	-1.23
Antalya, Isparta, Burdur	-4.91	-0.17
Muğla, Aydın, Denizli	-1.54	-0.05
İzmir	-2.07	-0.13

* Contribution to national food inflation is computed by using regional weights.

After aggregating the regional effects, the tourism slump is expected to have a total of –1.7 points contribution to end-2016 food inflation. The recent divergence in regional food inflation confirms this empirical evidence (Chart 1). In fact, food inflation has been relatively lower in Istanbul and Antalya, which experienced the highest drop in the relative number of tourists.

REFERENCES

Koca, Y.K., M.U. Özmen and Ç. Sarıkaya, 2016, Impact of Tourism Developments on Food Prices: A Panel Approach, Paper in progress.

4. Supply and Demand Developments

GDP data show that economic activity increased on a quarterly basis in the second quarter of 2016, albeit at a slower pace than the first quarter as projected in the July Inflation Report. In this period, final domestic demand continued to support annual growth through both public and private sector consumption. On the other hand, the lingering geopolitical tensions accompanied by the deepening contraction in the tourism sector caused net exports to have aggravated adverse effects on growth.

Current indicators suggest a possible quarterly contraction in economic activity in the third quarter. Due to seasonal factors, the tourism slump will have more marked negative impacts on growth in the third quarter. Adverse effects of the domestic uncertainties in July and losses in working days due to extended religious holidays are among other factors to restrict growth. Owing to the deceleration in economic activity, employment growth is expected to slow and the unemployment rate is estimated to accelerate.

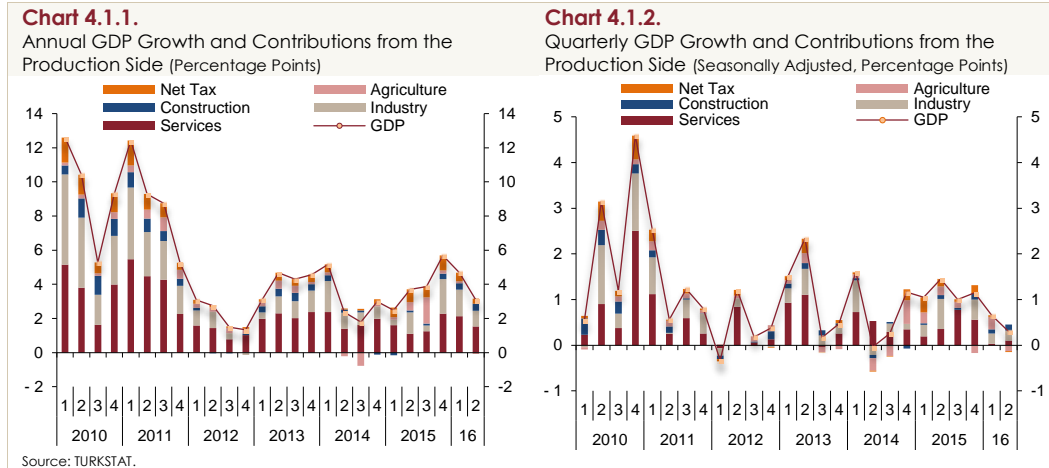
On the other hand, recently released data signal that the contraction in the third quarter is temporary and economic activity will see a rebound in the last quarter. Production, demand and foreign trade indicators for August and September show that the sharp fall in July is not permanent and some of the losses have been redeemed. Having adopted a more accommodative monetary policy stance, macroprudential policies and other incentive measures, the economic activity will settle into a trend of recovery in the last quarter. In fact, consumer loans hint at partial improvement. In the upcoming period, both producer and consumer confidence are expected to improve amid lessened uncertainty, consumption expenditures are estimated to rise on the back of demand-stimulating policies, and net exports are projected to have lower negative contribution to growth, which will all contribute to the improvement in the economic activity.

Growth prospects for 2017 do not signal a robust outlook, yet are considered to be more favorable than 2016, which was stricken with a series of adverse shocks. In the normalization process, the partial improvement both in tourism revenues and exports to Russia is expected to spur growth. Furthermore, the recently released incentive packages are expected to have more marked effects on growth in 2017. The possible rise in oil prices will pose an upside pressure on the current account deficit, but will stimulate the revenues of oil-exporting countries, thereby supporting exports and growth. Yet, the economic growth may be exposed to downside risks stemming mainly from the uncertainties regarding the pace of global growth and monetary policies of advanced economies as well as the course of capital flows and geopolitical tensions.

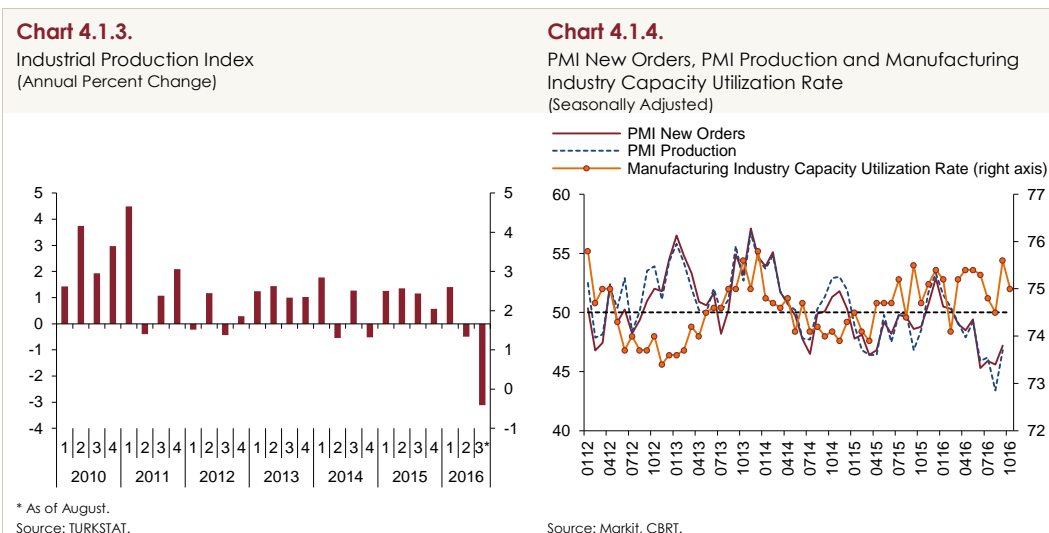
4.1. Supply Developments

According to the data released by the TURKSTAT, the GDP posted a year-on-year growth by 3.1 percent in the second quarter of 2016. Value added of all main sectors increased on an annual basis in this period (Chart 4.1.1). In particular, the value added of the industrial and services sectors were up by 3.2 and 3.1 percent, respectively, while the construction value added accelerated and reached 7 percent. The agricultural value added fell by 1 percent due to the base effect and drought.

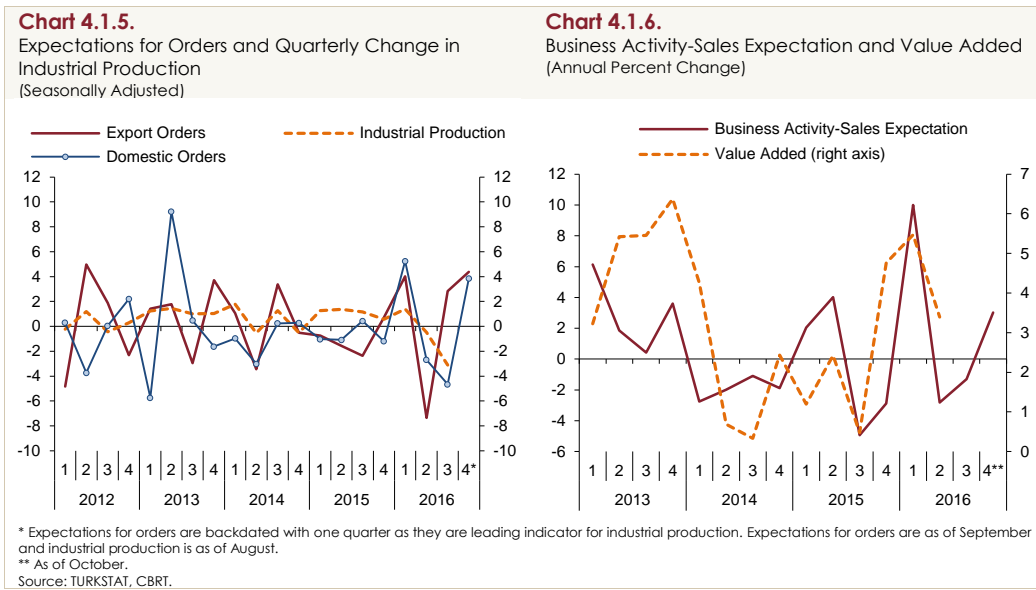
Adjusted for seasonal and calendar effects, the GDP expanded by a mere 0.3 percent with some deceleration compared to the first quarter (Chart 4.1.2). The agricultural value added declined by 1.4 percent while the construction sector posted an accelerated growth. As tourism revenues declined more markedly in the second quarter, value added from the industrial and services sectors lost momentum. Accordingly, accommodation and catering services contracted notably in quarterly and yearly terms.



Upon the sharp fall in July, the second-quarter contraction in industrial production has deepened in the third quarter (Chart 4.1.3). This sharp fall in July production was driven both by the demand-side effects of the domestic turmoil and the extended religious holiday as well as the working day losses after July 15. In fact, August production posted a month-on-month increase by 9.4 percent, compensating for the fall in July, which confirmed that the decline in production should be attributed to the loss in working days rather than the underlying trend. The fall in PMI new orders and production as well as the decline in the capacity utilization rate in the July-August period were compensated in September and October (Chart 4.1.4). Despite the favorable survey indicators, the bridge day effect to stem from the extended religious holiday in September may cause production to subside again and the industrial production is expected to record a quarterly decline in the third quarter.

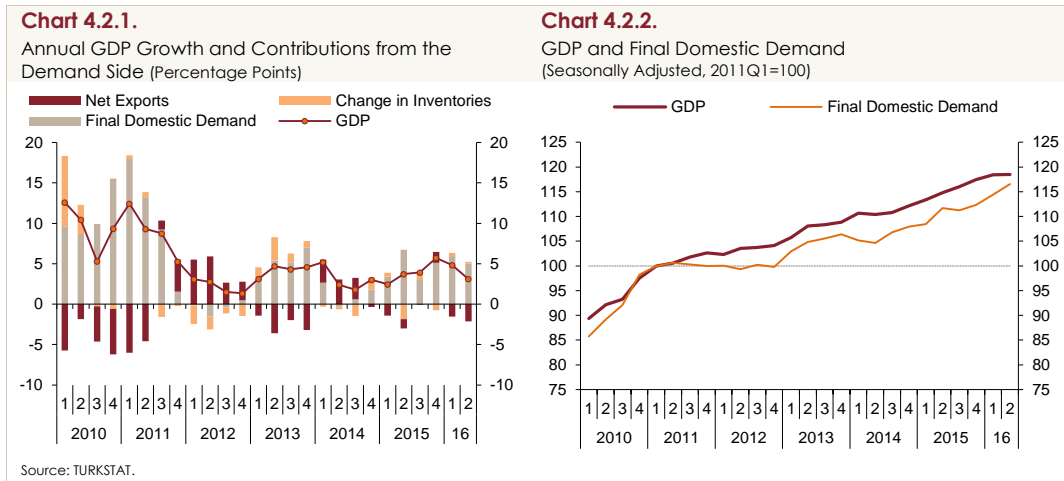


Expectations for orders in the last quarter of the year hint at a notable rebound in the manufacturing industry. Signals suggest that domestic orders, which remain weak compared to external demand in the third quarter, may also be influential in this rebound (Chart 4.1.5). In addition to the industrial sector, the trade sector also exhibits a favorable outlook for the last quarter of the year (Chart 4.1.6). The domestic uncertainties that were alleviated with the adoption of incentives and arrangements by the government are expected to support domestic demand and trading activities. Moreover, the expected recovery in tourism upon the normalization of relations with Russia is believed to improve the services sector as well.

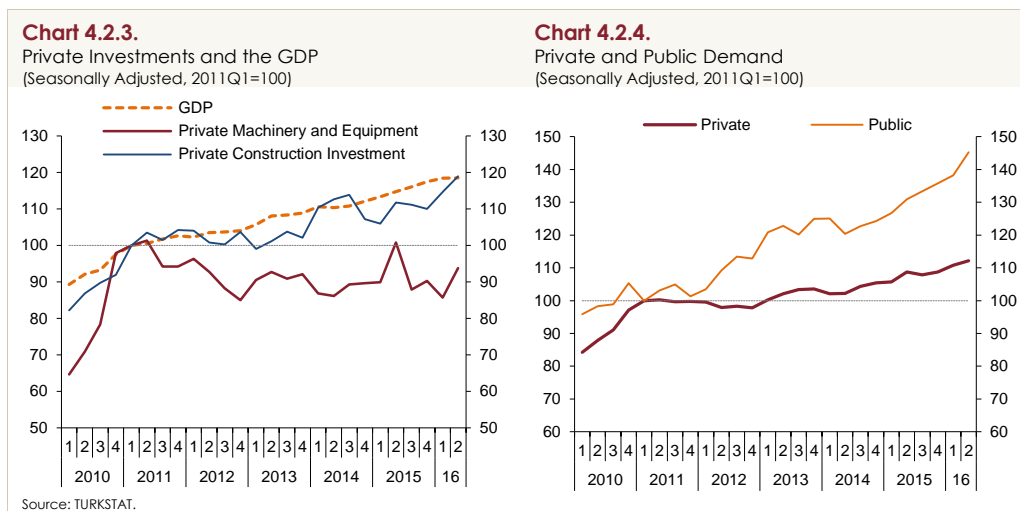


4.2. Demand Developments

The GDP data for the second quarter of 2016 on the expenditures side indicate that annual growth was further spurred by final domestic demand, while net exports restricted growth (Chart 4.2.1). In this period, the contribution of the final domestic demand to annual growth was driven by consumption expenditures, while total investments remained weak despite the support of the public demand. In seasonally adjusted terms, final domestic demand continued to increase at a much faster rate than the GDP in the second quarter (Chart 4.2.2). Private consumption had a negative effect on quarterly growth in the second quarter, while the quarterly increase was driven by private investments and public consumption. Meanwhile, changes in inventories and net exports continued to provide a negative contribution to quarterly growth.



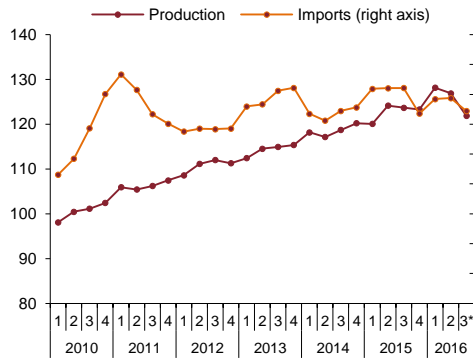
Private demand registered a quarterly growth in the second quarter. Upon a robust course backed by the surge in wages in the first quarter, private consumption saw a limited decline in the second quarter. However, on the investments side, the increases in private machinery and equipment and private construction investment compensated for the fall in consumption (Chart 4.2.3). The public sector demand recorded the highest increase since end-2013 (Chart 4.2.4). The robust course of public consumption was spurred by purchases of goods and services, while public investments contributed to growth through construction as well as machinery and equipment.



The domestic uncertainty in July attenuated final domestic demand considerably through both consumption and investment expenditures in the third quarter. In the July-August period, production and imports of consumption goods as well as expenditures on durable goods exhibited a notable decline compared to the second quarter (Charts 4.2.5 and 4.2.6). On the investments front, imports of machinery and equipment increased, yet the production thereof tumbled, indicating a negative outlook for investments (Chart 4.2.7). As for construction indicators, the fall in production and imports of non-metallic minerals reveals that construction investments lost pace in the third quarter (Chart 4.2.8).

Chart 4.2.5.

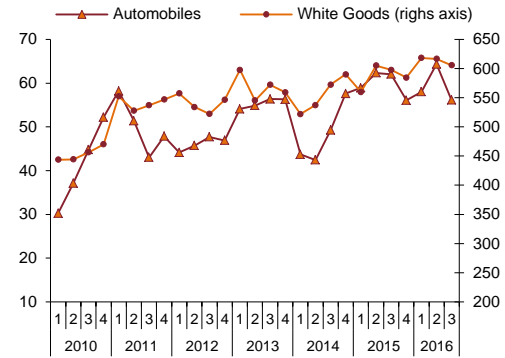
Production and Import Quantity Indices of Consumption Goods
(Seasonally Adjusted, 2010=100)



* As of August.
Source: TURKSTAT, CBRT.

Chart 4.2.6.

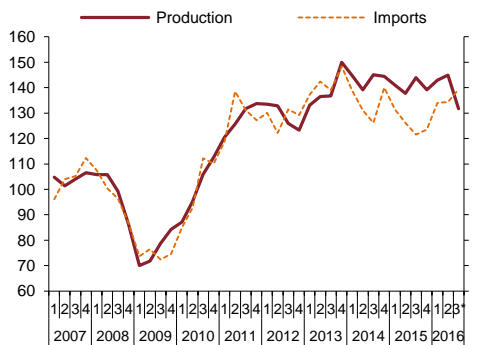
Domestic Sales of Automobiles and White Goods
(Seasonally Adjusted, Thousand)



Source: WGMA, AMA, CBRT.

Chart 4.2.7.

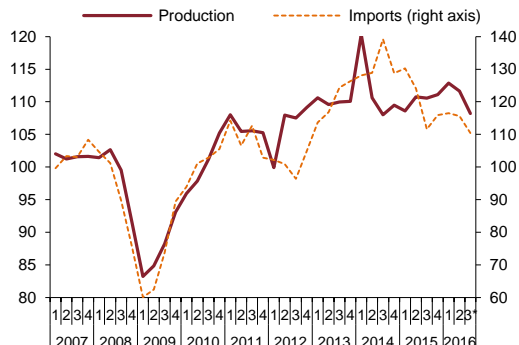
Production and Import Quantity Indices of Machinery and Equipment
(Seasonally Adjusted, 2010=100)



* As of August.
Source: TURKSTAT, CBRT.

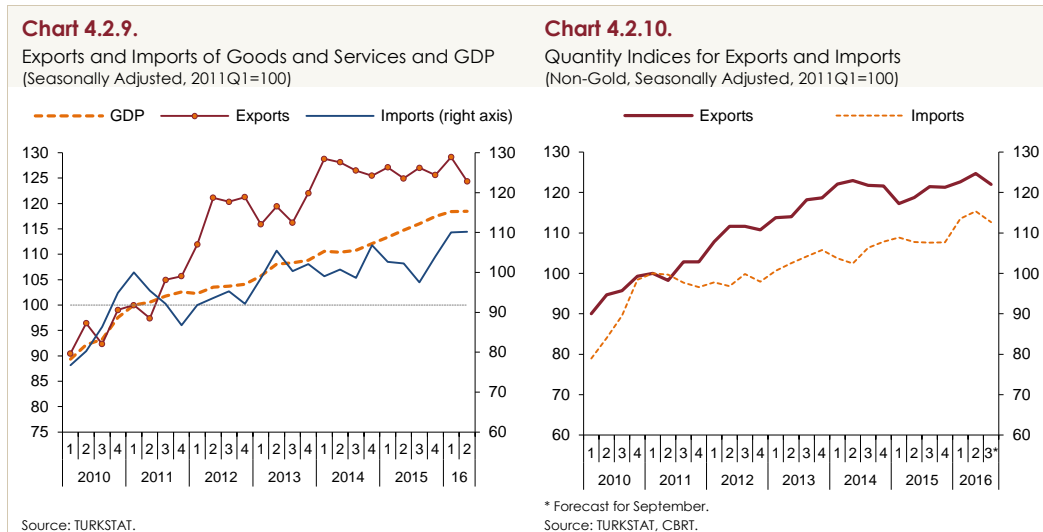
Chart 4.2.8.

Production and Import Quantity Indices of Non-Metallic Minerals
(Seasonally Adjusted, 2010=100)



* As of August.
Source: TURKSTAT, CBRT.

In the second quarter of 2016, exports of goods and services declined in line with the downtrend in tourism revenues, while the imports thereof rose slightly on a quarterly basis owing to the support from the domestic demand (Chart 4.2.9). Thus, net exports continued to weigh on quarterly growth in the second quarter. Rising demand from the EU and the market-shifting flexibility in external markets support exports despite the adverse effects driven by geopolitical developments. On the other hand, considering seasonal factors, the negative effects of the sharp fall in tourism revenues on exports of services and growth are expected to become more evident in the third quarter. Recently released data indicate that exports and imports of goods and services were deteriorated considerably by the July turmoil. Regardless of the rebound in August and September, goods trade saw a downturn in the third quarter (Chart 4.2.10). Accordingly, net exports are expected to restrict growth further in the third quarter. Geopolitical developments, the weak demand from oil-exporting countries and adverse developments in the tourism sector remain as downside risks to the contribution of net exports to the current account balance and growth. However, the moderate rebound in the global economy, normalization in relations with Russia and the high market-shifting flexibility of markets may contain these risks.

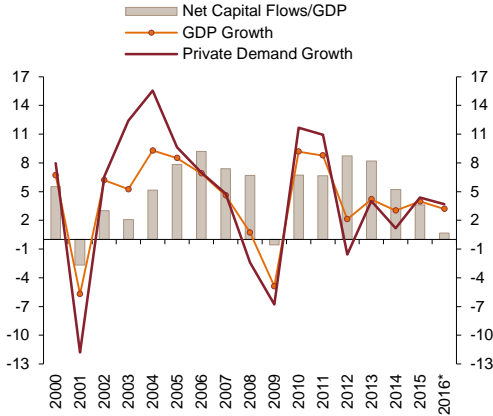


In short, economic activity posted an increase mainly on the back of the final domestic demand in the second quarter of 2016. The third-quarter downturn in economic activity, which is driven by the tourism slump, deepened amid the developments in July and economic activity recorded a quarterly contraction. Recently released data indicate that the production loss in July was compensated in succeeding months. The economic activity is expected to recover in the last quarter due to alleviated uncertainty, the improved producer and consumer confidence, demand-stimulating incentives and the partial recovery in loans. The pace of the recovery may vary according to the tightness in loan standards and the course of public expenditures.

Outlook for 2017

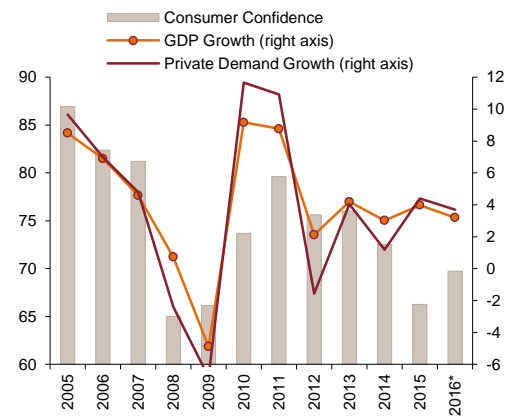
The Turkish economy was subject to a series of adverse shocks in 2016. The contraction in the tourism sector, the loss of confidence driven by the domestic uncertainties, geopolitical tensions and the declining exports to neighbor countries amid the developments in oil prices as well as tight financial conditions were major factors slackening growth. On the other hand, the sizeable contribution of private consumption on the back of wage adjustments and the ongoing increases in employment coupled with the robust course of public demand gave a push to growth. The weak course of investments despite the support from consumption and the adverse effect of net exports caused a notable downturn in annual growth in 2016. The contraction in the tourism sector is estimated to pull growth down by at least 1 point in this period (Box 4.1). Following the weak course in the third quarter of 2016, it is projected that economic activity will start to recover as of the last quarter and converge with the underlying trend gradually in 2017. Capital flows, confidence sentiment, global growth, fiscal and monetary policy stance as well as the effectiveness and pace of structural reforms are likely to set the course of growth.

Chart 4.2.11.
Capital Flows, GDP and Private Demand
(Percent)



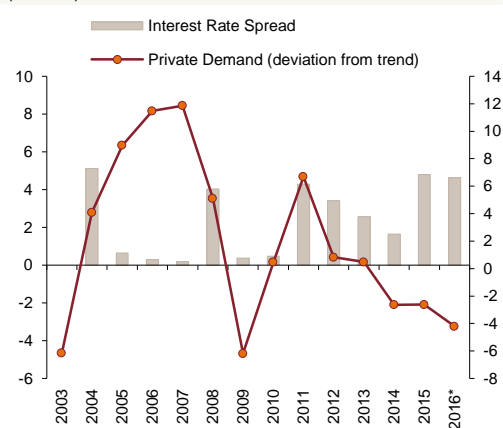
* Net capital flows are based on data covering January-June 2016 period. Forecasts for GDP and private demand growth are based on MTP projections.
Source: TURKSTAT, CBRT.

