CENTRAL BANK OF
THE REPUBLIC OF TURKEY

inflation report
2010-I

Contents

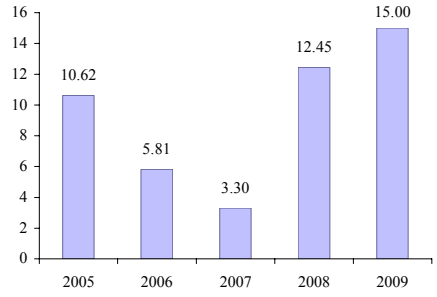
1. Overview

The global crisis which erupted in developed markets and then spread across the world during the last quarter of 2008, has continued to affect the economic outlook—albeit less forcefully—during the last quarter of 2009. During this period, data releases regarding the global financial system and economic activity displayed an ongoing recovery. However, budget deficits —especially in the developed economies—continue to rise, problems across credit markets linger, and employment remains in a precarious state, all suggesting that it would take a long time for the global economy to completely recover. Moreover, ongoing uncertainties regarding the exit strategies from unconventional fiscal and monetary stimulus continue to pose risks on the durability of the recovery process.

1.1. Inflation Developments

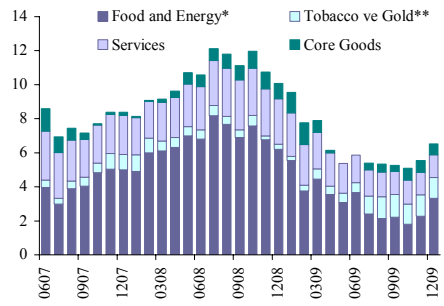
During the final quarter of 2009, factors affecting inflation evolved in line with the outlook presented in the October Inflation Report. Both domestic and external demand displayed a gradual recovery, yet resource utilization remained at low levels. However, an unexpected surge in unprocessed food prices led to a one percentage point higher inflation rate than forecasted in the October Inflation Report (Graph 1.1.1). In other words, the deviation from the end-2009 inflation forecast presented in the October Inflation Report could be explained almost entirely by the increase in food prices. Rising oil and other commodity prices as well as the withdrawal of tax cuts within the fiscal stimulus package were other factors leading to an increase in annual headline inflation. Accordingly, in the last quarter, inflation climbed to 6.53 percent from 5.27 percent (Graph 1.1.2).

Graph 1.1.1. Unprocessed Food Prices
(Last Quarter of the Year, Percentage Change)



Source: TURKSTAT, CBRT.

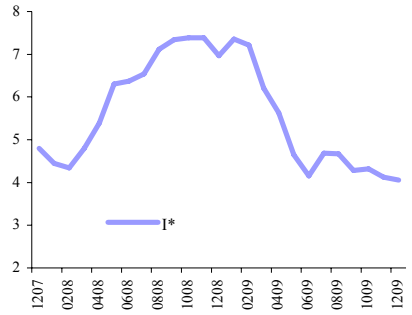
Graph 1.1.2. Contribution of Sub-Categories to Annual CPI Inflation



* Food and Energy: Food, nonalcoholic beverages and energy.
** Tobacco and Gold: Alcoholic beverages, tobacco and gold.
Source: TURKSTAT, CBRT.

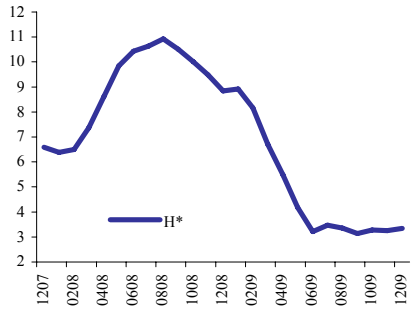
The rise in inflation can be attributed to several temporary factors, rather than a deterioration in general price setting behavior. In fact, core inflation indicators in the last quarter point to an underlying inflation trend of around 4 to 5 percent. Moreover services inflation and the inflation diffusion index have been hovering around historically low levels. These observations indicate that the increase in inflation in the last quarter of 2009 is mainly due to temporary developments, and factors beyond the immediate control of monetary policy (Graph 1.1.3 and 1.1.6).