Chart 4.2.12.
Consumer Confidence and Growth
(Percent)



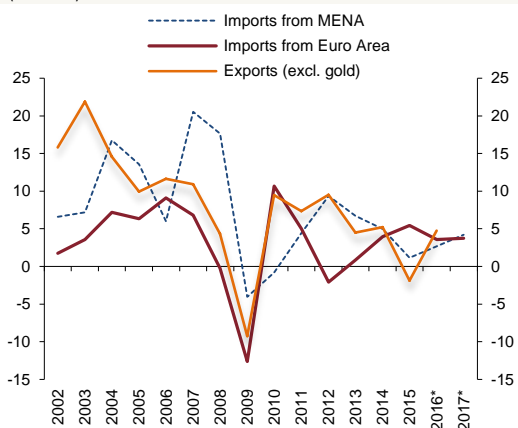
* Consumer confidence is based on data covering January-September 2016 period. Forecasts for GDP and private demand growth are based on MTP projections.
Source: TURKSTAT, CBRT.

Chart 4.2.13.
Interest Rate Spread and Private Demand
(Percent)



* Interest rate spread is the difference between commercial loan rate and deposit rate and based on January-September average for 2016. Forecast for private demand.
Source: TURKSTAT, CBRT.

Chart 4.2.14.
Exports and Global Demand
(Percent)



* Annual growth for January-June period for exports. Forecasts for Euro Area and MENA imports are based on October 2016 issue of the IMF World Economic Outlook.
Source: WEO, TURKSTAT, CBRT.

In 2017, capital flows and the resulting support from access to external credits to growth may remain limited. In the upcoming period, capital flows towards emerging economies may fluctuate depending on global monetary policies and expectations regarding these decisions. However, growth may become less sensitive to these fluctuations due to macroprudential measures, which may act as a buffer against the adverse effects of capital flows (Chart 4.2.11). Measures have been taken through changes in the private pension system to raise domestic savings and reduce the sensitivity of financing of growth to capital flows. Funding of investments is anticipated to become more diverse in 2017 as the initial results of these structural measures unfold.

The recovering consumer confidence is expected to support private demand (Chart 4.2.12). Limited adverse effects of the July turmoil in Turkey on financial markets, the disinflation process and the ongoing accommodative effects of wage increases support confidence indices. The improvement in confidence indices is likely to induce growth in the upcoming period.

The currently tight financial conditions are projected to become gradually more accommodative in the period ahead (Chart 4.2.13). The sluggish course of consumer loans shows that the credit channel had a limited support on growth in the first three quarters, yet more accommodative monetary conditions and the recently enforced expansionary macroprudential arrangements render financial conditions less tight. In fact, loan utilization displayed a partial recovery in the last couple of months. Due particularly to the fall in mortgage loan rates, the reduction in the loan-to-value ratio and the reduced VAT in house sales, the construction sector is expected to provide an increased contribution to growth directly or through affiliated sectors.

Exports of goods and services are expected to grant a stronger support to growth next year. The decline in tourism revenues caused the exports of services to reduce growth by around 1 point in 2016 (Box 4.1). Projections regarding the normalization in Turkey's relations with Russia and the possible recovery in Russia's growth indicate that losses in tourism and shuttle trade will be compensated partially in 2017. Accordingly, exports of services are expected to offer positive contribution to growth next year. In 2016, exports of goods to the EU increased on the back of increased demand in Europe amid the recovery as well as the rise in Turkey's market share in the region (Box 4.2). Under the projection that no additional gains will be obtained in Turkey's market share in Europe, the course of exports will be more subject to the performance of exports to other regions in the upcoming period. Forecasts indicate that import growth will continue steadily in the Euro area and at an accelerated pace in MENA countries (Chart 4.2.14). Accordingly, the recovery in exports of goods is projected to continue.

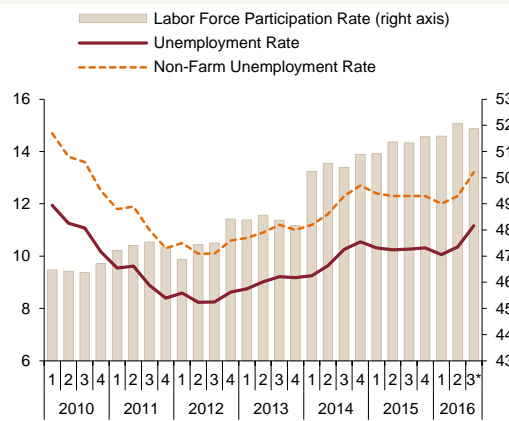
In sum, factors are present to support the recovery in growth in 2017. Due to the low base in tourism activities in 2016 stemming from geopolitical developments, exports of services are expected to contribute both directly and indirectly to growth in 2017. In addition, it is projected in 2017 that the incentive system regarding the private sector investments will be widened, practices to ensure diversity in the financing of growth will be inaugurated and thanks to the adoption of measures on housing, the public sector will provide growth with greater support. However, despite the monetary policy, which has recently been more accommodative, the support from financial conditions to domestic demand may remain limited due to the persisting tightness in loan standards driven by domestic uncertainties. The fragile growth of the global economy, uncertainties regarding the monetary policies of advanced economies, the course of capital flows and geopolitical developments indicate that the downside risks to growth still remain brisk.

4.3. Labor Market

After a decline in the first four months of 2016, unemployment rates displayed an upsurge in May, June and July (Chart 4.3.1). Although employment growth gained quarter-on-quarter momentum, unemployment rates increased due to rising labor participation in the second quarter. In June and July, the fall in employment caused a further rise in unemployment rates (Chart 4.3.2).

Chart 4.3.1.

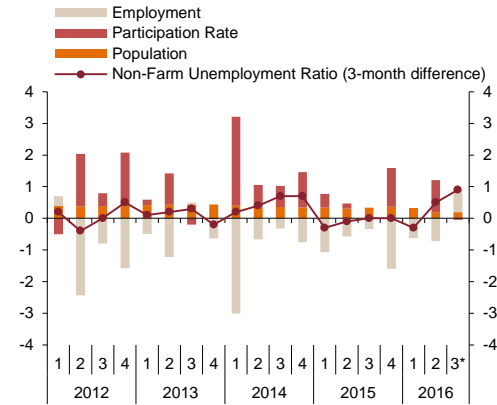
Participation and Unemployment Rates
(Seasonally Adjusted, Percent)



* As of July.
Source: TURKSTAT.

Chart 4.3.2.

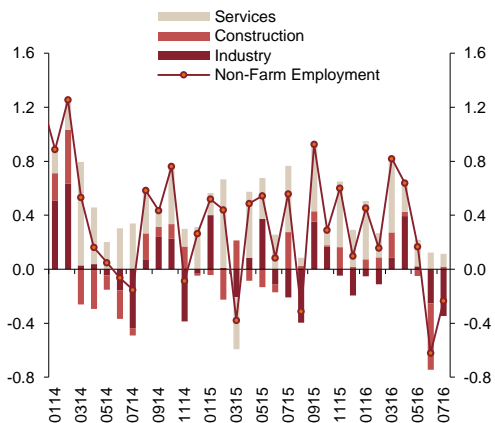
Contributions to Quarterly Changes in Non-Farm Unemployment
(Seasonally Adjusted, Percentage Points)



The main drivers on the second-quarter growth in non-farm employment were the rebound in industrial employment and the rise in employment in public management-social services sector. In this period, employment growth was also supported by the construction sector. The decline in non-farm employment was fueled by construction and industrial sectors in June, but solely from the industrial sector in July (Chart 4.3.3). Services employment recorded a limited increase during this period.

Chart 4.3.3.

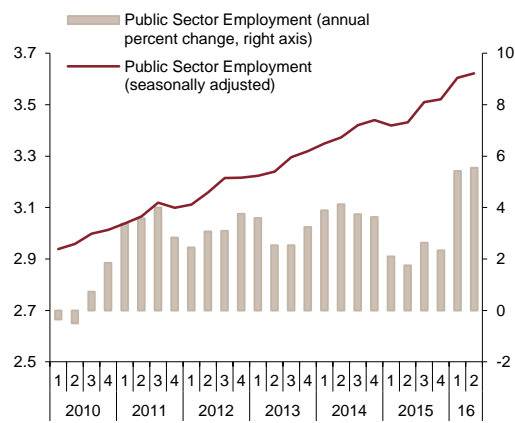
Contributions to Monthly Changes in Non-Farm Unemployment
(Seasonally Adjusted, Percentage Points)



Source: TURKSTAT.

Chart 4.3.4.

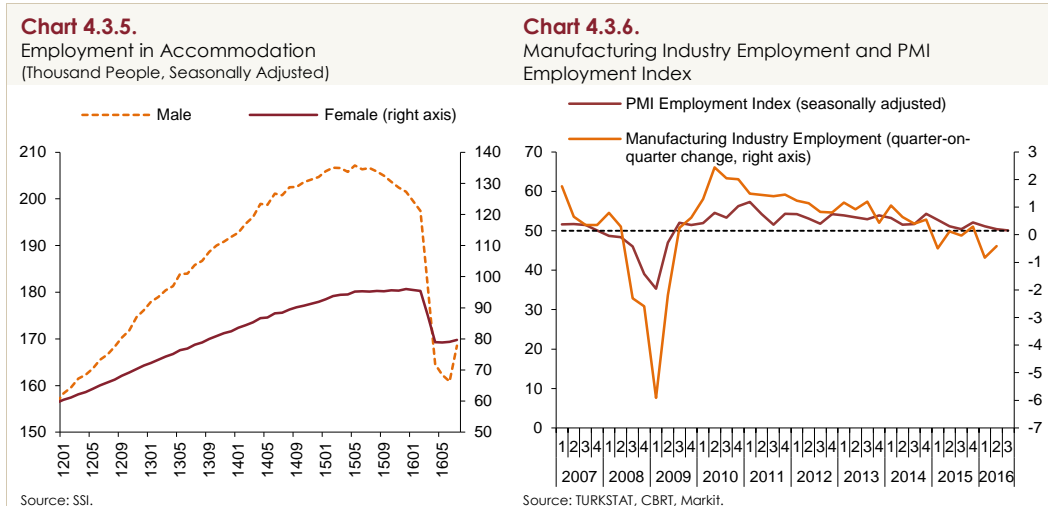
Public Sector Employment



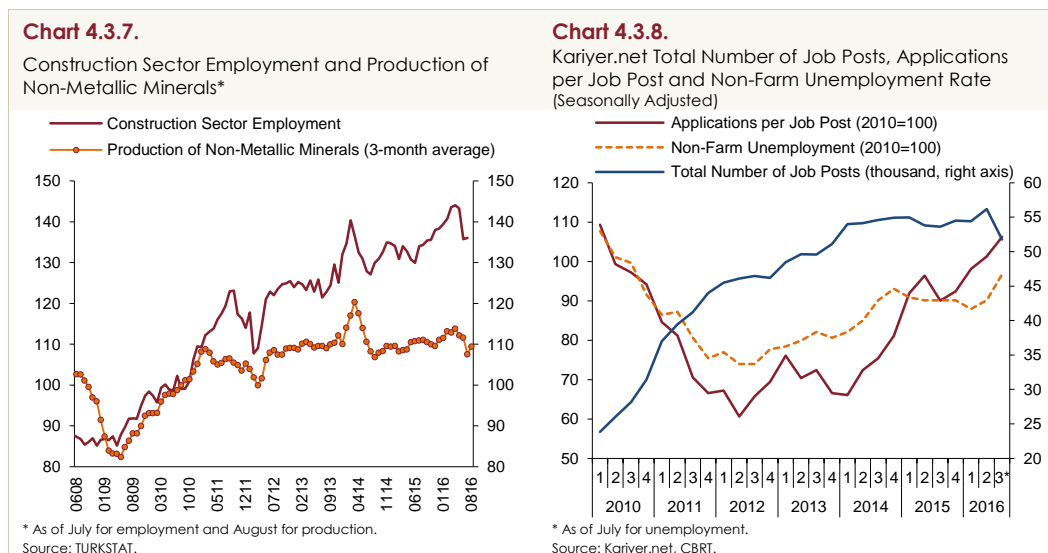
Source: Ministry of Finance.

Public employment growth restricted the increase in unemployment rates in the second quarter (Chart 4.3.4). In the upcoming period, public employment is expected to see a decline due to uncertainties in mid-July, which may cause a rise in unemployment rates. Moreover, developments in the tourism sector had further adverse effects on services employment in the same period (Box 4.1). The SSI employment data indicate that the ongoing negative prospects for the tourism sector continued to restrict the rise in services employment as of July. A breakdown of the male/female employment in the accommodation sector, which accounts for a major share in the tourism sector, also implies an unfavorable outlook (Chart 4.3.5).

The PMI employment index, an indicator of manufacturing industry employment, remained unchanged from August to September and hovered close to the neutral mark (Chart 4.3.6). Regardless of the recovery in August, the sluggish industrial production in the third quarter is expected to limit industrial employment as well.



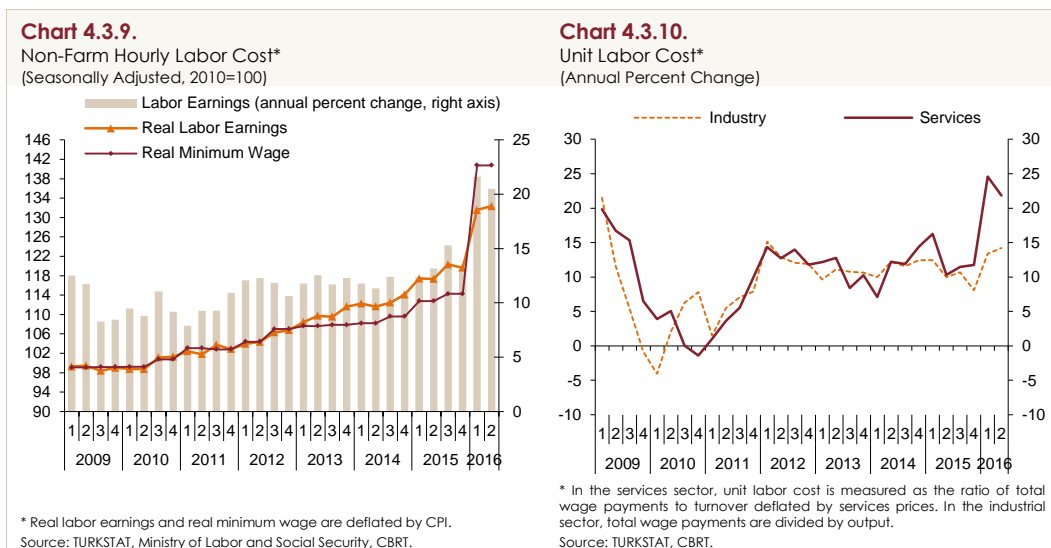
Having declined downwards since April, the production of non-metallic minerals, which is closely associated with construction employment, followed a weak course across the quarter, despite a fast recovery in August. In line with this outlook, the decline in construction employment in the June period is attributed to the domestic developments in July. This is confirmed by the developments in construction employment, which inched up by 0.2 points on a quarterly basis in the July period (Chart 4.3.7). In the September period, which no longer covers July, the construction sector may witness modest increases.



Data from Kariyer.net indicate that total job posts remained below the second-quarter level in September 2016. This is attributed to the falling number of working days due to the extended religious holidays and the uncertainties in July. However, rising job applications caused an increase in the

number of applications per job post (Chart 4.3.8). Thus, leading indicators signal rising unemployment rates for the upcoming period.

In the first half of 2016, wages surged in real terms, driven also by the minimum wage hike in early 2016 (Chart 4.3.9). Rising employment and increases in wages supported household consumption through the income channel in this period. On the other hand, wage increases caused lower profits and pushed unit labor costs upwards, thereby restricting employment opportunities and placing an extra burden on inflation. In this period, productivity developments partly hindered the increases in unit labor costs in the industrial sector, while in the trade and services sector, productivity had virtually no effect in slowing down the rising unit labor costs (Chart 4.3.10). With the absence of high productivity gains in this period, increases in wages largely spilled over into unit wages.



In sum, unemployment rates increased in the second quarter of 2016. In line with the aggravated slowdown in economic activity, employment receded and unemployment rates increased further in the June-July period. In the third quarter, the weak course of economic activity and leading indicators for employment suggest a persistent increase in unemployment rates. Despite signals of a rebound in economic activity in the last quarter, unemployment rates are expected to remain elevated in 2017 assuming that the underlying growth trend will be redeemed gradually. On the other hand, adverse effects of the minimum wage hike on employment may be slightly contained should a certain portion of the additional cost on employees due to the hike is also met by the state in 2017.

Box
4.1

Effects of Tourism on Main Macroeconomic Aggregates

Tourism revenues declined sharply in 2016 due to domestic turbulence as well as geopolitical tensions. This box gives an analysis of the possible effects of this slump on main macroeconomic aggregates such as the current account deficit, employment and growth. The tourism slump has the most direct impact on the current account deficit through services exports. Moreover, tourism has an effect on aggregate demand and growth via services sectors such as accommodation, food and beverage, package tours, transport, leisure and culture as well as through spending on clothing, footwear and souvenirs. Through the production chain, shocks to the sub-items of tourism expenditures may spill over into the overall economy, which may affect growth through more than one channel. The analysis shows that tourism has a strong connection with employment, especially in accommodation and retail trade, which indicates that tourism developments may have significant implications for employment and the unemployment rate through these channels in 2016.

Effects on the Current Account Balance

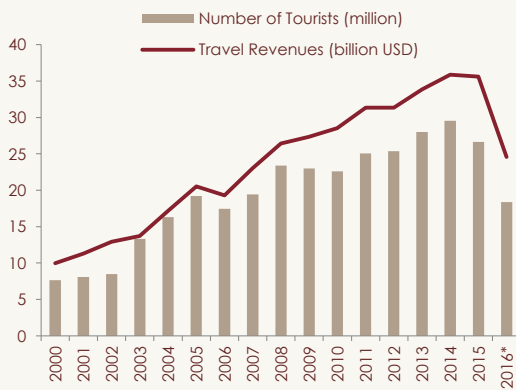
A significant portion of tourism revenues are recorded as travel revenues under services revenues in the balance of payments statistics. In recent years, travel revenues have covered around 50 percent of the foreign trade deficit. Given their effects on the revenues from transport and other services, tourism activities are a major source of financing for the current account deficit.

Travel revenues decreased by 31.4 percent, while the number of tourists dropped by 31 percent from January to August 2016. The decline in travel revenues widened the current account deficit by 5.6 billion USD in the same period. The recent

normalization in relations with Russia is expected to have only limited favorable effects in 2016 as the rest of the year is generally marked by slowing tourism activities due to seasonal factors. Moreover, the number of tourists from other countries is not expected to recover immediately. Accordingly, travel revenues for 2016 are estimated to decline to 18.4 billion USD with an annual drop by 31 percent (Chart 1). The tourism slump in 2016 is expected to have an effect of 8.2 billion USD on travel revenues and 1.5 billion USD on transport revenues. Hence, the total effect on

the current account deficit is estimated to be 9.7 billion USD, which corresponds to around 1.3 percent of the GDP. In 2017, however, travel revenues are expected to recover gradually and contribute favorably to the current account balance.

Chart 1. Travel Revenues and Number of Tourists



* Forecast.

Source: TURKSTAT, CBRT, Authors' calculations.

Effects on Growth

Tourism expenditures have direct, indirect and induced effects on economic activity (UN, 2008). The direct effect is observed in sectors, which are first-hand providers of goods and services to tourists, while the indirect effect is seen in other sectors, which are dependent on demand from tourism-affiliated sectors. As for the induced effect, it arises via employment changes in sectors that are directly or indirectly connected to tourism.

The effect of tourism revenues on economic activity is calculated using travel revenues under the current account balance. The effect of the tourism slump on growth is calculated in two stages. First, taking into account the spending composition of tourists, the contribution of the relevant goods and services to the decline in tourism revenues is measured, which enables to calculate the sectoral demand shock. Next, using input-output tables with base year 2002, changes in production and value added in the overall economy are computed corresponding to the respective demand shock.¹ This provides the measurement of direct and indirect effects, which are caused by shocks to the subcategories of the tourism expenditures.

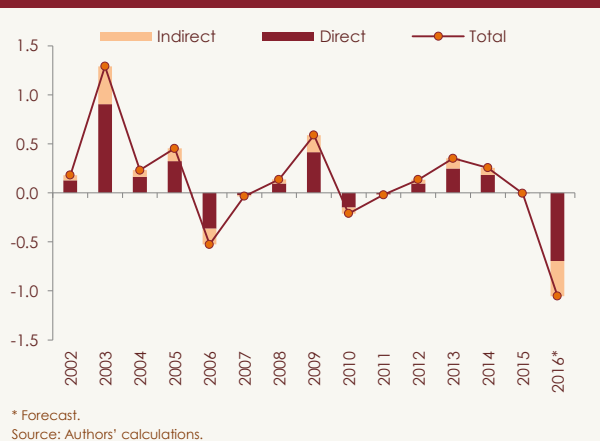
Chart 2 illustrates the direct and indirect effects of tourism revenues on growth. Accordingly, similar to 2006 and 2010, tourism revenues are expected to have a downward effect on growth in 2016. Assuming a 31-percent drop in travel revenues, tourism has a direct and indirect effect of -0.7 and -0.4 points on growth in 2016, respectively. Thus, the total effect of tourism revenues on growth is estimated to be -1.1 points in 2016. It should

be noted that the total effect may even be higher as the slump-driven job loss (induced effects), which may restrict private consumption and growth, are not taken into account. The contribution of tourism revenues to growth is predicted to improve partly in 2017 amid the expected gradual recovery in tourism sector.

Effects on Employment

Due to the absence of an individual category for tourism under the economic activity classification system, the effects of tourism on employment cannot be directly obtained using labor market data. Data on tourism employment can be reached through various subcategories, which are affiliated with tourism. Using SSI data on sectoral registered employment and the number of nights of stay for domestic and foreign tourists, Aldan et al. (2016) conclude that 8.8 percent of services employment was affiliated with domestic and foreign tourism activity during 2008-2014. Only taking the number of night stays by foreign

Chart 2. Direct and Indirect Effects of Tourism Revenues on Growth (Percentage Points)



¹Production/value added ratios are assumed to be constant for sectors.

tourists into account, this ratio decreases to 5.4 percent. Across tourism-affiliated sectors, accommodation, food and beverages, travel agency and tour operating sectors stand out in terms of job loss. Accordingly, SSI data suggest that employment decreased by 18 percent from end-2015 to July 2016 in the accommodation sector, which has 60 percent of the overall employment in foreign tourism-affiliated activities.

SSI data cover only registered employment. Hence, in order to measure the adverse effects of the tourism slump on unemployment, HLFS data should also be used, which include unregistered labor as well. Taking Aldan et al. (2016) as a benchmark, it can be inferred that around 550 thousand people were employed in foreign tourism-affiliated activities based on HLFS data for services employment in 2015. Assuming a direct effect, a 30 percent decline in the number of tourists corresponds to an employment loss of 165 thousand people, which has -0.5 percent effect on non-farm employment growth in 2016.²

REFERENCES

- Aldan A., B. Gürçihan-Yüncüler and A. Yavuz, 2016, Tourism Employment in Turkey, unpublished manuscript.
- Aldan A. and B. Gürçihan-Yüncüler, 2014, Alt Sektör Ayrımında İşgücüne Katılım ve İstihdam İlişkisi (in Turkish), CBT Research Notes in Economics No. 14/18.
- UN, 2008, Tourism Satellite Account: Recommended Methodological Framework.

² In analyzing the effect of job loss on unemployment rate, the positive co-movement between employment and labor force should be taken into account. In fact, job loss or anticipation of no possibility to find employment may cause discouraged workers to stay out of the market. Aldan and Gürçihan-Yüncüler (2014) analyze the relation between employment and labor force by sub-sectors and find that an increase of 1 person in employment can be associated with 0.79 person increase in labor force. Considering job loss and its reflections on labor market participation, the tourism slump is expected to add 0.15 points to the unemployment rate in 2016. In case of more limited effects on labor market participation, the effect on unemployment rate may reach 0.3 points.

Box
4.2

Assessing Turkey's Export Gain in the EU Market in Terms of Competitiveness

Turkey's exports to the EU have been rising gradually and continuously, especially since mid-2011, in both real terms and as a market share (Chart 1). In a period marked by relatively low world trade and weak economic activity in the EU, this performance may be attributed to the fact that EU growth was driven by final domestic demand, and 60 percent of Turkey's exports to the EU was composed of investment and consumption goods. Moreover, the export gain was also supported by favorable developments with respect to competitiveness in this period. This box gives an analysis of Turkey's gains in the EU market with respect to competitiveness. To this end, relative unit value, an indicator for competitiveness, is calculated both on a sectoral basis and in aggregated terms for Turkey, and then compared across competing countries in the EU market.³

Chart 1. Share of Turkey's Exports in EU and Turkey's Real Exports to EU



Relative Unit Value

Unit value is measured as a ratio of the total value of exports over the total quantity of exports for each sector to the total value of world exports over the total quantity of world exports. The sum of unit values weighted by sectoral shares in total exports is the relative unit value (RUV) of the country.⁴ An RUV above (below) 1 indicates that goods are exported at a higher (lower) price than the world average. Yet, this comparison is based on the assumption that goods are identical with respect to quality, while differences in quality may obviously be reflected on prices. Hence, unit value may capture the quality standards in exports as well. Other things being equal, a higher unit value implies a higher quality standard in production.⁵

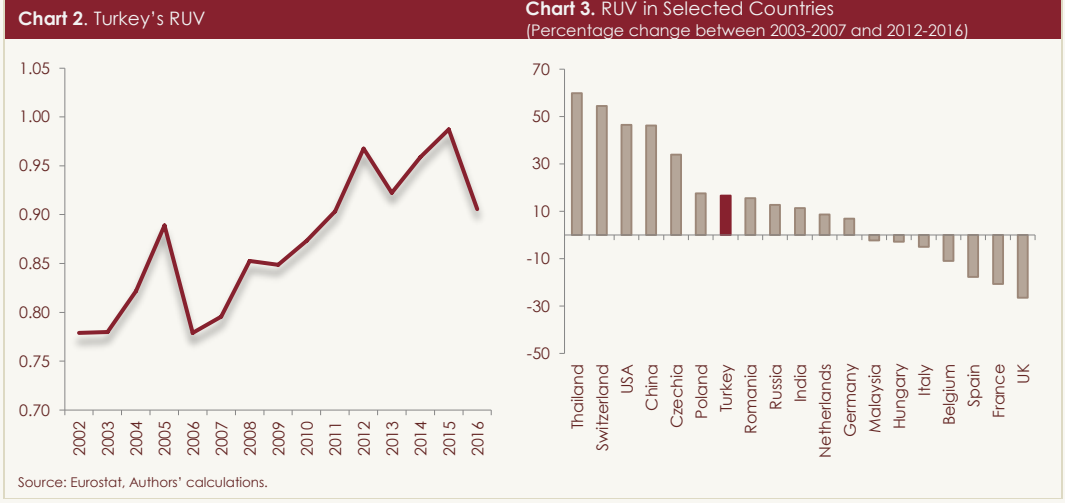
RUV measurements are based on Eurostat data. Unit values are obtained by dividing EUR-denominated total value of exports to the total quantity of exports individually for each country and on a sectoral basis. Competing countries include a balanced group of EU and non-EU countries as well as emerging and advanced economies. The comparisons are based on the pre-crisis and post-crisis periods, which cover 2003-2007 and 2012-2016, respectively.

³ Despite other factors such as technological development, product and market diversification, innovation and high quality, this box focuses only on quality improvement as a measure of competitiveness.

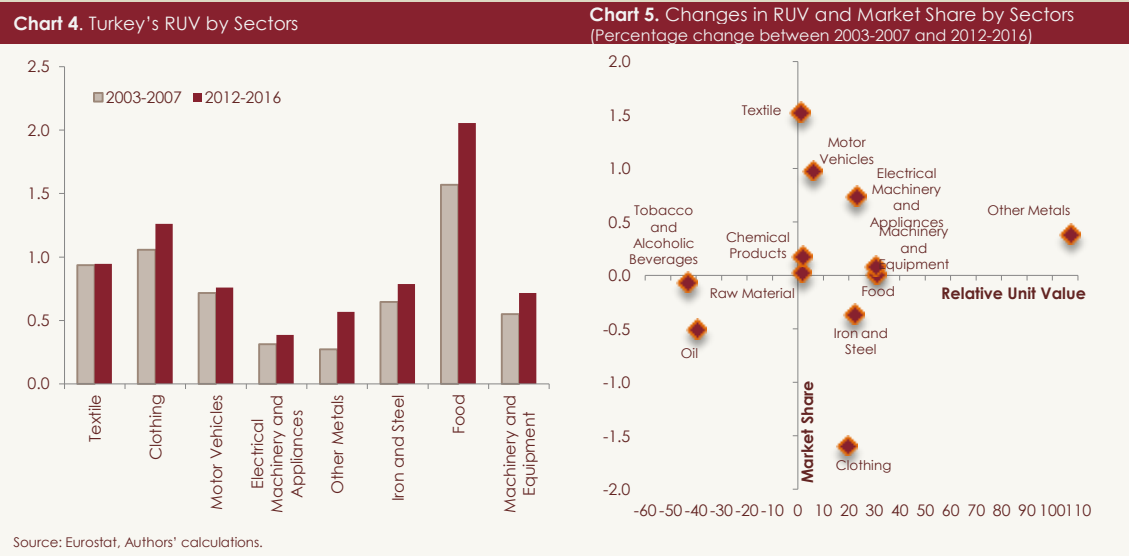
⁴ In broad terms, RUV is calculated as the ratio of export unit value for an individual country to the world unit value.

$$RUV = \sum_{i(s)} a_{cs}^{i(s)} * \frac{UV_{cs}^{i(s)}}{UV_{Dc}^{i(s)}} ; \quad a_{cs}^{i(s)} = X_{cs} / X_{Dc}$$
 where X_{cs} denotes exports of country c in sector s and X_{Dc} denotes total exports of country c.

⁵ Reis and Farole (2012).



The RUV for Turkey has risen over time and increased from 0.78 in 2003 to 0.91 in the first half of 2016. The RUV for Turkey surged by 17 percent in the EU market between the pre-crisis and post-crisis periods (Chart 2).⁶ When compared to competing countries in the EU market, Turkey is one of the countries with an increasing RUV, yet this is still below 1 (Chart 3). This indicates that relative prices are lower than the EU average, which may imply that market share grows on the back of price advantage. The rise in RUV is driven by all leading export sectors (Chart 4).



⁶ It should be noted that RUV reflects not only the change in quality standards but also the change in the export composition. While the share of the low-tech exports such as clothing, which was high at the beginning of the 2000s, declined gradually over the years, the share of medium-high technology products such as motor vehicles increased.

The findings in this context confirm the prior evidences that advanced economies lost while emerging economies gained market share amid globalization. Yet, on a sectoral basis, Turkey's gain in market share has been lower than peer emerging economies. In food, clothing, textile, motor vehicles, machinery and equipment and electrical machinery and appliances, which constitute about 80 percent of Turkey's exports to EU, the RUV mostly remained lower than 1 despite posting an increase after the crisis. Chart 5 shows changes in RUV and the market share by sectors. Main findings are summarized as follows:

- Food is the only sector in the analyzed period, which increased its RUV above 1 without decreasing its market share. About 80 percent of food exports to the EU is composed of fresh fruits and vegetables. Accordingly, when compared to competing countries such as Spain, Italy and France, an above-average RUV in food is interpreted as an increase in high quality.
- Clothing posted the fastest rate of increase in RUV in the analyzed period, yet it also experienced a loss of market share. This indicates that in order to increase export revenues, rising quality standards is preferred over competing in prices with countries like China and Bangladesh, which have a cost advantage given their cheaper labor force.
- Motor vehicles, textile, machinery and equipment as well as electrical machinery and appliances posted increases in both RUV and market share. However, the RUV stayed below 1 in these sectors, which implies that gains in market share were provided by price advantage besides rising quality.
- Textile registered the highest gain in market share in the analyzed period. The sector increased its exports considerably while keeping the RUV close to 1. Similar to clothing, this shows that quality standards are constantly rising in textile, which competes with East Asian countries over prices given their cheaper labor force.
- As for machinery and equipment, the RUV has increased over time while competitiveness has lagged behind Asia and Central Europe (Chart 9). On the other hand, the electrical machinery and appliances registered gains in the market share by keeping RUV below other countries.

Conclusion

Turkey's recent gain in market share is attributed to higher competitiveness driven by product quality as well as cyclical factors. The fact that Turkey was able to increase its exports without reducing its prices indicates that this was provided by increased quality. Despite the presence of price competition in some sectors, Turkey increased its market share while keeping its export prices below but close to the EU average. The quality improvement in exports to the EU market is an indication of favorable signals regarding the sustainability of the expansion in market share that has been observed since 2013. Hence, in the upcoming period, together with the EU growth driven by final domestic demand, continued rise in quality will set the course of growth in exports.

**Box
4.3**

The Impact of Agricultural Banking on Agricultural Productivity

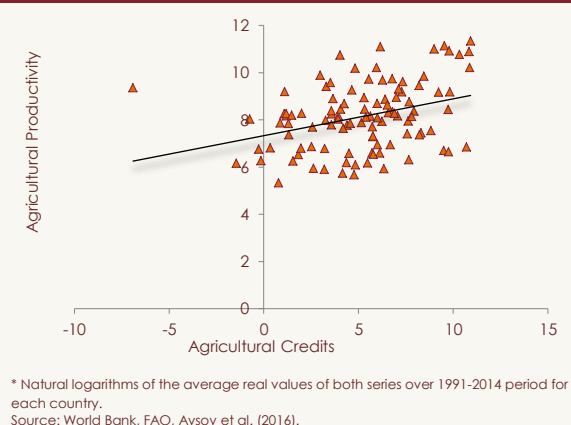
Current macroeconomic policies are hampered by external volatilities in food supply and food prices. Hence, developing policies to minimize these fluctuations are one of the top priorities in policymakers' agenda. Academic studies show that agricultural productivity has a favorable impact on both the level and the volatility of food supply and prices. Food supply increases and becomes less volatile as agricultural productivity, which can be measured by total agricultural value added or agricultural value added per labor increases. This causes reasonable increases and less volatility in food prices.

High technology and modern equipment lead to considerable gains in agricultural productivity. Access to technology and modern equipment in agricultural production is determined by producers' borrowing capacity for investment, which is closely associated with the advances in agricultural financing system. In an advanced system, producers have access to borrowing to buy technological machinery and equipment, obtain productive land, build and modernize plants, install irrigation systems and purchase seed, seedling and livestock, while they also benefit from technical consulting services in these areas.

This box presents an analysis of the link between the level of development in agricultural banking and agricultural productivity using World Bank and FAO data on 104 countries for the 1991-2014 period. Findings indicate that agricultural productivity correlates strongly with agricultural credits. Agricultural banking in Turkey is currently at an early stage of development. When compared to the rest of the world, an increase in both the volume and the coverage of agricultural banking are deemed to have significant benefits for the Turkish economy. Recently, private banks in Turkey have been quite active in agricultural banking activities, which were solely fulfilled by state banks in the past. This indicates that increased granting of agricultural credits by private banks may cause a rapid development in agricultural productivity, which may help to eliminate chronic structural problems in the agricultural sector.

The presence of a positive relation between agricultural productivity and agricultural credits can easily be observed using country-level raw data (Chart 1). Accordingly, higher agricultural financing opportunities result in higher agricultural productivity. In Turkey, agricultural banking is a relatively new, profitable and rapidly improving area; yet when compared to the top-ranking countries in agricultural production, the volume of private agricultural credits is quite low relative to total credits. Hence, enhancing agricultural banking may contribute significantly to agricultural value added and productivity.

Chart 1. Agricultural Productivity and Agricultural Credits*



As indicated above, the volume of agricultural banking seems to have a significant positive relation with agricultural productivity. Therefore, efforts to promote agricultural banking may considerably improve agricultural productivity in Turkey. In order to attain results with more solid and quantitative informational value, this proposition should be backed by a cautious data-based analysis.

Accordingly, the main objective is to see whether an increase in the volume of agricultural banking leads to an increase in agricultural productivity, and if so, measure the size of this contribution. This can be provided via the estimation of the following regression equation:

$$VA_{j,t} = \beta_0 + \beta_1 \cdot CA_{j,t} + \beta_2 \cdot X_{j,t} + f_j + f_t + \epsilon_{j,t}.$$

Where, j and t are indices for country and year, respectively; VA denotes agricultural value added; CA denotes agricultural credits; $X_{j,t}$ are control variables; f_j and f_t are country and year fixed effects; and ϵ stands for standard error. This equation can be regressed using standard OLS, panel estimation with fixed effects and instrumental variables. Agricultural productivity can be captured by agricultural value added in natural logarithms and agricultural value added per agricultural labor in natural logarithms. Results are summarized in Tables 1 and 2.

Against this background, Tables 1 and 2 indicate that the doubling of agricultural credits leads to an increase of about 4-5 percent in agricultural productivity. As for Turkey, newly granted credits in agriculture account for about 0.5 percent of total credits, while the sector's target is to reach 10 percent in the long term. In this respect, regression results imply agricultural productivity gains after reaching the target. Furthermore, the estimation results show that the growth of agricultural credits is more effective on agricultural value added in developing countries, while it has more impacts on agricultural productivity in developed countries. In other words, as the agricultural financing system improves in developing countries, agricultural value added increases through fixed investments such as infrastructure projects, while at later stages, agricultural productivity enhances with the effective use of these projects. These findings can be confirmed with both cross-sectional and panel data as well as instrumental variable regressions (Tables 1 and 2).⁷

Table 1	Dependent Variable: Agricultural Value Added								
	Total			Developing Countries			Developed Country		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Agricultural Credits	0.151*** (0.048)	0.051*** (0.018)	0.050*** (0.011)	0.254*** (0.043)	0.054** (0.026)	0.056*** (0.012)	0.023 (0.041)	0.030 (0.019)	0.039** (0.017)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	90	1005	847	71	795	671	19	210	176

Table 2	Dependent Variable: Agricultural Productivity								
	Total			Developing Countries			Developed Country		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Agricultural Credits	0.172* (0.098)	0.045** (0.018)	0.042*** (0.011)	0.258*** (0.061)	0.026 (0.020)	0.018 (0.013)	0.032 (0.041)	0.076*** (0.014)	0.093*** (0.018)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	90	1005	847	71	795	671	19	210	176

***, ** and * denote statistical significance at 1, 5 and 10 percent, respectively. Standard errors are in parenthesis and clustered for countries. The second lagged value of the agricultural credits in natural logarithm is used as an instrument while lending rate and arable land are control variables. Agricultural labor productivity is agricultural value added over agricultural employment. Columns [1], [4] and [7] show the results of OLS regressions with cross-sectional data, while columns [2], [5] and [8] are regressions with panel data using fixed effects and columns [3], [6] and [9] show instrumental variable regression results.

⁷ For technical details, see Aysoy et al. (2016).

These findings reveal that an efficient growth strategy in agricultural credits will lead to considerable gains in agricultural value added and productivity. Micro credits, which are provided to producers by expertized private banks, both enhance the agricultural productivity and contribute significantly to the elimination of structural problems. Accordingly, higher product variety in agricultural credits and increased allocation of micro credits for financing machinery and equipment as well as production technology may provide serious improvement in agricultural productivity.

REFERENCES

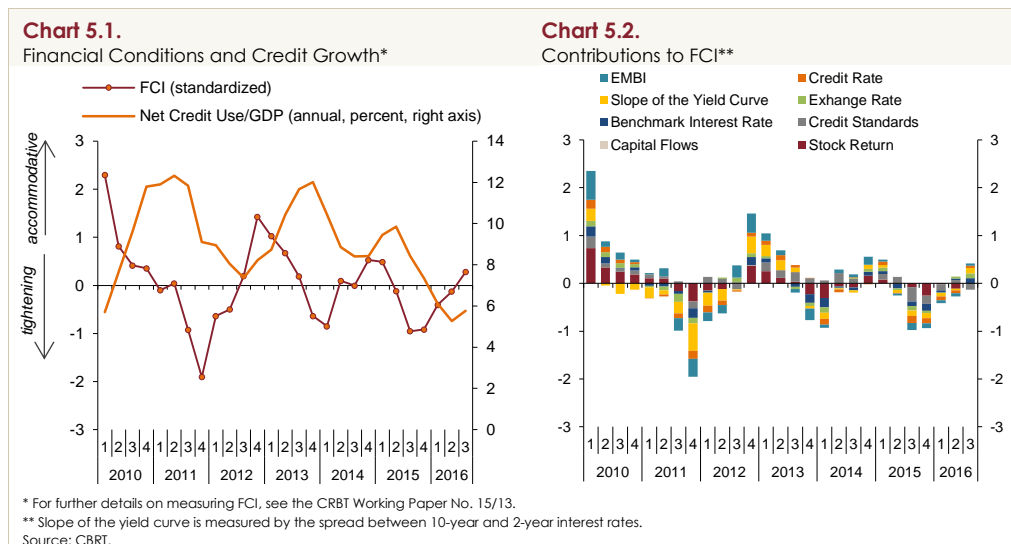
Aysoy, C., U. Seven and S. Tümen, 2016, Agricultural credits and agricultural productivity: Cross-country evidence, forthcoming CBRT Working Paper.

5. Financial Markets and Financial Intermediation

Leading indicators for the third quarter of 2016 pointed to a moderate improvement in global economic activity, yet global growth still remains at a historical low. The weak growth and trade volume cause continued low levels in commodity prices and inflation rates. Thus, advanced economies opt for more expansionary monetary policies. The improving global risk sentiment and low interest rates across advanced economies boosted portfolio flows towards emerging economies in the inter-reporting period. However, portfolio flows have weakened recently amid Fed rate hike prospects and uncertainties over monetary policies of other major central banks.

Due also to the CBRT's liquidity measures, domestic funding conditions of the Turkish banking sector followed a favorable course over the inter-reporting period, and consumer credits showed signs of recovery thanks to positive implications of the adopted macroprudential policies. However, the persistence in domestic uncertainty, decisions of credit rating agencies and geopolitical tensions may cause volatility in domestic financial markets. The CBRT's decisions to reduce the marginal funding rate have partly passed through to credit rates, but credit conditions remain tight due to uncertainties in financial markets.

This environment of uncertainty weighed on accommodative liquidity measures and macroprudential policies, keeping them from having a positive effect on financial markets in the third quarter. Therefore, the FCI calculated for Turkey stood slightly above the neutral mark in the third quarter of 2016 (Chart 5.1). In the third quarter, the real exchange rate, the benchmark rate, stock return, credit rate, EMBI and the slope of the yield curve provided only a small positive contribution to the index, whereas the contribution of capital flows remained flat and credit standards had a downward impact on the index (Chart 5.2).



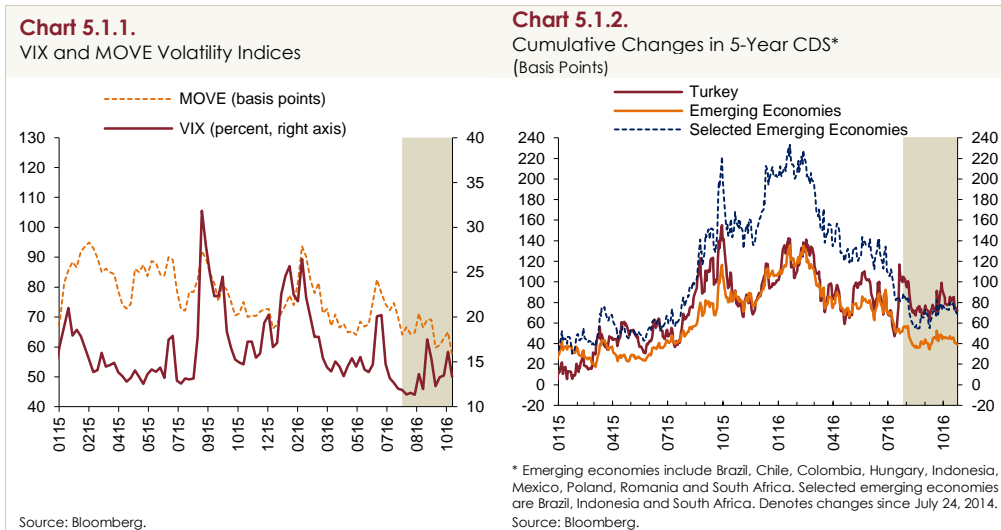
The downgrading of Turkey's international credit rating to non-investment grade in September was largely anticipated by markets, and thus received little reaction from financial markets. On the other hand, credit conditions might be affected slightly in the upcoming period depending on how much the downgrade will be reflected on banks' external funding conditions. However, on the back of

the CBRT's liquidity measures, macroprudential adjustments, fiscal policy incentives and Turkey's solid macroeconomic foundations, the downgrade is expected to have a short-lived and limited impact on credit conditions.

5.1. Financial Markets

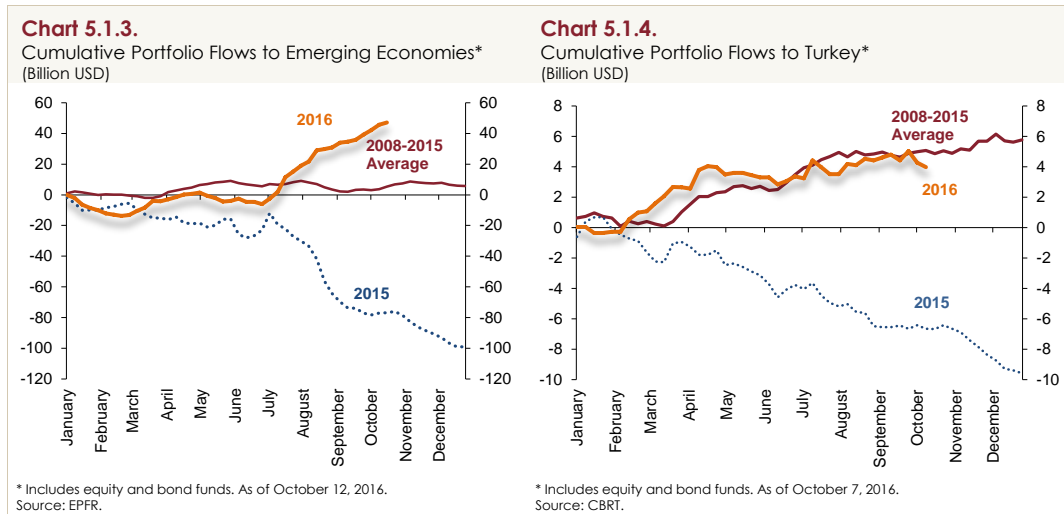
Global Risk Perceptions

With major central banks' maintaining accommodative monetary policies, the global risk sentiment fluctuated in the third quarter of 2016 amid Fed rate hike prospects (Chart 5.1.1). While the downtrend in bond yields of advanced economies has ended, global interest rates still remain at historically low levels (Chart 2.3.1). In fact, the risk sentiment towards emerging economies remained upbeat in the inter-reporting period and CDS premiums remained low compared to previous periods (Chart 5.1.2). In this period, the effects of the July domestic turbulence on Turkey's CDS premium were partly offset.

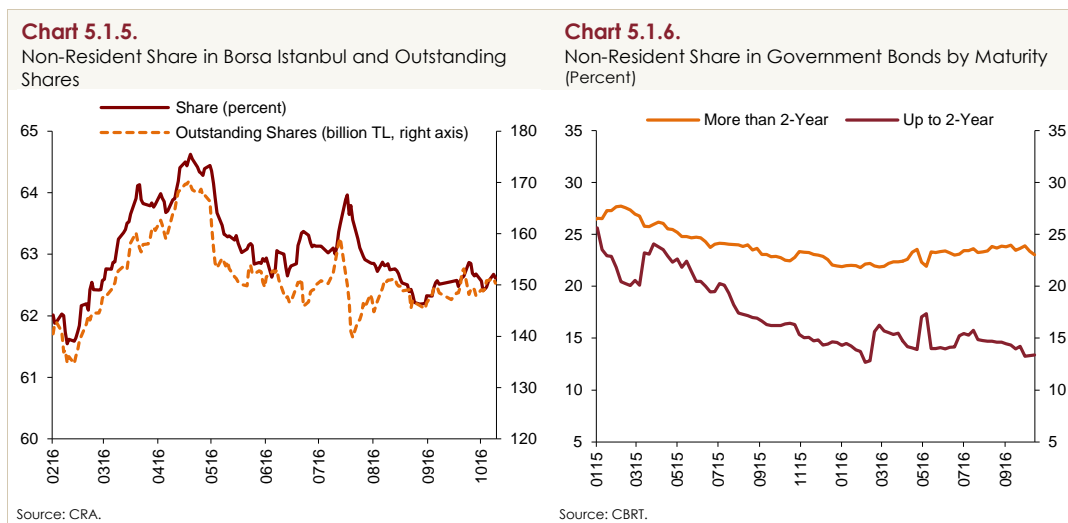


Portfolio Flows

Amid accommodative monetary policies and low long-term interest rates in advanced economies, portfolio flows have moved towards emerging economies starting from July. Yet, due to the recent global monetary policy uncertainty, the pace of these flows have decelerated slightly (Chart 2.3.4). In cumulative terms, portfolio inflows increased above 2008-2015 average with the recent surge of flows (Chart 5.1.3). Portfolio flows to emerging economies are concentrated mostly in bonds rather than equity funds. In the same period, portfolio flows into Turkey remained limited compared to other emerging economies due to domestic developments and hovered close to past years' averages (Chart 5.1.4).

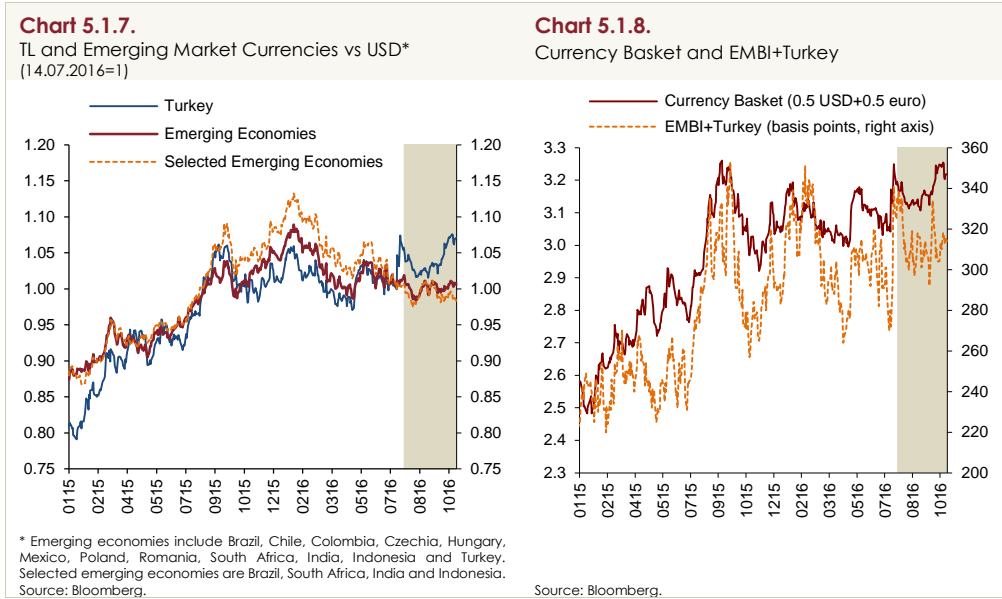


Despite volatile domestic markets since mid-July, non-residents' shares of equities and government bonds barely changed (Charts 5.1.5 and 5.1.6). The demand of non-residents for government bonds with more than 2-year maturities remains strong, which signals that foreign investors are optimistic about Turkey's medium and long-term outlook.

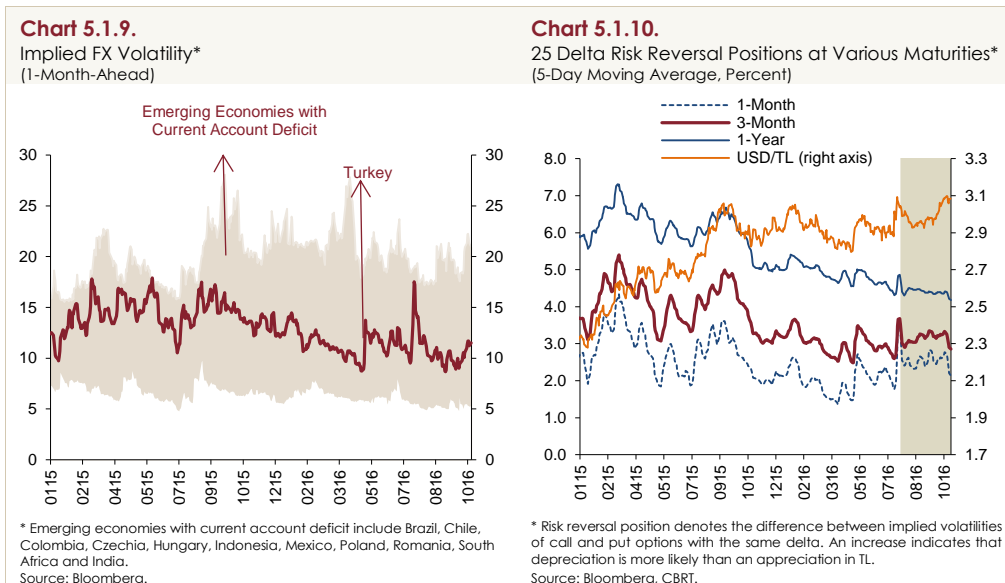


Exchange Rates

In the inter-reporting period, currencies of emerging economies appreciated slightly against the US dollar (Chart 5.1.7). Currencies of commodity exporting countries such as Brazil, South Africa, India and Indonesia outperformed currencies of other emerging economies due to the mild recovery in commodity prices. The Turkish lira appreciated rapidly against the US dollar particularly after the effects of the July turmoil died down, but, in September, it slightly underperformed emerging economies' averages due to rising oil prices, the increased domestic uncertainty, the decisions of credit rating agencies and geopolitical tensions (Chart 5.1.8).



The implied exchange rate volatilities for currencies of emerging economies with a current account deficit have remained flat since the previous reporting period. After rising due to the mid-July turbulence, the implied volatility of the Turkish lira fell rapidly in August below that of other emerging economies with current account deficit (Chart 5.1.9). Since the end of September, the short-term exchange rate volatility has posted some increase in line with exchange rate developments. Surging temporarily in July, risk reversal positions have returned to previous levels as of August (Chart 5.1.10).



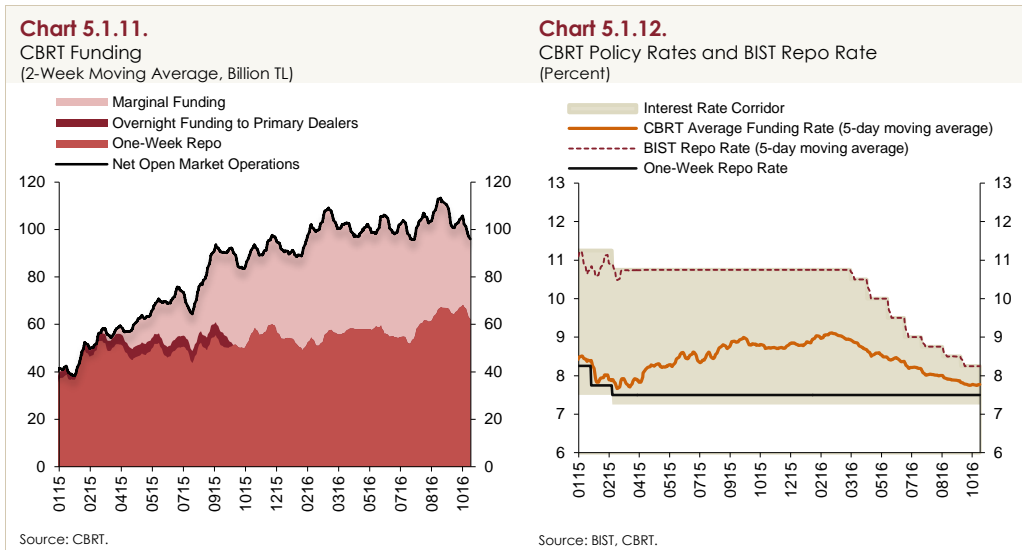
Monetary Policy

The effective use of the policy tools announced in the road map of August 2015, together with the tight liquidity policy and the cautious macroprudential policy framework have strengthened the resilience of the economy against global shocks, which in turn has reduced the need for a wide interest rate corridor. Thus, the CBRT decided to take measured steps towards simplification of the monetary policy by lowering the marginal funding rate by 25 basis points in March and 50 basis points each in the April, May and June MPC meetings. Despite recent domestic tensions, financial markets fluctuated only slightly and temporarily thanks to the favorable course of the global risk appetite and the effective liquidity measures taken by the CBRT since July. These developments show that the macroeconomic fundamentals of the Turkish economy are strong and resilient against shocks. In view of its contribution to an effective monetary policy, the CBRT continued to take measured and cautious steps towards simplification by lowering the marginal funding rate further by 25 basis points each in the July, August and September MPC meetings.

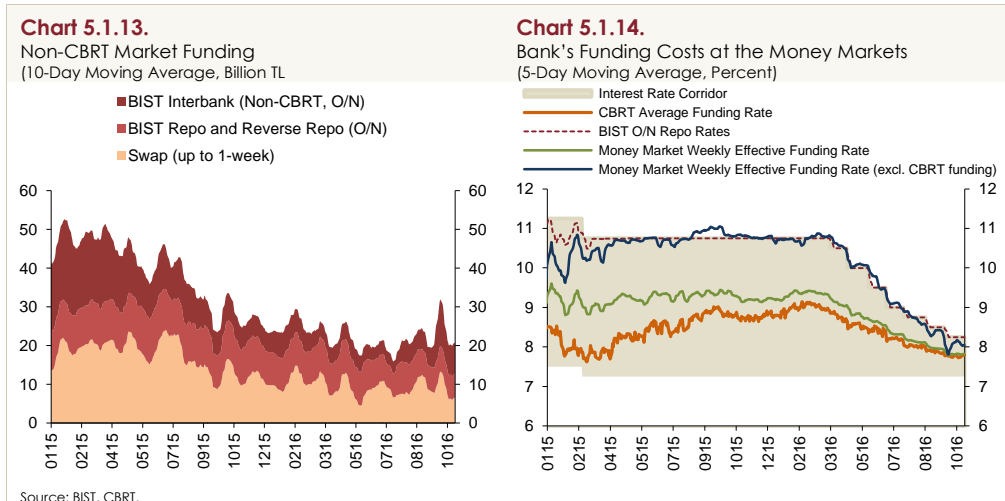
On July 27, in order to support the effectiveness of banks' liquidity management, the haircut/discount rates of Turkish lira and FX-denominated collaterals pledged against Turkish lira transactions were changed by taking into account of their types and maturities. With this adjustment, a part of pledged collaterals was released. Again within the liquidity policy, the CBRT made changes to reserve requirement ratios and reserve option coefficients in the inter-reporting period. Accordingly, the Turkish lira reserve requirement ratios were decreased by 50 basis points for all maturity brackets on August 9 and September 6. On the same dates, coefficients for the second, third and fourth tranches of the FX facility and for the first three tranches of the gold facility under ROM were increased by 0.1 point. Assuming that the reserve option utilization rates remain unchanged, additional Turkish lira and USD liquidity were provided to the financial system with these changes.

Overall financial conditions are supported by macroprudential adjustments and the reduced tightening in monetary conditions, which is also owed to the CBRT's policy actions. Developments in exchange rates and other cost factors limit the improvement in the inflation outlook and require that the cautious monetary policy stance be maintained. Against this background, the CBRT decided to keep policy rates constant in October. The direction and the timing of the next step towards monetary policy simplification will depend on data. In the upcoming period, the monetary policy decisions will be conditional on the inflation outlook. Taking into account inflation expectations, the pricing behavior and the course of other factors affecting inflation, the cautious monetary policy stance will be maintained.

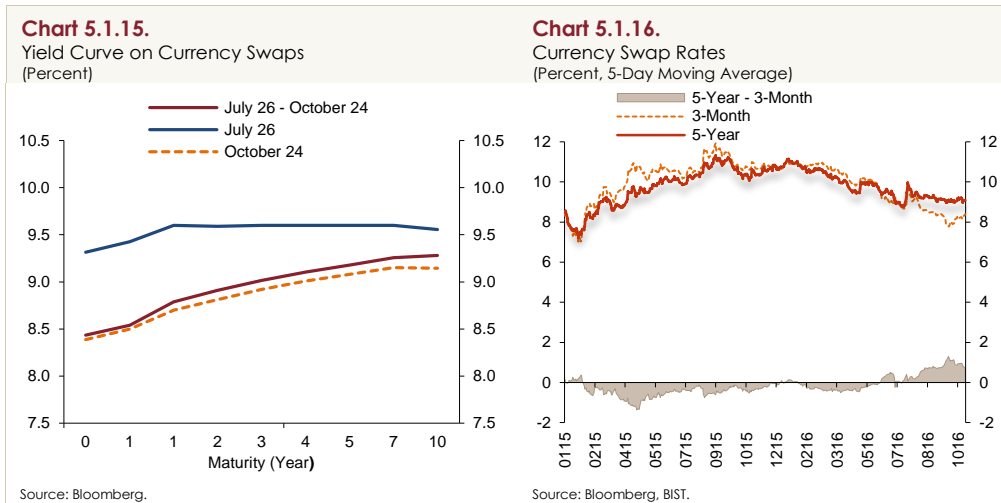
One-week repo auctions, which account for a large portion of the CBRT funding, were up from the previous reporting period, while the share of marginal funding fell slightly (Chart 5.1.11). In line with the increased share of weekly repo and the reduced marginal funding rate, the average funding rate of the CBRT also fell by about 20 basis points from the previous reporting period and stood at 7.80 percent as of October 24. Interbank overnight repo rates continued to fall on a par with the marginal funding rate cut (Chart 5.1.12).



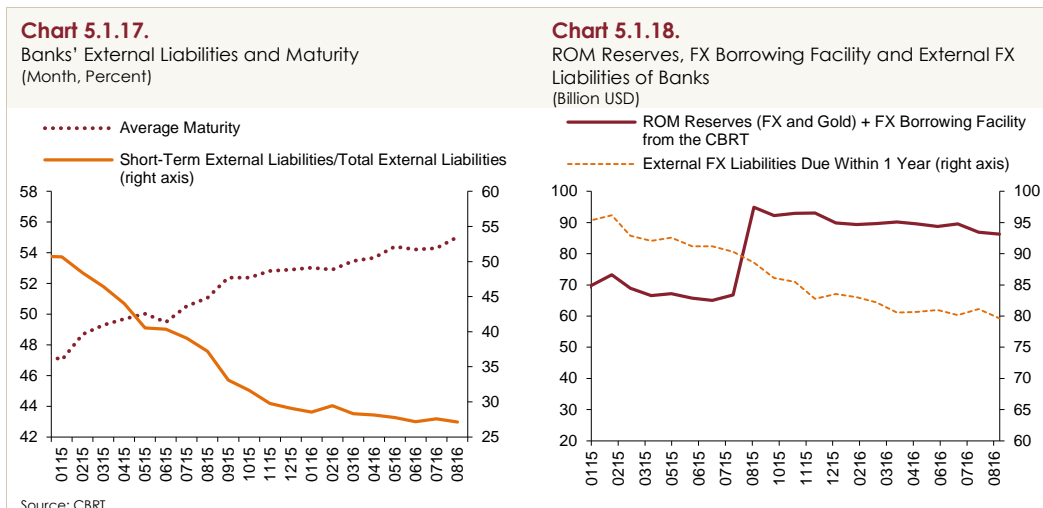
In the money market, non-CBRT market funding with up to one-week maturity is mostly obtained via swap markets. This is followed by funds transacted under the BIST Interbank Repo and Reverse Repo Market and those which are exchanged by intermediaries under the BIST Repo and Reverse Repo Market (Chart 5.1.13). The effective funding rate, which is calculated by the weights of the CBRT and non-CBRT funds in total funds, was 7.79 percent on October 25 (Chart 5.1.14). Falling short-term market rates driven by the reductions in the upper band of the interest rate corridor cause the effective funding rate to approach the average funding rate. The fact that different types of interest rates in the money market hover close to each other is viewed to be favorable in terms of the effectiveness of the monetary policy transmission.



Ongoing expectations for an extended period of low policy rates across advanced economies, the benign course of domestic macroeconomic indicators and further reductions in the marginal funding rate caused the yield curve derived from currency swap rates to shift down across all maturities in the inter-reporting period (Chart 5.1.15). Short-term rates registered a faster decline in line with the CBRT's reduced funding rate. Accordingly, the yield curve based on the gap between 5-year and 3-month currency swap rates trended higher compared to the previous reporting period (Chart 5.1.16).



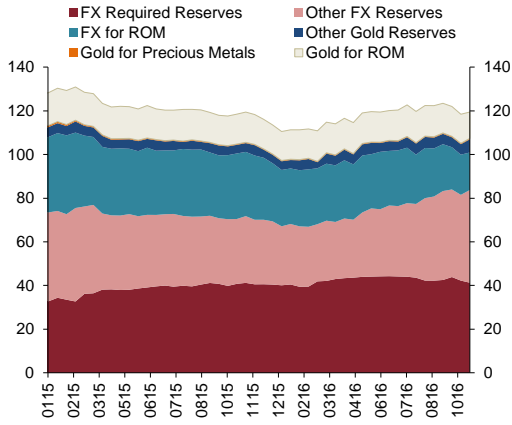
Thanks to the measures taken by the CBRT since early 2015 to support financial stability, the average maturity of banks' non-core FX liabilities has followed a relatively flat course as of August 2016 (Chart 5.1.17). The extended maturity of banks' external borrowing helps to alleviate the rollover risk and also strengthens the resilience of banks against global shocks. The CBRT took measures to enhance the flexibility of the FX liquidity management as of the second half of 2015. Accordingly, deposit limits allocated to banks and the sum of gold and FX-denominated assets held at the CBRT under the ROM reached a level that could easily meet all the external liabilities of banks in the next one year. This level has been maintained as of August 2016 (Chart 5.1.18).



The CBRT's gross FX reserves remained flat as of October 21 compared to the previous reporting period (Chart 5.1.19). On the other hand, other FX reserves increased by 8.8 billion USD in this period amid the contribution of rediscount credits for exports as well as the fact that the CBRT's direct FX sales to energy-importing state institutions declined and the amount of daily FX auctions were lowered to zero. The FX amount obtained by rediscount credits through 2016 equaled 10.9 billion USD as of September (Table 5.1.1). Appreciation in exchange rates led to a decline in the amount held by banks under the ROM.

Chart 5.1.19.

CBRT FX Reserves*
(Billion USD)



Source: CBRT.

Table 5.1.1.

CBRT FX Reserves and Contribution of Rediscount Credits to FX Reserves
(Billion USD)

	Rediscount Credits	CBRT FX Reserves
2015	15.18	113
2016	10.95	122
January	1.08	111
February	1.1	111
March	1.13	114
April	1.03	116
May	1.37	118
June	1.4	120
July	1.35	120
August	1.02	122
September	1.44	118

Market Rates

In the inter-reporting period, global monetary policy actions were the key factors affecting market rates in emerging economies, and both short-term and long-term rates dropped in many countries. Market rates were on the rise in Mexico, where interest rates are still hiked, but went down in India and Indonesia, where policy rates are still cut and in Brazil and Colombia, where interest rates are no longer hiked (Charts 5.1.20 and 5.1.21). In addition, market rates also declined in Turkey, where the marginal funding rate was lowered until October. The fall in market rates was higher in Turkey after the mid-July fluctuations, particularly for shorter maturities, compared to other emerging economies. However, market rates are still high in Turkey compared to other emerging economies (Charts 5.1.22 and 5.1.23).

Chart 5.1.20.

Changes in 5-Year Market Rates*
(Percent)

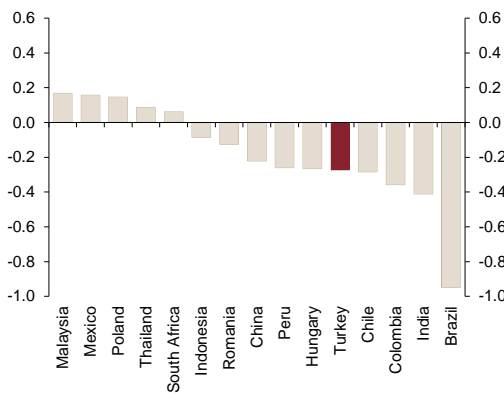
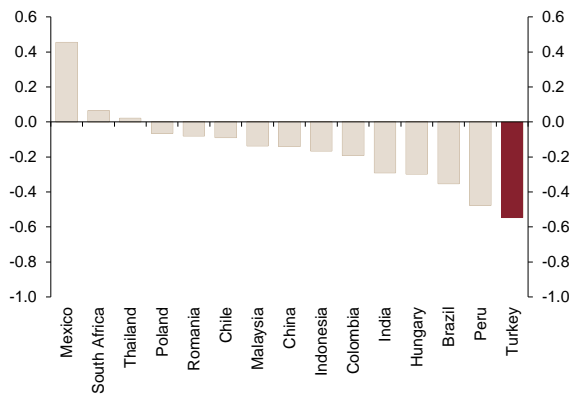
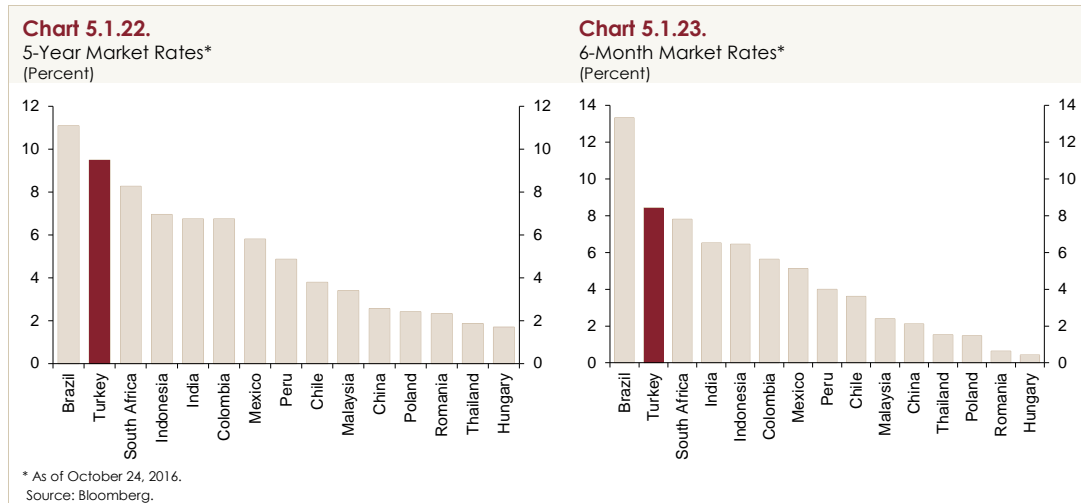


Chart 5.1.21.

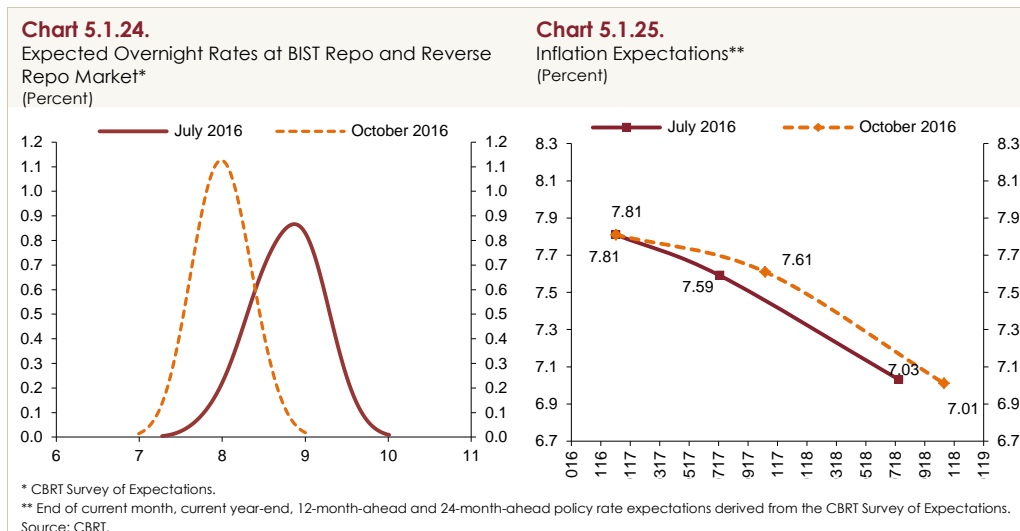
Changes in 6-Month Market Rates*
(Percent)



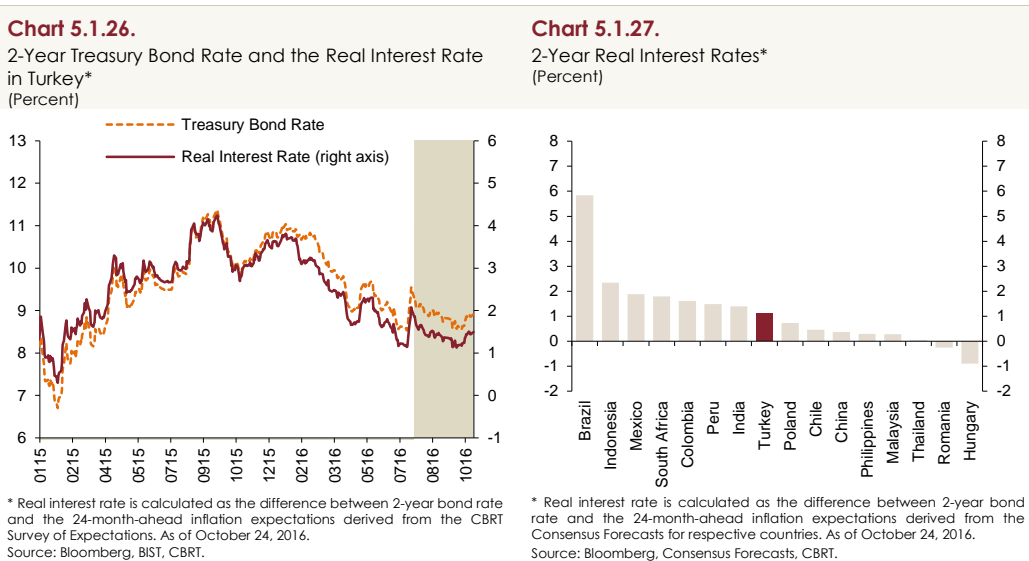
* Between July 26 and October 24, 2016.
Source: Bloomberg.



The CBRT has continued to take steps towards monetary policy simplification by lowering the marginal funding rate gradually since the previous reporting period. The expected overnight rate distribution at the BIST Repo and Reverse Repo Market implied relatively lower volatility in October compared to July, whereas the mid-point of the distribution continued to fall to about 8 percent as of October (Chart 5.1.24). In this period, inflation expectations for the current year-end remained unchanged while medium-term inflation expectations changed slightly (Chart 5.1.25).

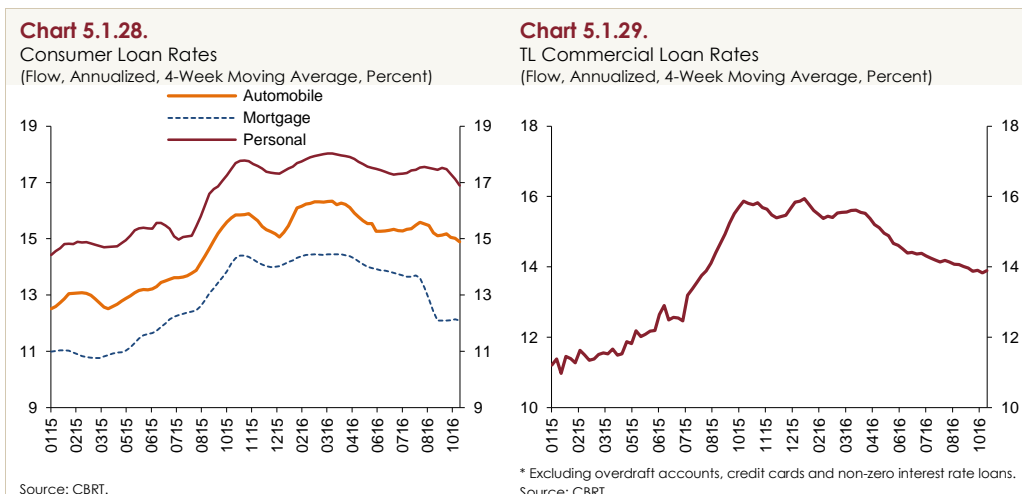


After rising rapidly following the mid-July turmoil in financial markets, the 2-year bond yield has declined recently due to both global financial conditions and the CBRT's cautious and measured steps towards simplification (Chart 5.1.26). While average 24-month-ahead inflation expectations barely changed, 2-year real interest rates decreased remarkably on a par with nominal interest rates. As a result, Turkey's real interest rates have been close to the average of other emerging economies (Chart 5.1.27).



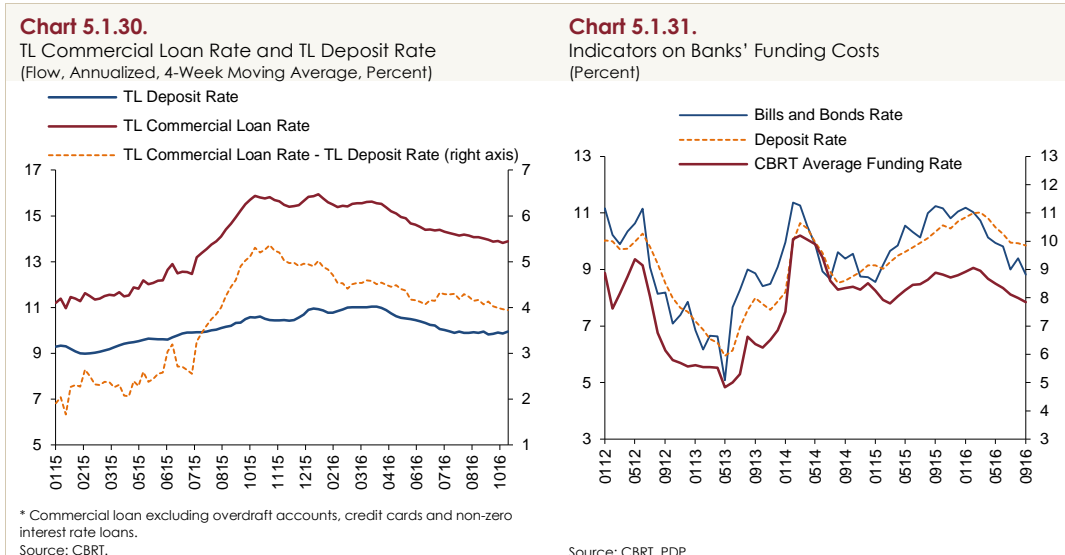
Loan Rates and Banking Sector Funding Costs

In the third quarter of 2016, rates on loans extended to the non-financial sector remained flat except for mortgage and commercial loans (Chart 5.1.28). The marked fall in mortgage loan rates since August was the main reason behind the fall in consumer loan rates. Rates on commercial loans, which have a shorter maturity than consumer loans, continued to decrease for the second quarter in a row (Chart 5.1.29). In this period, the marginal rate cuts by the CBRT contributed significantly to the slowdown in loan rates.



Rates on deposits with maturities shorter than three months, which are the primary financing resources of the banking sector, continued to post a quarter-on-quarter decline, albeit limited, in the third quarter of 2016. As of October 14, deposit rates decreased by 106 basis points compared to March 2016 when the CBRT started to cut the marginal funding rate. Meanwhile, commercial loan rates dropped by 171 basis points. As commercial loan rates decreased more than deposit rates, the spread between commercial loan rates and deposit rates contracted to 394 basis points (Chart 5.1.30). While the spread between loans and deposit rates has narrowed, it still remains high compared to past

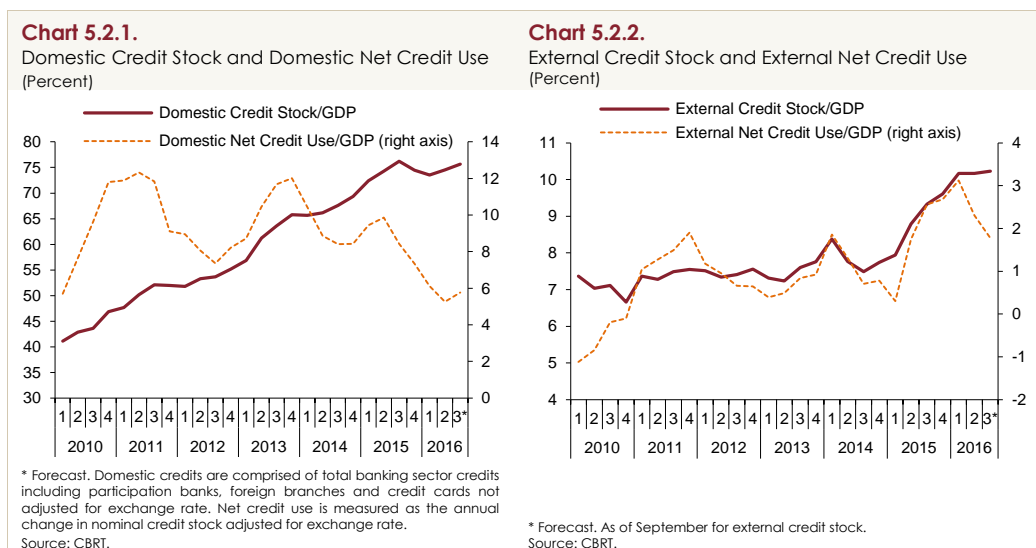
years. In fact, the Loan Tendency Survey results for the July-September period also suggest continued tightness in loan standards (Box 5.2). In tandem with lower deposit rates, banks' rates on bills and bonds receded further in the third quarter (Chart 5.1.31).



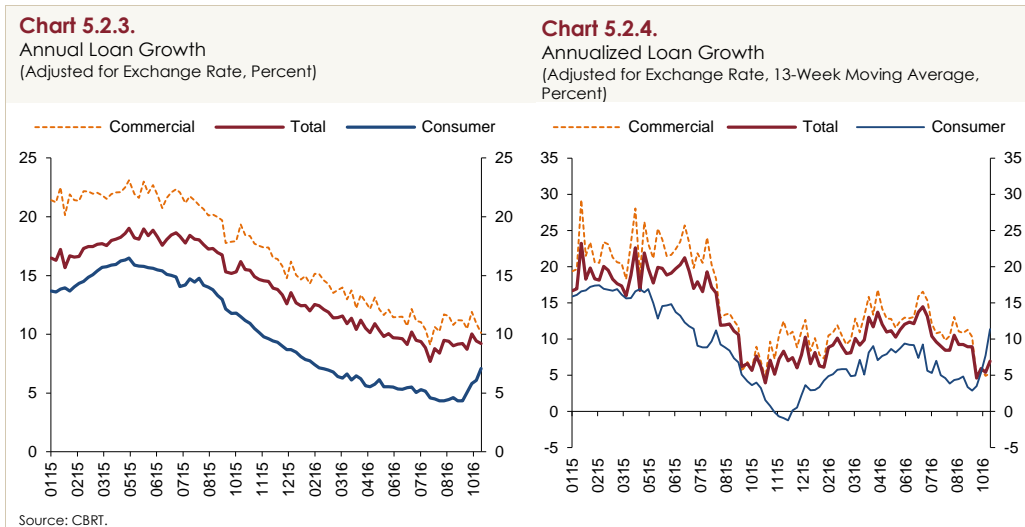
5.2. Credit Volume and Monetary Indicators

Credit Developments

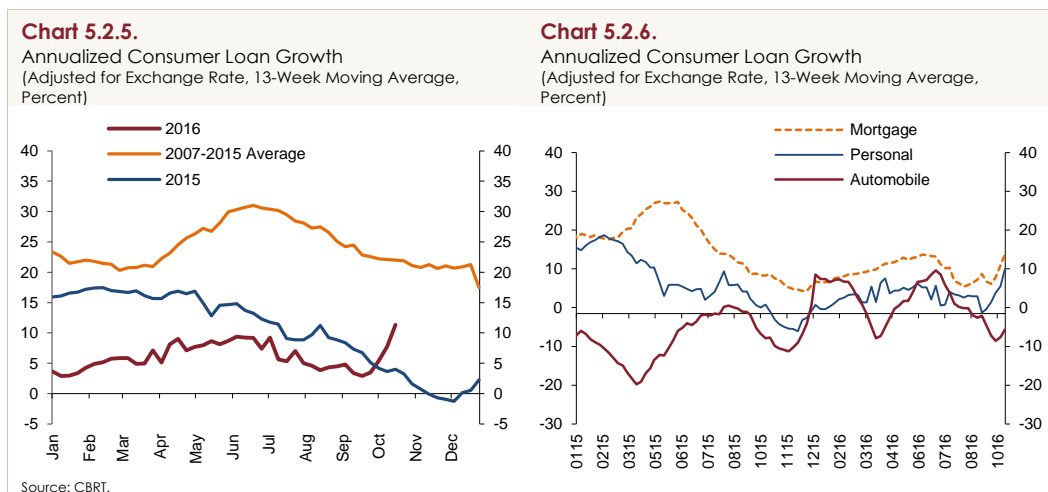
Accommodative macroprudential policies, the CBRT's liquidity measures and fiscal incentives helped to stimulate credit growth in the third quarter of 2016. The ratio of net credit use to the GDP, which is critical to financial stability and an indicator of the relationship of credit growth with economic activity and aggregate demand, ended the downtrend and surged to 5.8 percent in the third quarter (Chart 5.2.1). While posting a decline, firms' use of net external credits still hovers above its historical average (Chart 5.2.2).



The trend in the annual growth rate of loans extended to the non-financial sector was no longer downward in the third quarter. A breakdown of total loans shows that commercial loans grew faster than consumer loans on the back of the BRSA's measures in recent years and the historically low consumer confidence. Yet, consumer loans are currently edging up thanks to the improving consumer confidence and the adjustments to consumer loans and credit cards.

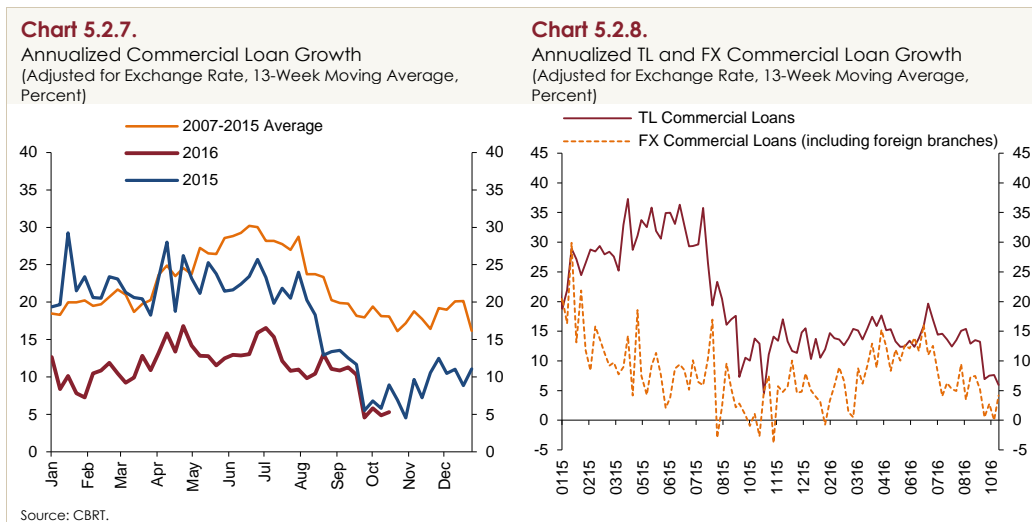


In the third quarter of 2016, loans extended to the non-financial sector were up 10 percent year-on-year in exchange rate adjusted terms (Chart 5.2.3). 13-week moving averages, which reflect the third-quarter developments, reveal that total loans grew by an annual 5.9 percent (Chart 5.2.4). The recent slide of the annualized 13-week growth rate of loans extended to the non-financial sector ended, suggesting that the annual growth rate of total loans may pick up again.



Having recovered in the first half of 2016, the annualized growth rate of consumer loans edged down on seasonal factors in the third quarter of 2016 (Chart 5.2.5). Thus, consumer loan growth ended the third quarter at 5.4 percent in annualized terms, yet recovered rapidly in recent weeks to 11.36 percent on October 14. With an average 5-year maturity and higher interest rate sensitivity, the annualized growth rate of mortgage loans was higher than others, but fell below past years' averages,

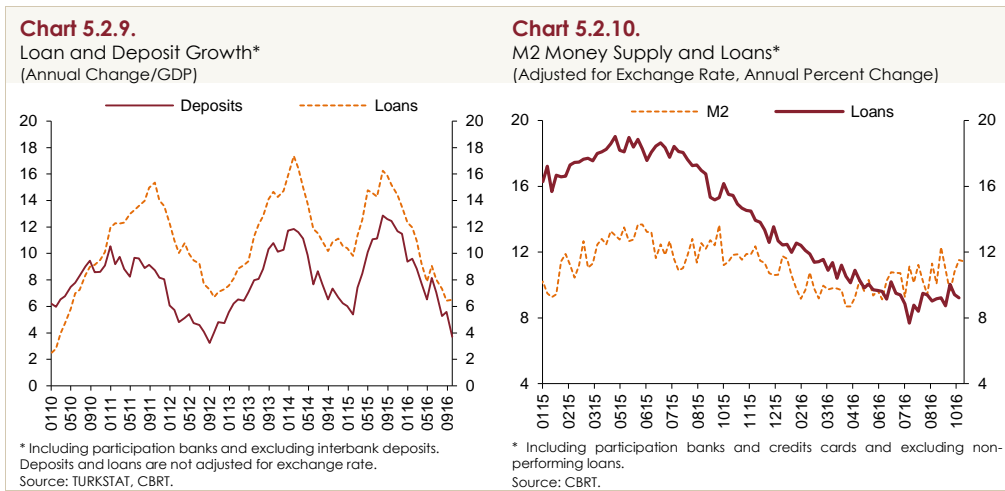
standing at 7.8 percent. However, it climbed back to 13.7 percent on October 14. According to the results of the Loan Tendency Survey, the demand for mortgage loans inched down in the third quarter while loan standards tightened more aggressively quarter-on-quarter. Weakening since mid-2015, the annualized growth rate of personal loans remained subdued, ending the quarter at 3.8 percent, while it increased to 9.9 percent as of October 14. After the sharp second-quarter recovery, the annualized growth rate of automobile loans dropped markedly by the third quarter, ending the quarter at -8.6 percent and creeping up to -5.6 percent as of October 14 (Chart 5.2.6). Data from the Loan Tendency Survey suggest that loan standards tightened for automobile loans, and especially personal loans in the third quarter. Meanwhile, the demand for both automobile loans and personal loans contracted. The ratio of non-performing loans differed across subcategories of consumer loans. The ratio of non-performing mortgage loans remained flat in this quarter, whereas the ratio of non-performing automobile loans and personal loans posted a mild increase.



The annualized growth rate of commercial loans fell well below past years' averages, amounting to 5.8 percent in the third quarter of 2016 (Chart 5.2.7). Among subcategories of commercial loans, FX-denominated loans grew by an annualized 2.8 percent (Chart 5.2.8). The annualized growth rate of FX-denominated commercial loans has been slightly on the rise in recent weeks, reaching 4.2 percent as of October 14. Used primarily for operating capital, TL-denominated loans ended the quarter at an annualized growth rate of 7.5 percent. According to the Loan Tendency Survey, standards on commercial loans remained tight in the third quarter of 2016. Meanwhile, standards tightened for both TL and FX-denominated commercial loans, but more severely for FX loans. By size of business, loan standards were much tighter for SMEs than for large-sized firms. Broken down by maturity, loan standards tightened for both short and long-term loans, albeit considerably more for the latter. In the third quarter, standards were tighter for FX-denominated and long-term commercial loans than for other types of commercial loans, which might be linked to the weakening investment spending.

As for factors affecting commercial loan standards, expectations for overall economic activity were the main driver of tightening in the third quarter of 2016. Additionally, restrictions on capital adequacy had some positive effect on loan standards. In this period, banks kept profit margins constant for average loans but raised them for riskier loans. Moreover, collaterals and maturity standards tightened.

According to the Loan Tendency Survey, commercial loan standards are expected to remain tight in the fourth quarter of 2016. Expectations have shown no divergence in size, yet standards on long-term loans and FX-denominated loans are expected to be much tighter. On the demand front, firms' loan demand may surge in the final quarter of 2016. This likely upturn may be more apparent for SMEs, longer-term loans and TL-denominated loans.



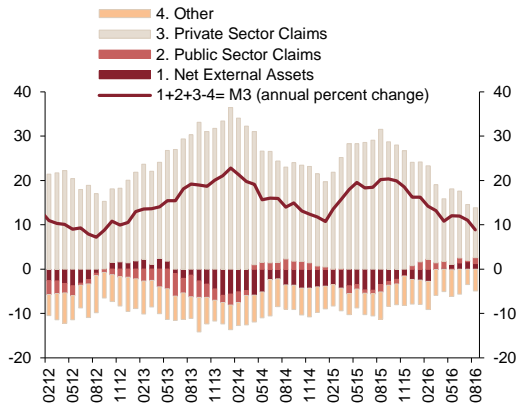
Growth rates of deposits and loans continued to slow in the third quarter of 2016 (Chart 5.2.9). Thus, the loan-to-deposit ratio remained on a horizontal track. The relationship between M2 and loans suggests that the downtrend in the annual growth rates of total loans and M2 that started in mid-2015 ended as of the third quarter of 2016 (Chart 5.2.10).

Monetary Indicators

Having declined in the first half of 2016, the annual growth of M3, the broad measure of money supply, decreased further in the third quarter, down to about 9 percent as of August. In terms of the decomposition of M3, this trend was driven primarily by Private Sector Claims, which mostly include bank loans extended to non-financial private individuals and institutions. Net External Assets made further positive yet small contributions to the M3 growth. Public Sector Claims continued with the recent contributions to the M3 growth. Lastly, the item Other maintained a steady course in line with bank profitability, and remained a non-deposit funding source for the banking sector (Chart 5.2.11).

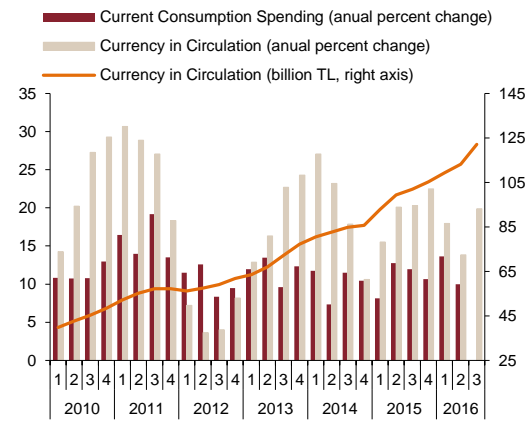
After the first-half slowdown, the seasonally adjusted currency in circulation picked up again in the third quarter of 2016 and increased remarkably in quarter-on-quarter terms. The annual growth in current consumption spending, which is a key driver of the currency in circulation, recorded a quarterly decline in the second quarter. The third-quarter upsurge in the currency in circulation indicates a possible recovery of the current consumption spending in this period (Chart 5.2.12).

Chart 5.2.11.
Balance Sheet Decomposition of M3
(Contributions to Annual M3 Growth)



Source: CBRT.

Chart 5.2.12.
Currency in Circulation and Current Consumption Spending*
(Seasonally Adjusted)



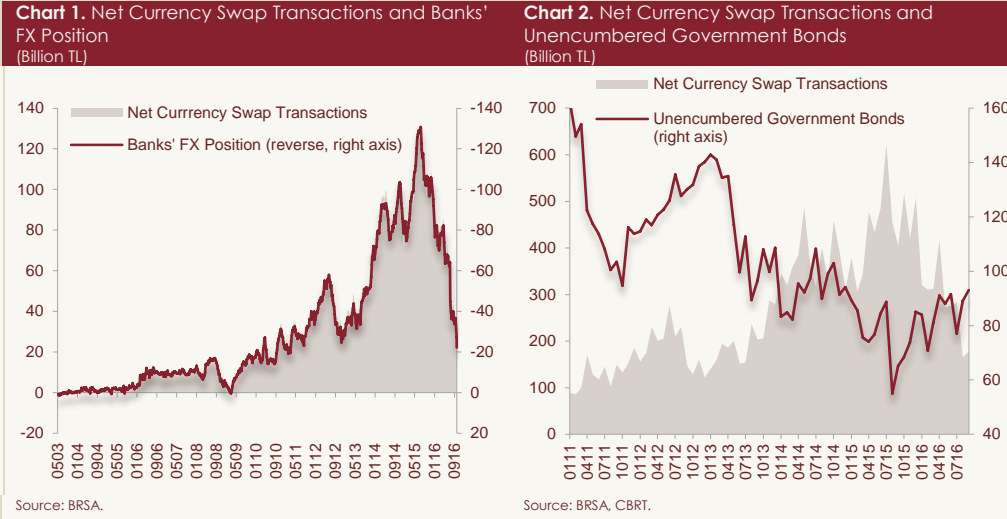
* Consumption spending includes private and public consumption excluding furniture, household appliances, transport and communication services at current prices.
Source: TURKSTAT, CBRT.

Box
5.1

The Collateral FX Deposit Facility and Its Impact on Currency Swap Markets

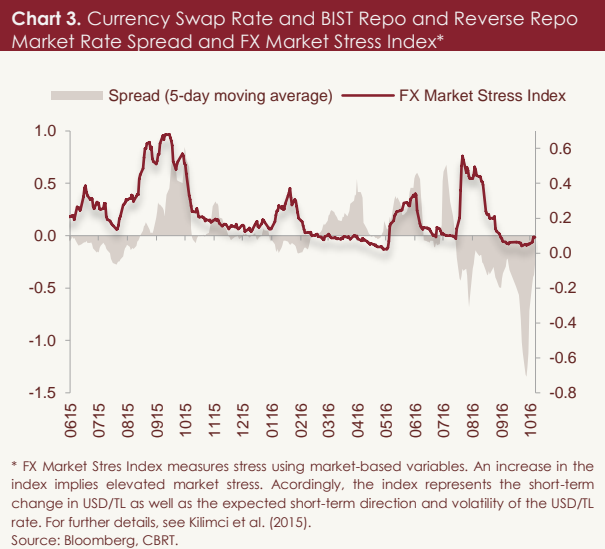
Inflation-targeting central banks have an immediate effect on short-term market rates within the monetary policy transmission mechanism. This ensures the effectiveness of the monetary policy by subsequent pass-through of short-term rates to exchange rates and long-term rates, which are influential on consumption and savings decisions of economic agents. One of the most important benchmarks for short-term market rates in Turkey is the overnight rates (BIST repo rates) at the BIST Interbank Repo and Reverse Repo Market, where only banks can make repo transactions. Besides the BIST Interbank Repo and Reverse Repo Market, banks can also use the short-term currency swap market for liquidity management. The currency swap market is an important market where banks can also obtain liquidity especially from foreign investors. The BIST repo rate has a significant role in the pricing of the overnight rate at the currency swap market. Hence, the cost of funds obtained via the currency swap market is expected to be close to the BIST repo rate (Kara, 2015). On the other hand, in periods of heightened volatility in both domestic and global markets, the deteriorated risk perception of market players and increased motive for hedging may cause swap rates to hover above BIST repo rates. Moreover, banks in need of collateral use the currency swap market more effectively for liquidity management, which imposes an upward pressure on TL interest rates and causes an inefficiency in the monetary transmission mechanism. Accordingly, various arrangements were made by the CBRT to maintain efficiency in TL and FX markets and to support banks' liquidity management. This box provides a discussion of the main motivation for the implementation of the collateral FX deposit facility and presents a graphical analysis of its impact on the currency swap market.

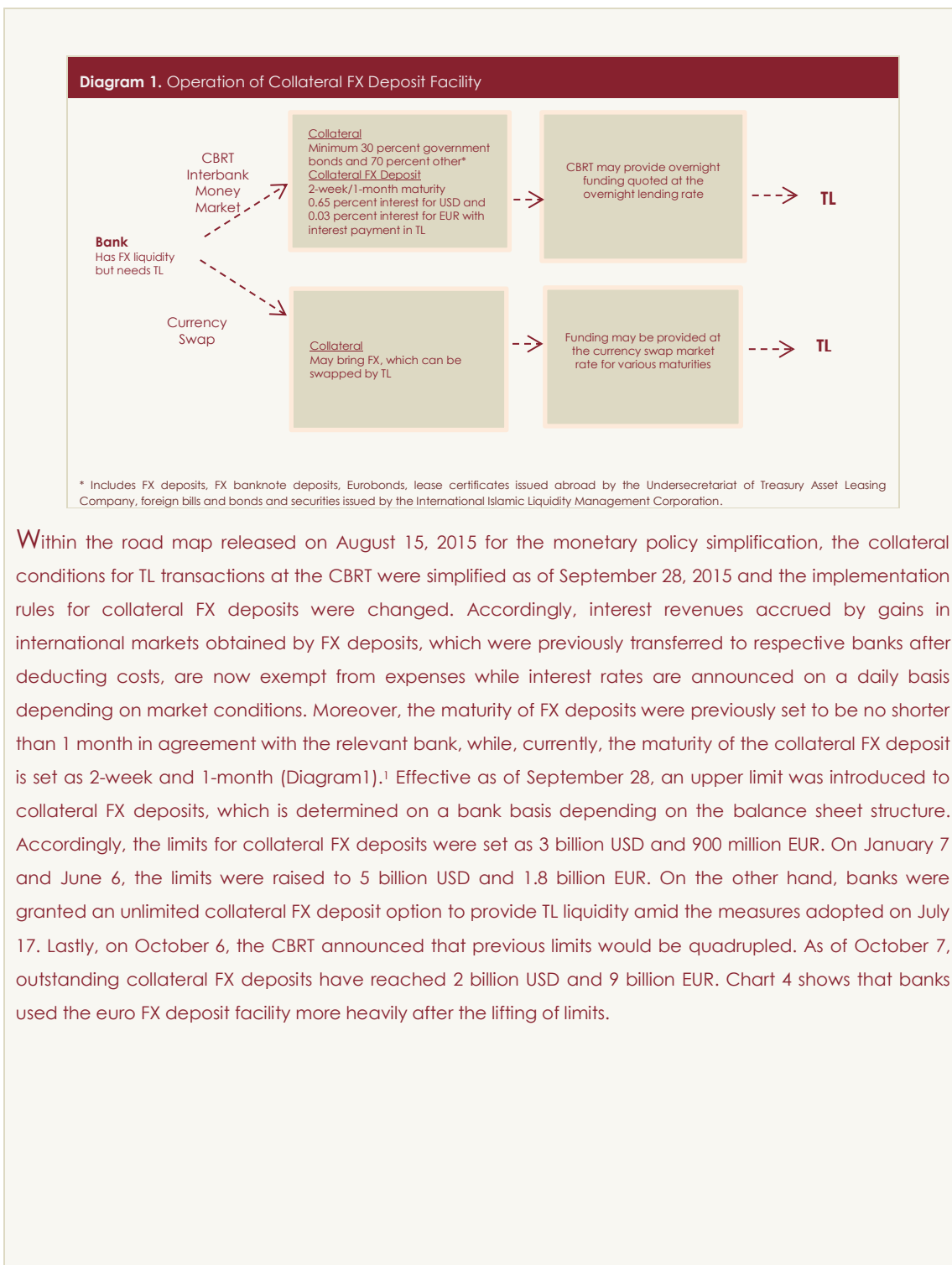
A well-functioning currency swap market provides hedging against the asset-liability mismatch and supports liquidity management by offering a short-term funding opportunity. Turkey's net international asset position shows that the banking sector has a deficit in the net FX position (Chart 1). Under current circumstances, a major portion of the currency swap market transactions originates from the hedging motives of the banking sector against the asset-liability mismatch. The banking sector closes on-balance sheet FX open positions by off-balance sheet transactions in the currency swap market (Chart 1). Also, another motive for banks to use the currency swap market for liquidity management is the increased funding need of the system. Banks meet their short-term liquidity needs through repo transactions within the CBRT's open market operations, which are generally collateralized by government bonds. Increases in the funding need of the system cause a need for collateral, which leads to lower liquidity in the banking sector, thereby increasing open market operations and lowering unencumbered government bonds in the banking sector balance sheets (Er and Güney, 2016). Moreover, due to motives such as the fact that government bonds, which are used as collaterals, are not being disseminated evenly across banks in proportion to their funding needs, banks may be urged to use the currency swap market as an alternative source for TL funding needs (Chart 2).



During periods of elevated stress in financial markets, all market players take a simultaneous and similar position, prompting undesirable tightness and volatility in financial conditions. In times of elevated exchange rate risk, the demand for currency increases due to the hedging motive, which leads to a surge in both the level and the volatility in the currency swap market and the spot market. Moreover, in stress periods with shallow liquidity in the FX market, the demand for currency may increase even more, thereby causing a vicious cycle. Meanwhile, during market stress, the co-movement of the currency swap rate and the BIST repo rate may be violated.

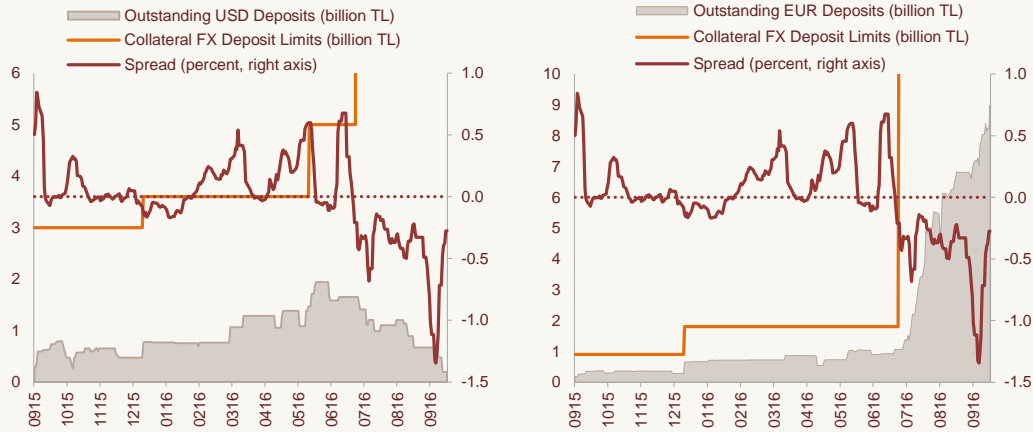
Chart 3 shows that in times of elevated stress in the FX market, the currency swap rate may deviate from the BIST repo rate. This is because of higher risk perception, which causes increased demand for currency, and this leads to higher TL sales and FX borrowing with precautionary and speculative motives, which cause higher forward FX rates. Also, investors demand a higher return for TL, which is perceived to be more risky, and this drives currency swap rates above the BIST repo rate. In this context, the collateral FX deposit facility is identified as an important tool in view of its similarities with the currency swap market as well as its support for TL during possible unilateral positioning in the currency swap market.





Within the road map released on August 15, 2015 for the monetary policy simplification, the collateral conditions for TL transactions at the CBRT were simplified as of September 28, 2015 and the implementation rules for collateral FX deposits were changed. Accordingly, interest revenues accrued by gains in international markets obtained by FX deposits, which were previously transferred to respective banks after deducting costs, are now exempt from expenses while interest rates are announced on a daily basis depending on market conditions. Moreover, the maturity of FX deposits were previously set to be no shorter than 1 month in agreement with the relevant bank, while, currently, the maturity of the collateral FX deposit is set as 2-week and 1-month (Diagram1).¹ Effective as of September 28, an upper limit was introduced to collateral FX deposits, which is determined on a bank basis depending on the balance sheet structure. Accordingly, the limits for collateral FX deposits were set as 3 billion USD and 900 million EUR. On January 7 and June 6, the limits were raised to 5 billion USD and 1.8 billion EUR. On the other hand, banks were granted an unlimited collateral FX deposit option to provide TL liquidity amid the measures adopted on July 17. Lastly, on October 6, the CBRT announced that previous limits would be quadrupled. As of October 7, outstanding collateral FX deposits have reached 2 billion USD and 9 billion EUR. Chart 4 shows that banks used the euro FX deposit facility more heavily after the lifting of limits.

¹ In addition to 1-month deposits, banks were granted the option to hold 2-week FX deposits as of May 16.

Chart 4. Currency Swap Rate and BIST Repo and Reverse Repo Market Rate Spread, Collateral FX Deposit Limits and Outstanding FX Deposits*

* Banks were granted unlimited collateral FX deposit opportunity as of July 17, 2016.
Source: BIST, CBRT.

The implementation of the collateral FX deposit facility serves as an alternative to currency swap transactions. It also restricts the divergence of the currency swap rate from the BIST repo rate, which is observed in periods of heightened hedging costs under financial stress. Chart 4 shows that the spread between the currency swap rate and the BIST repo rate declined after the introduction of the collateral FX deposit facility. Furthermore, the currency swap rate, which hovers above the BIST repo rate, posted a decline after collateral FX deposit limits were raised. Recently, with the lifting of limits on collateral FX deposits, overnight currency swap rates have tended to decline, while the swap rate has surged again and hovered close to the BIST repo rate with the announcement regarding the re-introduction of limits.

The CBRT's collateral FX deposit facility provides support for TL liquidity management by enabling banks to use their excess FX liquidity as a collateral in open market operations and interbank money market transactions. Furthermore, the CBRT's collateral FX deposit facility enhances the effectiveness of the monetary policy transmission by limiting the deviation of the currency swap rate from the BIST repo rate.

REFERENCES

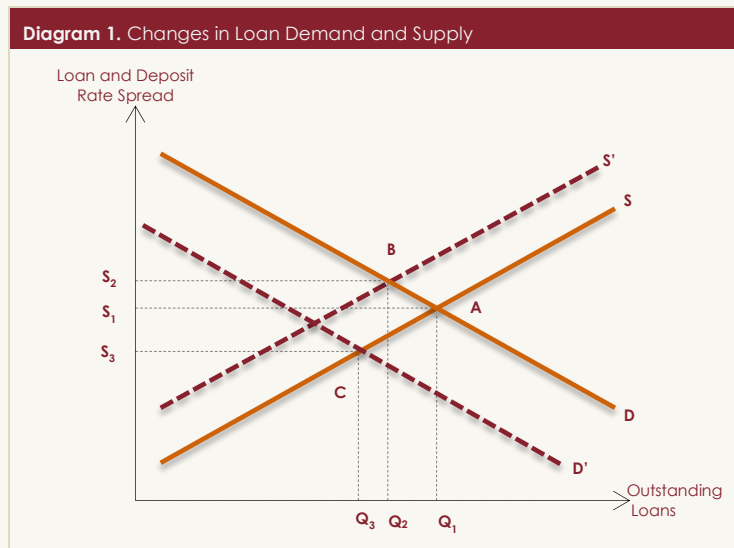
- Er, H. and İ.E. Güney, 2016, Para Politikasında Kaldıraç Etkisi: Likidite Kanalı (in Turkish), CBT Research Notes in Economics No. 16/20.
- Kara, H., 2015, Faiz Koridoru ve Para Politikası Duruşu (in Turkish), CBT Research Notes in Economics No. 15/13.
- Kilimci, E., H. Er and İ. Çerçil, 2015, Döviz Piyasası Stresi ve Likidite İlişkisi (in Turkish), CBT Research Notes in Economics No. 15/04.

Box
5.2

Recent Loan Developments: Some Indicators on Loan Supply and Demand

The recent tightness in financial conditions is mainly driven by developments in the loan market. Despite the relatively stable course of economic activity, the growth of both commercial and consumer loans has slowed remarkably since mid-2015 (Chart 5.2.4).² The question of whether this slowdown was caused by tight loan standards or poor loan demand is important for the transmission of the monetary policy. In cases where the slowdown is dominated by supply-side factors, for example when banks are reluctant to grant loans due to uncertainties about the economy, policy rate reductions may have limited effects on loans and economic activity compared to cases in which loan growth decelerates due to demand-side factors. Moreover, distinguishing between demand and supply-side factors is important for the effectiveness of loan market as the required monetary policy and macroprudential measures may differ depending on whether the slowdown is driven by demand or supply-side conditions. This box presents an analysis of some indicators on loan demand and supply to shed light on the recent loan developments.

Observed values for loans and loan rates reflect changes in both demand and supply-side factors, which makes it difficult to understand the dominating effect on loans. Diagram 1 presents a simple theoretical framework to decompose the effects of demand and supply-side shocks on outstanding loans and the spread between the loan rate and the deposit rate. Accordingly, assuming constant risk, loan demand is defined as a decreasing function of the interest rate spread, while loan supply is defined as an increasing function of the spread. The slopes of the two lines show the interest rate elasticity of loan demand and supply.

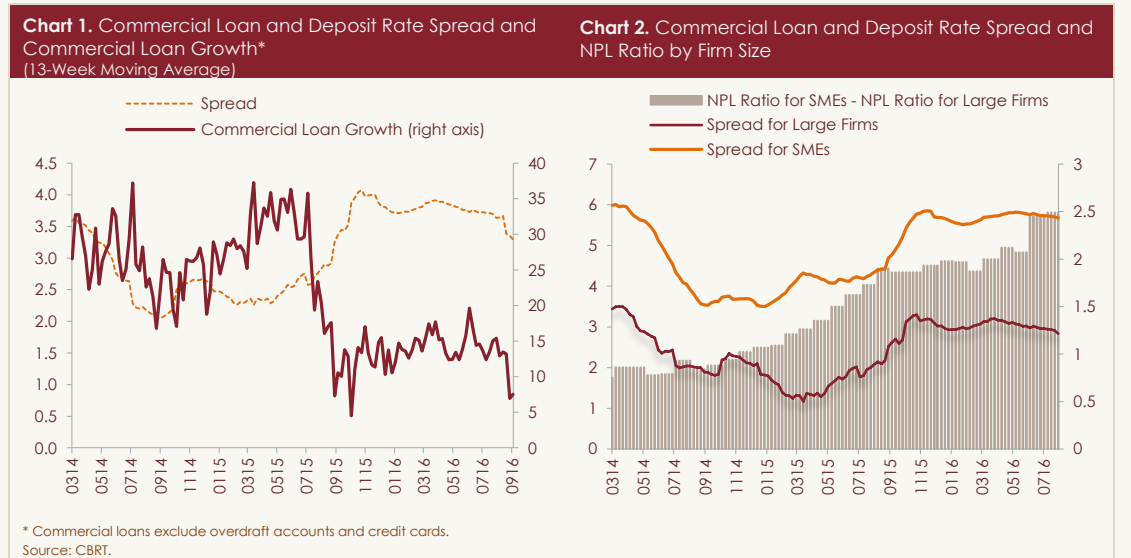


² Consumer loans decelerated before commercial loans due to the adoption of macroprudential measures to limit consumer loans, while consumer loan growth decelerated to even lower levels in the second half of 2015.

A contractionary supply shock means lower loan supply by banks for a given interest rate spread (which is a leftward shift of the supply curve, S). In this case, the interest rate spread should increase and the loan demand should consequently decrease to reach equilibrium. Hence, a tightening in supply conditions, which is independent from demand, leads to lower amount of loans while raising the interest rate spread (the move from point A to point B in Diagram 1). On the other hand, a contractionary demand shock causes lower demand by firms or households for a given interest rate spread, which is shown by the leftward shift in the demand curve, D. In this case, the interest rate spread should decrease to clear out the excess supply. In other words, a negative demand shock reduces both the outstanding loans and the interest rate spread (the move from point A to point C in Diagram 1). In either case, changes in outstanding loans and the spread are determined by both demand and supply-side factors, while the direction of the change makes it possible to understand whether the underlying reason is a demand or a supply shock. In cases where a decrease in outstanding loans is accompanied by an increase in the interest rate spread, the underlying shock is likely to be a contractionary supply shock.³

Chart 1 shows the spread between the commercial loan rate and the deposit rate jointly with the commercial loan growth. Accordingly, the spread has surged since mid-2015, which is marked by a rapid slowdown in commercial loan growth, and except for the recent period, the spread remained elevated throughout 2016. In this regard, the decelerating commercial loan growth since mid-2015 may be attributed mainly to a supply-side contraction.

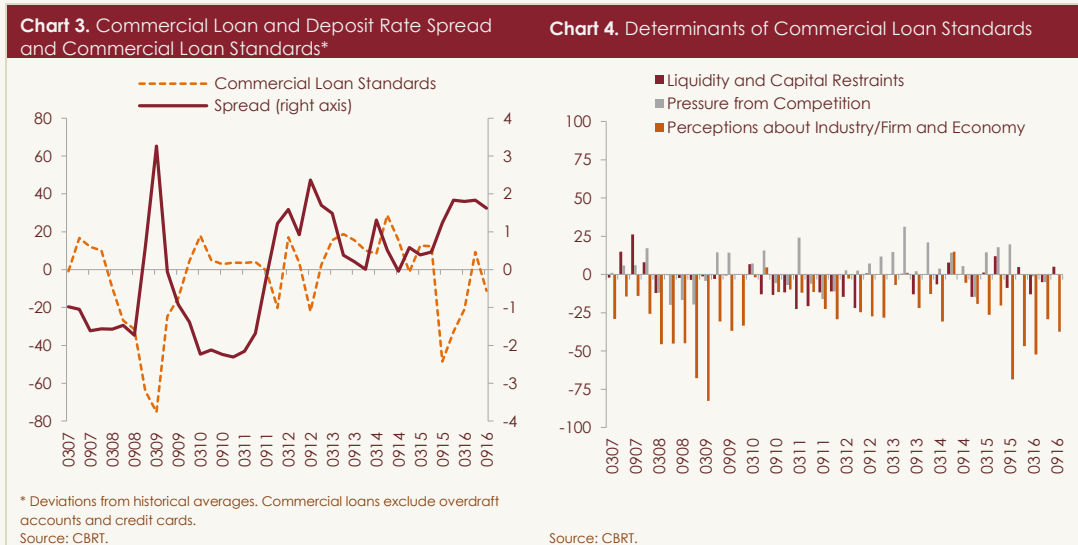
Besides factors regarding loan standards, the interest rate spread also reflects a maturity mismatch (Alper and Mutluer-Kurul, 2010). By controlling for maturity, Chart 2 shows the commercial loan and deposit rate spread and the NPL ratio by firm size. Accordingly, in the recent period, the spread declined for large firms but remained virtually unchanged for SMEs. The widening gap between the spread for SMEs and large firms can be attributed to the relative rise in the default risk for SMEs.



³ The simple theoretical framework described here forms the basis for the main identification strategy in structural VAR (SVAR) analysis that decomposes loan supply shocks as in Barnett and Thomas (2014) as well as Gambetti and Musso (2012).

The Loan Tendency Survey, which has been conducted by the CBRT since 2004, presents important information regarding loan standards, loan demand and their determinants.⁴ Chart 3 shows the deviation of commercial loan standards and the interest rate spread from their historical averages. Accordingly, both indicators present a similar outlook for loan supply and show that loan standards have been tighter (below zero) compared to historical averages especially starting from mid-2015, while the interest rate spread has remained remarkably above the average.

Determinants of commercial loan standards reveal that tightness in loan standards is mainly driven by perceptions about industry/firm and the overall economy (Chart 4). As in Chart 2, these responses indicate that tightness in loan standards can mainly be attributed to default risk. Liquidity and capital constraints were supportive, while domestic funding conditions have recently been more accommodative compared to external financing opportunities. This may be due to reductions in the upper band of the interest rate corridor since March 2016.

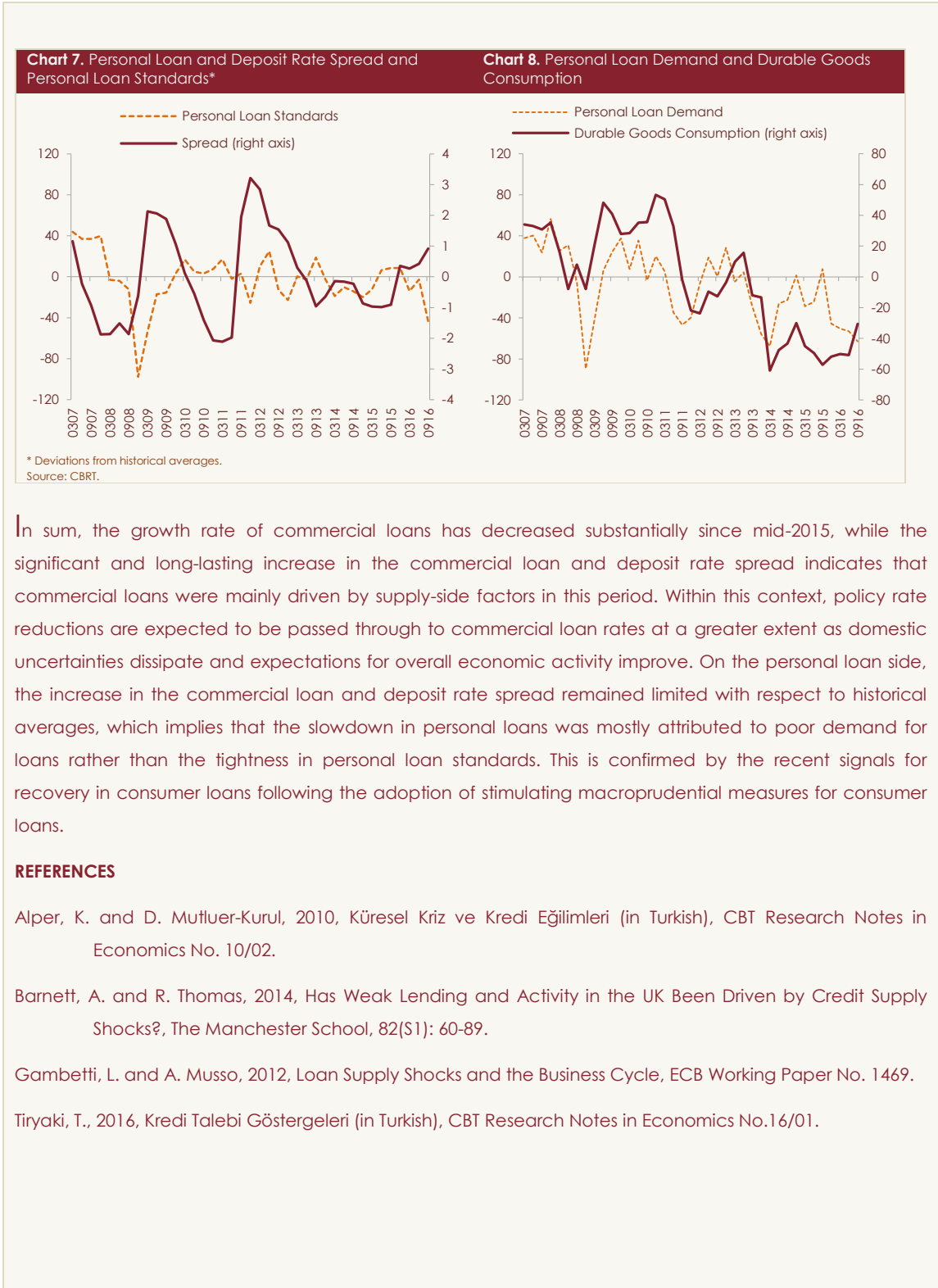


In line with the tightness in commercial loan standards observed since mid-2015, commercial loan demand has remained lower than historical averages (Chart 5). Commercial loan demand was mostly in tandem with the BTS response of firms on the general economic outlook, which confirms the weak tendency in loan demand. However, recently, commercial loan demand has increased slightly on the back of debt restructuring as well as inventory increase and working capital (Chart 6). Meanwhile, the continuing decline in loan demand for fixed investments indicates that commercial loan demand is still weak despite some improvements over the previous periods.

⁴ Explanation for survey methodology can be reached at <http://www.tcmb.gov.tr/wps/wcm/connect/TCMB+EN/TCMB+EN/Main+Menu/STATISTICS/Tendency+Surveys/Bank+Loans+Tendency+Survey/>.



⁵ In addition to survey indicators, Tiryaki (2016) uses alternative indicators such as Google search to derive measures for personal loan demand.



6. Public Finance

In the first nine months of 2016, the central government budget performance registered a rather limited year-on-year improvement, particularly upon the hikes in non-tax revenues. Although the growth of primary expenditures continued in this period, the mild uptick in tax revenues, besides the intermittent decline in interest expenditures, also contributed favorably to the budget performance.

The MTP covering the 2017-2019 period was announced to the public. The MTP states that the fiscal policy will be implemented to boost growth potential, maintain economic stability, keep a sustainable level of current account deficit and stimulate domestic savings and investments. The fiscal policy will be formulated to support these targets primarily by reviewing expenditures, and contain the public sector borrowing requirement by taking measures to reduce public savings and the investment deficit. Moreover, public infrastructure investments, regional development, education, R&D support and incentives will be given special priority in expenditures (Box 6.1). In addition, public revenue policies will safeguard the provision of required revenues from reliable and sustainable resources and also contribute to economic and social objectives like improving the income distribution, supporting development and increasing savings. In this respect, it is projected that fiscal discipline will be maintained amid the tight fiscal policy and the public debt stock to the GDP ratio will continue to decline gradually throughout the MTP period (Table 6.1). The fiscal harmonization envisaged in the MTP presents a framework that primary expenditures to the GDP ratio will be reduced gradually and tax revenues to the GDP ratio will not be subject to a noticeable change.

According to the new MTP, the central government budget deficit to the GDP ratio is estimated to stand at -1.6 percent in 2016 with a slight year-on-year increase (Table 6.1). Projected realizations in the MTP suggest that primary expenditures remained considerably above the target in 2016, while tax revenues remained largely consistent with the target. On the other hand, the deviation in the budget deficit is likely to remain low amid the high performance of non-tax revenues.

Table 6.1.
Central Government and General Budget Balance
(Percent of GDP)

	2015	2016*	2017**	2018**	2019**
Expenditures	25.9	27.0	26.8	25.9	25.1
Primary Expenditures	23.2	24.7	24.4	23.6	22.7
Interest Expenditures	2.7	2.4	2.4	2.3	2.4
Revenues	24.7	25.4	24.9	24.2	23.8
Tax Revenues	20.9	20.9	21.3	21.1	20.9
Other Revenues	3.8	4.5	3.6	3.1	2.9
Budget Balance	-1.2	-1.6	-1.9	-1.6	-1.3
Primary Balance	1.5	0.8	0.4	0.7	1.1
General Budget Balance	-0.1	-1.9	-1.7	-1.6	-1.0
Primary Budget Balance	2.7	0.6	0.8	0.8	1.6
EU-Defined Nominal Debt Stock	32.9	32.8	31.9	31.0	29.9

* Forecast.

** MTP (2017-2019).

Source: MTP (2017-2019).

6.1. Budget Developments

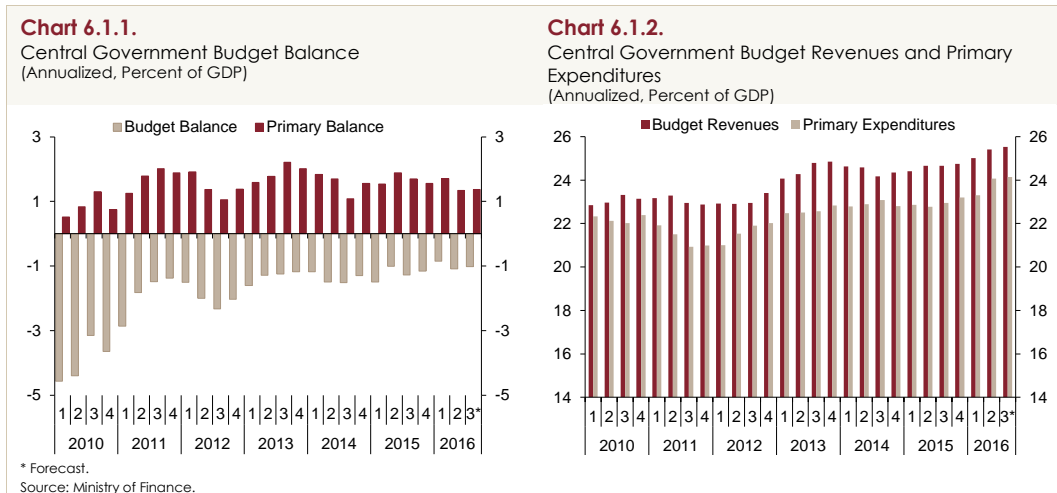
In the first nine months of 2016, the central government budget balance registered a deficit of 12.0 billion TL and the primary budget balance posted a surplus of 29.6 billion TL (Table 6.1.1). The robust tax revenue collection of 2015 continued into the first nine months of 2016 despite some deceleration. Due to the intermittent fall in interest expenditures and the sharp year-on-year growth in non-tax revenues, the central government budget balance exhibited a rather limited year-on-year improvement in the first nine months of 2016.

Table 6.1.1.
Central Government Budget Aggregates
(Billion TL)

	2015 January- September	2016 January- September	Rate of Increase (Percent)	Actual/Target (Percent)	Target Rate of Increase (Percent)
Central Government Budget Expenditures	367.7	416.5	13.3	73.0	12.8
Interest Expenditures	44.8	41.7	-6.9	74.4	5.6
Primary Expenditures	322.9	374.8	16.1	72.9	13.6
Central Government Budget Revenues	354.2	404.5	14.2	74.8	11.9
I. Tax Revenues	298.3	329.0	10.3	71.6	12.7
II. Non-Tax Revenues	42.2	60.4	43.3	87.3	20.7
Budget Balance	-13.5	-12.0	-	-	-
Primary Balance	31.3	29.6	-5.3	112.7	-

Source: Ministry of Finance.

After rising slightly to 1.3 percent in 2014 on an annual basis, the central government budget deficit to the GDP ratio dropped to 1.2 percent in 2015. This ratio is estimated to fall further to 1 percent in the first nine months of 2016 (Chart 6.1.1). Meanwhile, having declined to 1.1 percent in the third quarter of 2012, the primary budget surplus to the GDP ratio assumed an upward course, ending 2013 at 2 percent. The ratio receded to 1.6 percent in 2015, and is estimated to decrease slightly to 1.4 percent in the first nine months of 2016.



Having followed a significant uptrend since 2012, the central government primary expenditures to the GDP ratio hit 23.2 percent in 2015. This ratio is expected to climb further to 24.2 percent in the first nine months of 2016, especially owing to sharp increases in personnel expenditures, capital transfers and consumption expenditures (Chart 6.1.2). On the other hand, upon the relatively robust economic activity as well as the tax adjustments in September 2012 and January 2013, the central government

budget revenues to the GDP ratio climbed to 24.8 percent at end-2013. After dropping to 24.4 percent in 2014, mainly due to slowing tax revenues based on domestic demand, the ratio increased to 24.8 percent in 2015. Supported mainly by the hikes in non-tax revenues, the central government budget revenues to the GDP ratio is estimated to reach 25.5 percent in the nine months of 2016.

Having leaped since the second half of 2012, the central government primary budget expenditures remained on the rise in the first nine months of 2016. Accordingly, the central government primary budget expenditures posted a year-on-year increase of 16.1 percent in the January-September period of 2016 (Table 6.1.2).

Table 6.1.2.Central Government Primary Expenditures
(Billion TL)

	2015 January- September	2016 January- September	Rate of Increase (Percent)	Actual/Target (Percent)
Primary Expenditures	322.9	374.8	16.1	72.9
1. Personnel Expenditures	95.0	113.6	19.6	76.9
2. Government Premiums to SSI	15.5	18.6	19.8	74.7
3. Purchases of Goods and Services	28.4	33.6	18.3	71.6
4. Current Transfers	138.8	167.5	20.7	76.9
a) Duty Losses	3.0	4.2	40.4	76.4
b) Health, Pension and Social Benefits	63.3	82.4	30.2	80.6
c) Agricultural Support	8.4	9.3	10.4	80.1
d) Reserved Share Revenues	41.6	46.1	10.8	73.2
e) Transfers to Households	6.6	7.4	11.7	72.2
5. Capital Expenditures	29.9	28.9	-3.5	55.8
6. Capital Transfers	5.6	4.2	-24.1	56.0
7. Lending	9.7	8.5	-12.3	65.6

Source: Ministry of Finance.

Across primary expenditures, current transfers, purchases of goods and services, and personnel expenditures surged by 20.7, 18.3 and 19.6 percent, respectively, in the first nine months of 2016. Health, pension and social benefit expenditures, a major component of current transfers, which also include social security deficit financing, soared by 30.2 percent in this period. Transfers for the financing of the social security deficit, which stood at 12.3 billion TL in the first nine months of 2015, amounted to 17.2 billion TL in the same period of 2016. Moreover, public expenditures were affected heavily by the 5-point reduction in employers' insurance premiums and posted a year-on-year surge by 65.7 percent in the first nine months of 2016, thus leading to a jump in health, pension and social benefit expenditures. As for public investment expenditures, capital expenditures remained limited while capital transfers posted a notable decline, which curbed the rise in primary budget expenditures.

In the first nine months of 2016, central government budget revenues displayed a year-on-year increase by 14.4 percent (Table 6.1.3). In the same period, tax revenues rose by 10.3 percent, while non-tax revenues exhibited an outstanding performance with an upsurge by 43.3 percent.

Across tax revenues, the collection of income tax, which makes up the largest share of direct taxes, recorded a year-on-year upsurge by 12.1 percent in the January-September period of 2016. Income tax collection is mostly composed of deductions from wages. In this regard, the large minimum wage hike in 2016 had a favorable impact on income tax revenues. Among consumption-based indirect taxes, the SCT and the domestic VAT rose by 10.7 and 11.9 percent, respectively. The details of SCT revenues show a jump of 18.6 and 6.7 percent, respectively, in tax revenues from tobacco products and motor vehicles, and an increase of 6.9 percent in petroleum and natural gas products, which account for a major share of total SCT revenues. The VAT on imports, on the other hand,

remained unchanged in year-on-year terms. The sharp rise in non-tax revenues was largely caused by the inclusion of an additional 9.9 billion TL of privatization revenues into the budget in the first nine months of 2016 and the CBRT's profit transfer of 9.3 billion TL.

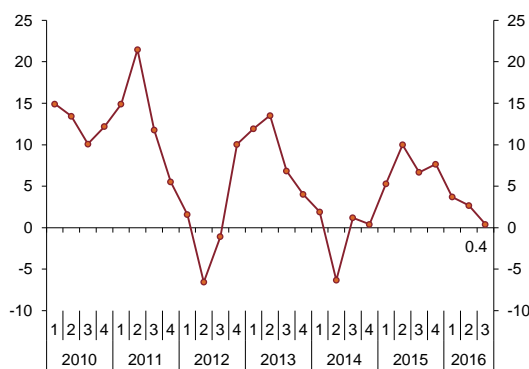
Table 6.1.3.
Central Government General Budget Revenues
(Billion TL)

	2015 January- September	2016 January- September	Rate of Increase (Percent)	Actual/Target (Percent)
General Budget Revenues	340.4	389.4	14.4	73.7
I-Tax Revenues	298.3	329.0	10.3	71.6
Income Tax	61.9	69.4	12.1	70.2
Corporate Tax	24.5	31.0	26.6	84.2
Domestic VAT	34.5	38.6	11.9	75.3
SCT	77.4	85.7	10.7	73.7
VAT on Imports	53.4	53.5	0.1	61.5
II-Non-Tax Revenues	42.2	60.4	43.3	87.3
Enterprise and Property Revenues	13.2	19.4	47.5	102.6
Interests, Shares and Fines	19.7	26.2	32.8	77.2
Capital Revenues	7.2	12.1	67.9	99.0

Source: Ministry of Finance.

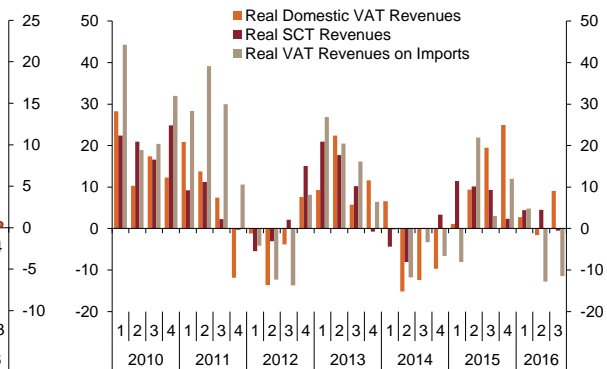
Having turned positive amid tax rate hikes in September 2012 as well as the base effect, the annual rate of increase in real tax revenues started to slacken in the third quarter of 2013. Real tax revenues remained unchanged on an annual basis in the last quarter of 2014, but increased by 7.7 percent in the last quarter of 2015. In the third quarter of 2016, however, real tax revenues rose merely by 0.4 percent year-on-year (Chart 6.1.3). The analysis of this increase by sub-items suggests that revenues from the VAT on imports and the domestic VAT, which are among consumption-based taxes, tumbled by 11.4 percent and surged by 9.1 percent in real terms, respectively, while the SCT collection edged down by 0.5 percent (Chart 6.1.4).

Chart 6.1.3.
Real Tax Revenues
(Annual Percent Change)



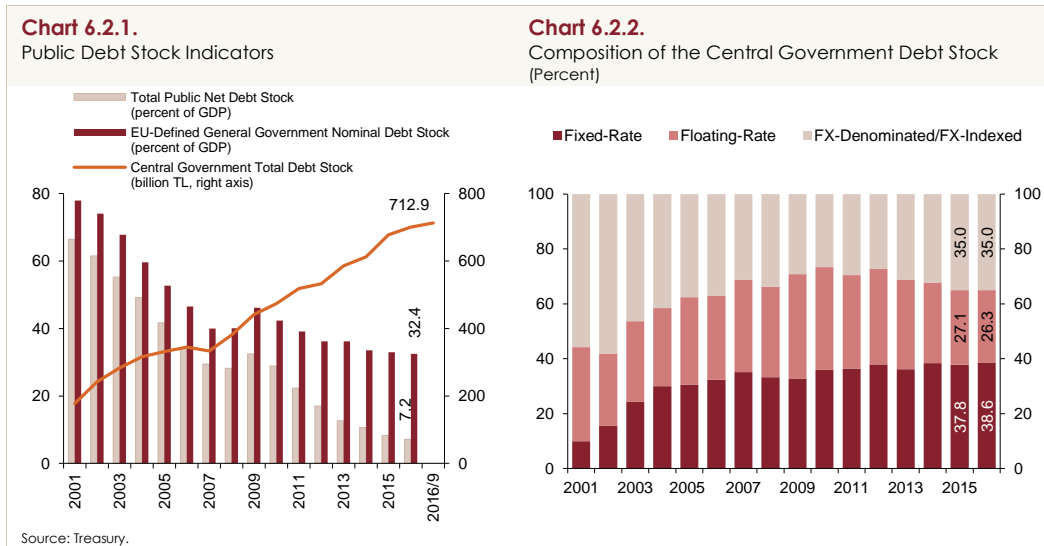
Source: Ministry of Finance.

Chart 6.1.4.
Real VAT and SCT Revenues
(Annual Percent Change)

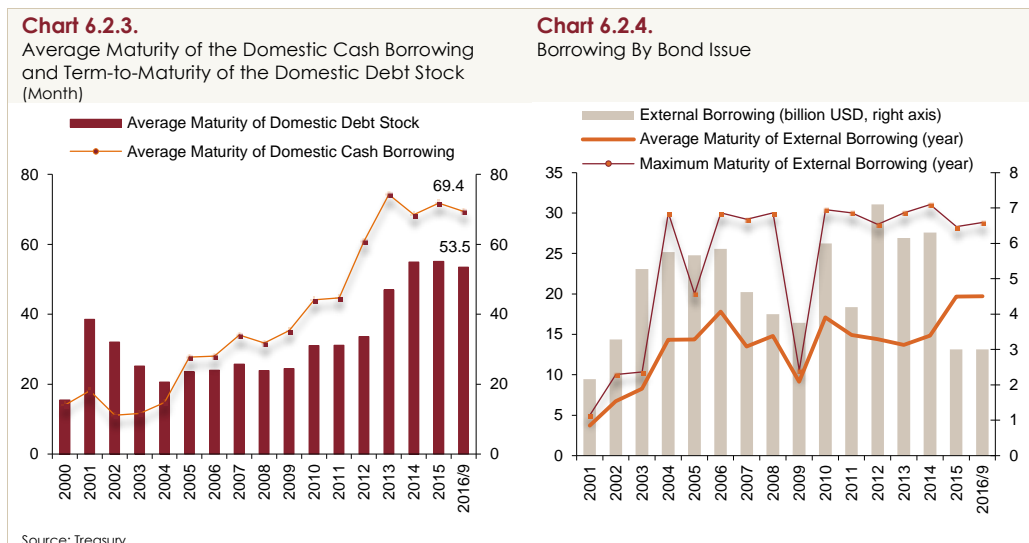


6.2. Developments in the Public Debt Stock

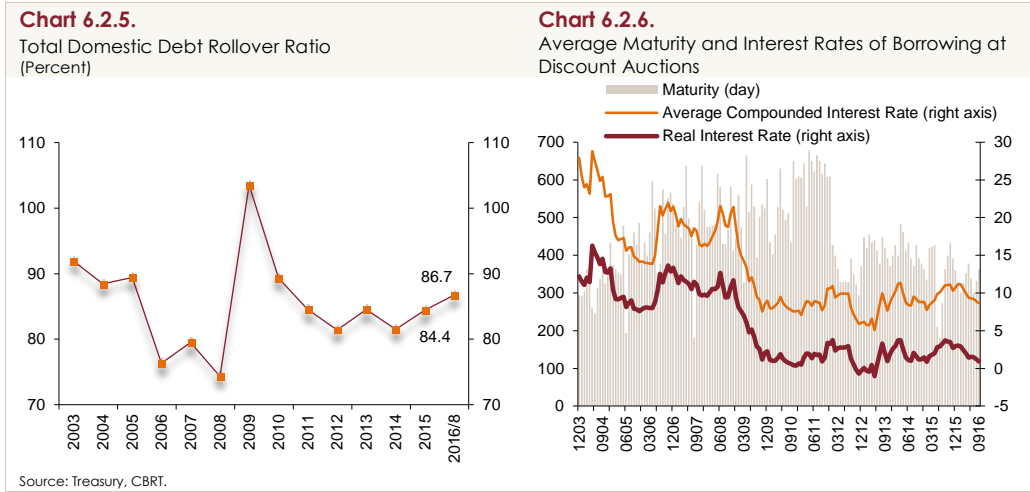
The central government debt stock reached 712.9 billion TL in the first nine months of 2016 (Chart 6.2.1). Total public net debt stock to the GDP and the EU-defined general government nominal debt stock to the GDP posted a year-on-year drop of 1 and 0.5 points, respectively, in the first half of 2016 (Chart 6.2.1).



The share of fixed-rate securities in the total debt stock increased slightly from 2015 to September 2016 (Chart 6.2.2). As for the interest rate structure of domestic borrowing, the share of fixed-rate borrowing registered a year-on-year increase in the January-September period of 2016. Meanwhile, the ratio of public deposits to the average monthly debt service stood at 450.2 percent. The average term-to-maturity of the domestic debt stock reached 53.5 months (Chart 6.2.3). External borrowing by bond issues amounted to 3 billion USD in the first nine months of the year, with an average maturity of 19.7 years (Chart 6.2.4).



The domestic debt rollover ratio stood at 86.7 percent by the end of August 2016 (Chart 6.2.5). The average real interest rate¹ has recently been on the decline (Chart 6.2.6).



¹ Real interest rates are calculated by subtracting the 12-month-ahead inflation expectations of the CBRT Survey of Expectations from nominal interest rates (average annual compounded interest rate at the Treasury's TL-denominated zero-coupon securities auction).

Box
6.1

Main Features of the Recent Incentive Schemes in Turkey

Fiscal policy can affect economic activity both from the demand and the supply side. Fiscal policy may stimulate economic activity from the demand side through tax and spending policies in the short run, while in the long run, it can affect the economy from the supply side by improving investment conditions and enhancing the potential output. In particular, a reduction in indirect taxes such as income tax or corporate tax or tax rates imposed on labor can stimulate economic growth and increase employment by influencing the supply of factors of production like labor and capital, without causing any inflationary pressures in the long run. Against this background, this box provides a summary of the general framework and the main features of the recent incentive schemes launched in Turkey.

The term incentive can be defined as material and non-material support, assistance and encouragements provided by the public sector through various methods to stimulate development of a certain economic activity. According to types of incentives, general incentives to induce development, enhance technological infrastructure and reduce labor costs are preferred in prioritized sectors. Incentive schemes may be in the form of financial incentives (tax reduction, tax exemption and investment deduction); special investment incentives for under-developed regions; financial incentives to provide credit access; and initiating incentives to facilitate both infrastructure and technical structure as well as to support business operations.

Amongst the objectives of investment incentives in Turkey are boosting investments, increasing employment by creating new business areas and alleviating interregional discrepancies in terms of development. The coverage of public subsidies granted to investments was changed and improved four times in a period of 12 years, the first one being in 2004, and the others in 2006, 2009 and 2012, respectively. Without prejudice to the main set up and the framework of the incentive scheme launched in 2012, energy and wage subsidies were added to incentive tools by the law called "Project-Based Support for Investments" that took effect on August 20, 2016.

The incentive scheme in 2009, which was newly designed with a broader coverage, expanded the range of investment fields subject to incentives by dividing the country into four regions for investment, and prioritized improvement of related macroeconomic indicators such as exports, imports, competitiveness and employment. As the effectiveness of the incentive scheme introduced in 2009 diminished over time and regional discrepancies also changed, a new incentive scheme was designed and put into effect in 2012.

The new incentive system launched in 2012 is the most comprehensive incentive scheme with the broadest coverage introduced so far. Under this incentive scheme, considering the needs and demands of investors, four main investment incentive items were identified as general incentives, regional incentives, incentives to large-scale investments and incentives to strategic investments. Similar to the former scheme, the new incentive scheme, which prioritizes some practices to solve current economic problems, offers incentives in eight cost factors to investors as VAT exemption, customs duty exemption, tax reduction, support for employer and employee insurance premium calculated over the minimum wage, land allocation for investment purposes, income tax withholding allowance, interest support and VAT refund (Table 1).

Table 1. Comparison of the Recent Incentive Programs in Turkey

Incentive Coverage		
2009	2012	2016
Turkey Overall (26 NUTS-2 Region divided into 4 sub-regions according to the level of socioeconomic development).	Turkey Overall (Turkey divided into 6 regions using a socioeconomic development index announced by the Ministry of Economy).	Investments are supported on a project basis.
Incentive Tools		
2009	2012	2016
1. Tax Reduction 2. Land Allocation for Investment 3. Customs Duty Exemption 4. VAT Exemption 5. Interest Support 6. Social Security Premium Support	1. Tax Reduction 2. Land Allocation for Investment 3. Customs Duty Exemption 4. VAT Exemption 5. Interest Support 6. Social Security Premium Support 7. Income Tax Withholding Allowance	1. Tax Reduction 2. Land Allocation for Investment 3. Customs Duty Exemption 4. VAT Exemption 5. Interest Support 6. Social Security Premium Support 7. Income Tax Withholding Allowance 8. Energy Support 9. Wage Support

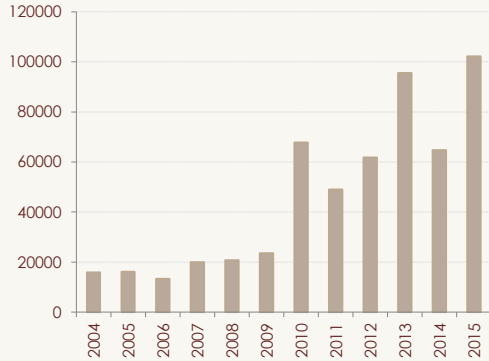
Source: Acar and Çağlar (2012), CBRT.

The incentive scheme launched in 2012 encourages investments that will enable strategic and technological transformation, contribute to the development of the least favored regions, enhance the effectiveness of support instruments and remove regional discrepancies. Similar to the former scheme, the incentives to be granted in the new incentive scheme also vary depending on the investment region and the scale of investment. However, the new incentive scheme is much more comprehensive than the previous one with regard to the field of practice and targeted sectors. Unlike past schemes, the new incentive scheme introduces privileges to investments to be made in organized industrial zones. The new scheme offers higher shares in tax reductions in investment periods for lesser developed regions, which provides considerable financing support to investor companies. In addition, interest support is also included in the new incentive scheme as another factor of incentive to spur financing opportunities.

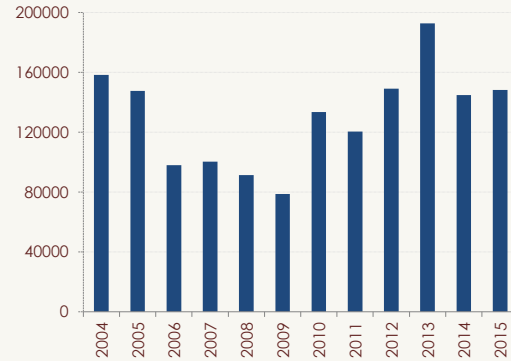
Another notable feature of the new incentive scheme is the special attention given to strategic investments, i.e., the investments to produce intermediate goods or products, 50 percent of which is met by imports. Additionally, the new incentive scheme aims at reducing the structural current account deficit and boosting the international competitiveness by encouraging high-tech investments with considerable value added.

The new incentive scheme can be distinguished from previous schemes by its project-based nature. Another striking novelty in the new scheme is the introduction of energy and wage support besides existing tools from the previous schemes (Table 1).

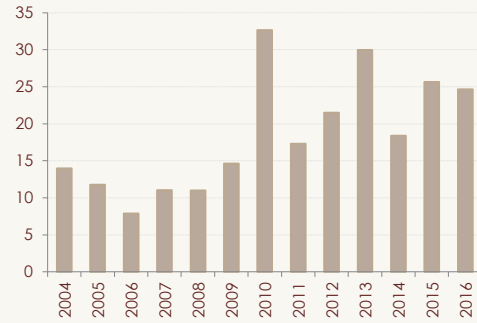
It is noteworthy that both the wider variety of incentive tools and the greater regional coverage introduced in the 2009 and 2012 incentive systems led to increases in the amount of incentive-backed investments (Chart 1) and the number of jobs pledged to be created with incentives (Chart 2).

Chart 1. Incentive-Backed Investments
(Million TL)

Source: Ministry of Economy.

Chart 2. Incentive-Backed Employment
(Number of People)

For a better understanding of the significance of incentive-backed investments in terms of the real economy, the share of investments that benefited from incentives within total investments is depicted in Chart 3. The ratio of incentive-backed investments to total investments increased during the years following the implementation of incentive schemes. As illustrated in these charts, a wider variety of tools and greater coverage of regions lead to enhanced effectiveness of the investment schemes on investment, growth and employment.

Chart 3. Ratio of Incentive-Backed Investments to Total Investments*
(Percent)

* As of July 2016.

Source: Ministry of Economy, Authors' calculations.

In sum, the incentive schemes implemented in Turkey spur economic growth mainly through tax reductions and other government subsidies, and contribute positively to the increase of investment and employment, thereby diminishing socioeconomic discrepancies among regions. The tools utilized in the implementation of incentive schemes have an expansionary effect on the fiscal policy and lead to a decline in public savings in the short run. However, public revenues improve in the medium and long terms due to the resulting increases in investment, employment and production.

REFERENCES

Acar, O. and E. Çağlar, 2012, Yeni Teşvik Paketi Üzerine Bir Değerlendirme (in Turkish), TEPAV Policy Note No. 201221.

Decree No. 2009/15199 on Government Support in Investments, available in Turkish at <http://www.resmigazete.gov.tr/eskiler/2009/07/20090716-5.htm>.

Decree No. 2012/3305 on Government Support in Investments, available in Turkish at <http://www.resmigazete.gov.tr/eskiler/2012/06/20120619-1.htm>.

7. Medium-Term Projections

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

7.1. Current State, Short-Term Outlook and Assumptions

Financial Conditions

In the third quarter of 2016, monetary policy developments in advanced economies caused volatility in global financial markets. Having surged markedly after the July Inflation Report, portfolio flows into emerging economies have recently started to slow down again. In this period, Turkey attracted fewer portfolio flows compared to other emerging economies, while the Turkish lira depreciated against the US dollar and the country risk premium inched up.

The CBRT continued with monetary policy simplification by lowering the marginal funding rate to 8.25 percent by consecutive reductions of 25 basis points in July, August and September. The reduced tightness in monetary conditions amid the CBRT's policy actions as well as macroprudential measures support overall financial conditions. In fact, consumer loans have started to recover in recent weeks. In view of the reduced tightness in financial conditions besides the possible spillovers of the developments in the exchange rate and other cost factors on the inflation outlook, the simplification process was postponed in October, and the marginal funding rate was kept constant at 8.25 percent.

Inflation

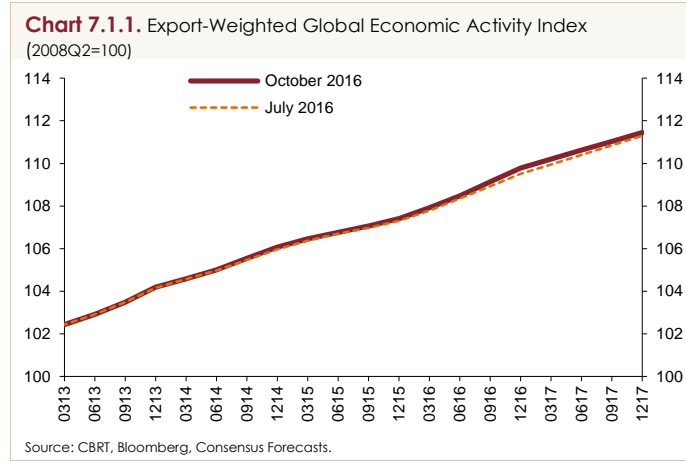
Consumer inflation ended the third quarter at 7.28 percent, remaining close to the lower bound of the July Inflation Report forecast. The fall in inflation was mostly driven by prices of unprocessed food. On the other hand, annual inflation in tobacco and energy increased. Thus, inflation excluding unprocessed food and tobacco posted a smaller decline, and ended up near the upper bound of the July Inflation Report forecast. The inflation outlook remained benign amid waning cumulative exchange rate effects, weakening demand conditions and modest import prices in September.

Demand Conditions

Economic activity was broadly in line with the predictions of the July Inflation Report. In the second quarter, the GDP grew by 0.3 and 3.1 percent quarter-on-quarter and year-on-year terms, respectively. The main driver of annual growth was final domestic demand, whereas net exports provided more negative contribution to growth due to the tourism slump. Final domestic demand contributed to growth both through public and private consumer spending, while investments remained subdued. On the production front, the value added of industrial and services sectors was limited due to tourism-driven indirect effects.

Current indicators of the third quarter of 2016 hint at a quarterly contraction in economic activity. The expected slowdown in economic activity caused by the tourism sector deepened due to the domestic turmoil in July, which had adverse impacts on both production and the domestic demand. On the other hand, economic indicators for August and September indicate that the adverse effects of the mid-July developments are counterbalanced. Accordingly, the output gap estimate for the third quarter is likely to widen compared to the previous quarter and put downward pressure on inflation (Table 7.1.1, Chart 7.2.3).

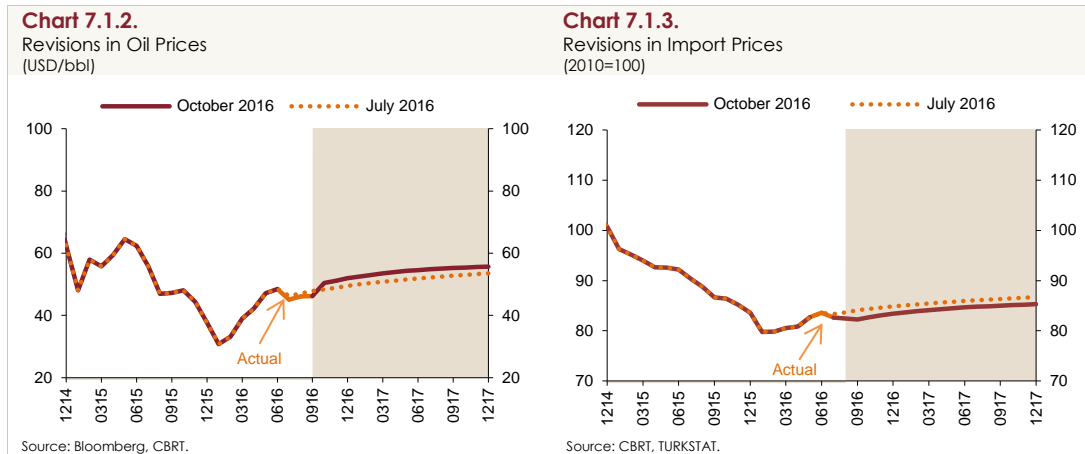
In view of waning uncertainties in the upcoming period, producer and consumer confidence will be re-built, demand-stimulating policies will support consumption expenditures and negative contribution of net exports will fall, which will all contribute to economic recovery. External demand was not revised notably amid the global growth outlook. In fact, the annual growth rate of the export-weighted global production index, which is updated according to current growth forecasts of Turkey's export partners, remained almost unchanged in the inter-reporting period (Chart 7.1.1).



Oil, Import and Food Prices

Owing to the recent developments, assumptions for crude oil prices for the upcoming period were revised upwards compared to the July Inflation Report, while assumptions for USD-denominated import prices saw a minor downward revision (Table 7.1.1, Charts 7.1.2 and 7.1.3). However, in terms of Turkish lira, import prices were subject to a considerable upward revision compared to the previous reporting period. The crude oil price assumption in annual averages was kept unchanged at 44 USD for 2016, and increased to 54 USD for 2017.

In the third quarter of 2016, food inflation remained far below the level envisaged in the July Inflation Report due to unprocessed food inflation. Taking into account the current trend of unprocessed food inflation as well as the decrease in the demand for food stemming from the fall in tourism revenues, food inflation, which was assumed to be 8 percent by end-2016 in the July Inflation Report, was revised downwards to 6 percent. The weak food demand owing to the tourism sector is expected to restrict food inflation in 2017 as well. Moreover, the measures taken by the Food Committee are expected to cause the food price inflation to remain below its historical average. Accordingly, the assumption for food price inflation was revised downwards from 8 percent to 7 percent for end-2017.



Fiscal Policy and Tax Adjustments

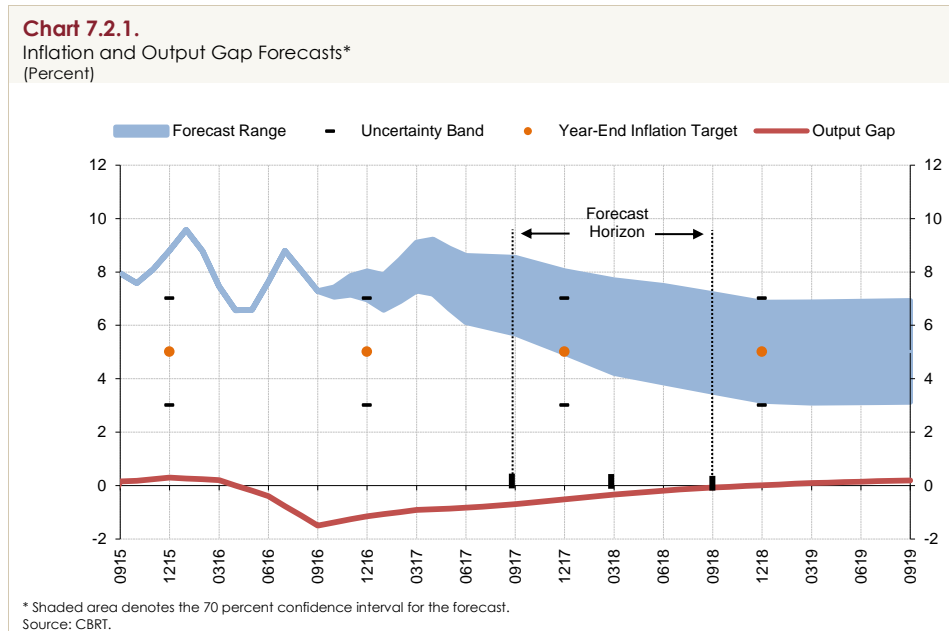
Medium-term forecasts are based on the assumption that adjustments to taxes and administered prices will be consistent with the inflation target and automatic pricing mechanisms. The medium-term fiscal policy stance depends on the MTP projections covering the 2017-2019 period.

Table 7.1.1. Revisions in Assumptions

		July 2016	October 2016
Output Gap	2016Q2	-0.2	-0.4
	2016Q3	-0.3	-1.5
Food Prices (Year-end Percent Change)	2016	8.0	6.0
	2017	8.0	7.0
Import Prices (Average Annual Percent Change, USD)	2016	-8.5	-9.2
	2017	4.0	3.2
Oil Prices (Average, USD)	2016	44	44
	2017	52	54
Export-Weighted Global Production Index (Average Annual Percent Change)	2016	1.7	1.7
	2017	1.8	1.8

7.2. Medium-Term Forecasts

Given a cautious policy stance that focuses on bringing inflation down, inflation is estimated to converge gradually to the 5-percent target. Accordingly, inflation is likely to stabilize around 5 percent in 2018 after falling to 7.5 percent in 2016 and 6.5 percent in 2017. Hence, inflation is expected to be, with 70 percent probability, between 7 percent and 8 percent (with a mid-point of 7.5 percent) at end-2016 and between 5 percent and 8 percent (with a mid-point of 6.5 percent) at end-2017 (Chart 7.2.1).

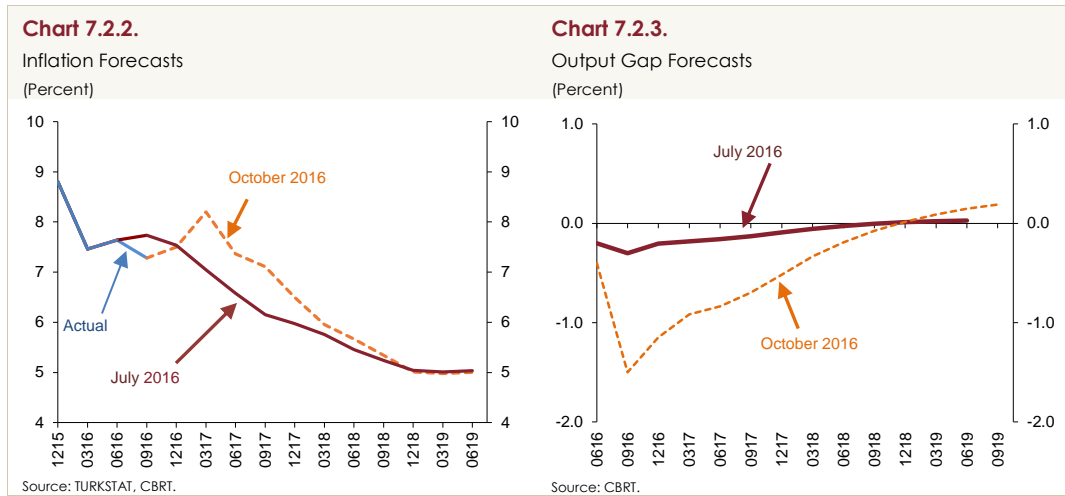


The Turkish lira fluctuated following the July Inflation Report, while oil prices increased. In the upcoming period, TL-denominated import prices are estimated to be higher compared to the previous reporting period. On the other hand, the latest domestic developments are envisaged to curb domestic demand particularly in the short term. Accordingly, output gap forecasts were revised downwards (Chart 7.2.3). In this respect, the year-end consumer inflation forecast for 2016 remained unchanged as downside factors on inflation were counterbalanced by upside factors. On the other hand, the consumer inflation forecast for end-2017 was revised upwards by 0.5 points as the upside effects driven by import prices outweighed the downward revision in the output gap and food inflation (Chart 7.2.2).

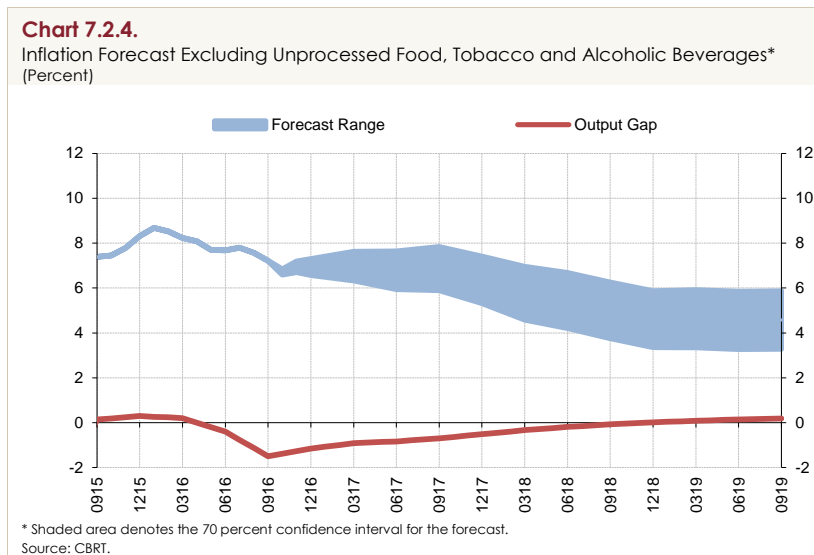
A detailed analysis of forecasts accounting for the changes in factors affecting inflation indicates that the upward revision in the TL-denominated import prices and tax adjustments in fuel are expected to push the end-2016 inflation forecast in the July Inflation Report upwards by 0.4 points and 0.3 points, respectively. However, 0.2 and 0.5 points of this effect will be offset by the downward revision in the output gap and the fall in food inflation, correspondingly.

A more detailed analysis of 2017 forecasts suggests that the upward revision in the TL-denominated import prices will add around 1 point to the year-end inflation forecast compared to the previous Report. On the other hand, downward revisions in the output gap and food inflation are likely to pull the end-2017 inflation forecast down by 0.3 and 0.2 points, respectively. Accordingly, the consumer inflation forecast for end-2017, which was set as 6 percent in the July Inflation Report, was revised to 6.5 percent.

According to the inflation forecast path presented in Chart 7.2.1, consumer inflation is projected to follow a flat course in October and converge to the 7.5 percent year-end forecast after a slight increase in November. Following an expected increase due in particular to the base effects from unprocessed food inflation in the first quarter of 2017, inflation is likely to fall in the second quarter of the year and see 6.5 percent at end-2017 with a gradual decline.



Unpredictable price fluctuations in items beyond the monetary policy domain, such as unprocessed food and tobacco, are among major factors that cause a deviation in inflation forecasts. Hence, inflation forecasts excluding unprocessed food, tobacco and alcoholic beverages are also announced and presented in Chart 7.2.4. The inflation indicator as measured above is expected to decline gradually to 4.6 percent.



Comparison of the CBRT's Forecasts with Inflation Expectations

It is critical that economic agents take the inflation target as a benchmark in their plans and contracts and focus on the underlying trend of medium-term inflation rather than on temporary price fluctuations. Likewise, it is crucial that the CBRT's current inflation forecasts be compared with inflation expectations of other economic agents to serve as a reference guide. Accordingly, the year-end, 12-month-ahead and 24-month-ahead inflation expectations of the Survey of Expectations' respondents are above the CBRT's baseline scenario forecasts, which necessitates close monitoring of expectations and the pricing behavior (Table 7.2.1).

Table 7.2.2.
CBRT Inflation Forecasts and Expectations

	CBRT Forecast	CBRT Survey of Expectations*	Inflation Target
2016 Year-end	7.5	7.8	5.0
12-month-ahead	6.9	7.6	5.0
24-month-ahead	5.2	7.0	5.0

* As of October 2016.
Source: CBRT.

7.3. Risks and Monetary Policy

Overall financial conditions remain buoyed by reduced tightness in monetary conditions, thanks to the CBRT's policy actions, and macroprudential measures. The gradual fall in the marginal funding rate has partially passed through to loan and deposit rates. Supported also by the recently enforced macroprudential measures, consumer loans showed some recovery in the last couple of months. On the other hand, due to global and geopolitical developments that had effects on domestic financial markets, loan conditions still remain tight. As the end-September downgrade of Turkey's sovereign credit rating to non-investment grade was largely anticipated by markets, the reaction of financial markets remained limited. Even though this downgrade weighs on external funding costs, loan conditions are supported by liquidity measures, macroprudential arrangements and other incentives. On the other hand, the CBRT may introduce accommodative adjustments to required reserves and other liquidity instruments in case of a higher-than-expected tightness in financial conditions.

The latest data indicate a remarkable economic slowdown in the third quarter. Accommodative incentives and measures are projected to stimulate a rebound in domestic demand starting from the last quarter. Accordingly, the Turkish economy is expected to grow mildly in the remainder of 2016 and throughout 2017. However, economic activity is exposed to downside risks stemming from tourism revenues, the global economic outlook, uncertainties regarding the monetary policies of advanced economies and geopolitical developments. The CBRT will continue to closely monitor the impacts of the developments in economic activity on price stability and financial stability.

In the third quarter of the year, inflation recorded a decline on the back of improvements in unprocessed food and core inflation indicators. While the lagged effects of the cumulative exchange rate developments on annual inflation continued to wane, slowing aggregate demand supported disinflation and the underlying trend of core inflation displayed some recovery. However, the tax rise in fuel products restrained the improvement in inflation through energy and transport prices. Although the developments in TL-denominated import prices are expected to push inflation upwards, the mild course of aggregate demand is projected to support the gradual decline in core inflation. Moreover, forecasts are based on the assumption that the year-end food inflation in 2016 and 2017 will be lower than the projections of the previous Report amid the tourism-induced slowdown in food demand and the actions taken by the Food Committee.

Inflation forecasts accommodate both upside and downside risks. Inflation may settle on a lower-than-expected path, should economic activity recover at a slower-than-envisioned pace in the upcoming period. On the other hand, uncertainties regarding oil prices and global markets pose an upside risk to inflation through the cost channel. Meanwhile, the volatility in food prices pose risks in

both directions for 2017. The CBRT will closely monitor the developments affecting inflation and take necessary policy measures to achieve price stability.

Leading indicators for the third quarter of 2016 point to a mild improvement in global economic activity. However, the historically low levels of global growth and the trade volume lead to sustained environment of low interest rates in advanced economies. Accordingly, the risk appetite towards emerging economies has followed a robust course in recent months. On the other hand, uncertainties regarding global monetary policies cause fluctuations in portfolio inflows. In fact, amid strengthened perceptions about the Fed's possible rate hike coupled with the uncertainties regarding the monetary policies of other advanced economies, portfolio flows towards emerging economies have recently trended downwards after a surge following the previous reporting period.

Against this background, the marginal funding rate, which was lowered gradually under the simplification process as of March 2016, was kept constant in October. The completion of the simplification will ensure funding via a single rate, thereby bringing short-term market rates closer to the CBRT funding rate. Simplification is believed to contribute to the effectiveness of the transmission mechanism by providing a more reliable assessment of the monetary policy stance. Therefore, simplification of the monetary policy will be finalized within a reasonable schedule. The direction and timing of simplification will depend on developments affecting the inflation outlook and financial stability.

Despite experiencing significant external shocks in recent years, the adopted policy framework proved successful in containing the deterioration in inflation and inflation expectations. However, price stability is yet to be achieved. Ten years of experience in inflation targeting showed that combatting inflation requires joint efforts. Thus, to reduce inflation to the 5-percent target permanently, all institutions must fulfill their duties under a holistic approach by also taking structural factors into account. In this respect, actions taken by the Food Committee set an invaluable precedent. In the upcoming period, the CBRT will bolster these efforts by undertaking extensive studies to raise awareness regarding structural issues in inflation dynamics.

Developments in fiscal policy and tax adjustments are monitored closely with regard to their effects on the inflation outlook. The baseline monetary policy stance is formulated under the assumption that fiscal discipline will be maintained and there will be no unanticipated hikes in administered prices. A revision of the monetary policy stance may be considered, should the fiscal policy deviate significantly from this framework, and consequently have an adverse effect on the medium-term inflation outlook.

In recent years, sustaining fiscal discipline has contributed significantly to lowering the sensitivity of the Turkish economy against external shocks. In the current environment of highly uncertain global markets, the gains from maintaining and further advancing these achievements are significant. Any measure to provide permanent fiscal discipline and reduce the savings deficit will support macroeconomic stability and contribute positively to social welfare by keeping the interest rates of long-term government securities at low levels.

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Abbreviations

A-PPI	Agricultural Producer Price Index
AMA	Automobile Manufacturers Association
bbf	Barrel
BIST	Borsa İstanbul
BRSA	Banking Regulation and Supervision Agency
BTS	Business Tendency Survey
CBRT	Central Bank of the Republic of Turkey
CDS	Credit Default Swap
CPI	Consumer Price Index
CRA	Central Registry Agency
D-PPI	Domestic Producer Price Index
ECB	European Central Bank
EMBI	Emerging Markets Bond Index
EPFR	Emerging Portfolio Fund Research
EU	European Union
EUR	The Euro Currency
Eurostat	The Statistical Office of the European Union
FAO	Food and Agriculture Organization of the United Nations
FCI	Financial Conditions Index
Fed	Federal Reserve Bank
FOMC	Federal Open Markets Committee
FX	Foreign Exchange
GDP	Gross Domestic Product
HLFS	Household Labor Force Survey
MEDIAN	Median Inflation for Seasonally Adjusted 5-Digit Sub-Price Index
MENA	Middle East and North Africa
MOVE	Merrill Lynch Option Volatility Estimate
MTP	Medium-Term Program
PDP	Public Disclosure Platform
PMI	Purchasing Managers Index
PPI	Producer Price Index
R&D	Research and Development
ROM	Reserve Options Mechanism
S&P	Standard and Poor's
SATRIM	Seasonally Adjusted Trimmed Mean Inflation
SCT	Special Consumption Tax
SMEs	Small and Medium-Sized Enterprises
SSI	Social Security Institution
TL	Turkish Lira
TURKSTAT	Turkish Statistical Institute
UK	United Kingdom
US	United States
USA	United States of America
USD	United States Dollar
VAT	Value Added Tax
VIX	Implied Volatility Index for S&P 500 index options
WEO	World Economic Outlook
WGMA	White Goods Manufacturers Association

2016 Calendar for MPC Meetings, Inflation Report and Financial Stability Report			
MPC Meetings	Summary of the MPC Meeting	Inflation Report	Financial Stability Report
19 January 2016	26 January 2016	26 January 2016	
25 February 2016	1 March 2016		
24 March 2016	31 March 2016		
20 April 2016	26 April 2016	26 April 2016	
24 May 2016	31 May 2016		31 May 2016
21 June 2016	28 June 2016		
19 July 2016	26 July 2016	26 July 2016	
23 August 2016	31 August 2016		
22 September 2016	29 September 2016		
20 October 2016	27 October 2016	27 October 2016	
24 November 2016	1 December 2016		30 November 2016
20 December 2016	27 December 2016		