Graph 1.1.3. Core Inflation Indicator (I)
(Annual Percentage Change)



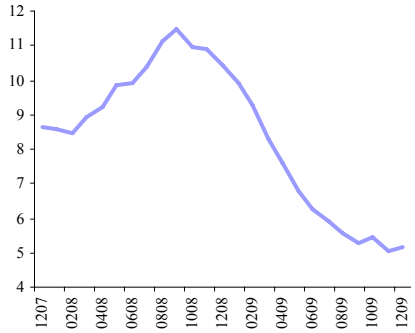
I*: CPI excluding food, energy, nonalcoholic beverages and tobacco and gold. (Corrected for temporary tax effects in 2009.)
Source: TURKSTAT, CBRT.

Graph 1.1.4. Core Inflation Indicator (H)
(Annual Percentage Change)



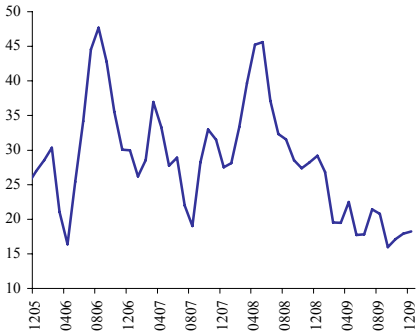
H*: CPI excluding unprocessed food, energy, nonalcoholic beverages and tobacco and gold. (Corrected for temporary tax effects in 2009).
Source: TURKSTAT, CBRT.

Graph 1.1.5. Services Prices
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

Graph 1.1.6. Inflation Diffusion Index**



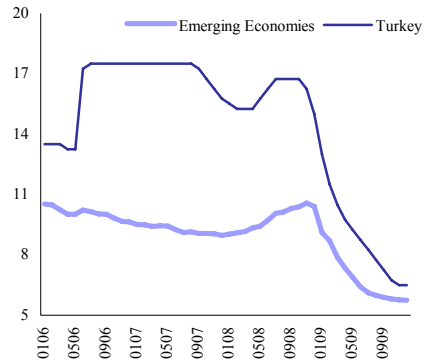
** Difference between the share of items with increasing prices and the share of items with falling prices in CPI.(Seas. adjusted 2-month average).
Source: TURKSTAT, CBRT.

1.2. Monetary Policy

Anticipating that inflation would decrease sharply following the last quarter of 2008, the Central Bank of Turkey (CBRT) focused on alleviating the potentially harsh impact of the global financial crisis on the domestic economy. In this respect, the CBRT has delivered sizeable cuts in policy rates, while providing liquidity support to facilitate the smooth operation of credit markets. The cumulative interest rate cuts between November 2008 and November 2009

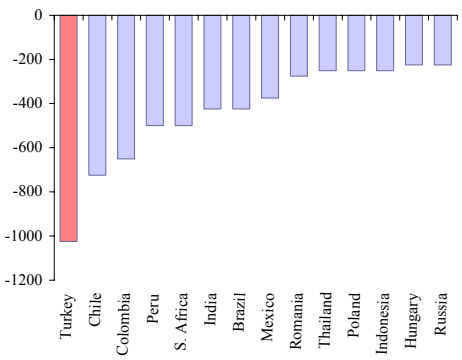
reached 1025 basis points, bringing Turkey's policy rate closer to the average of emerging markets implementing inflation targeting regimes (Graph 1.2.1 and 1.2.2).

Graph 1.2.1. Policy Rates in Inflation-Targeting Emerging Economies (Percent)*



*As of end of December.
Source: Bloomberg, CBRT calculations.

Graph 1.2.2. Changes in Policy Rates in Emerging Markets*
(September 2008 – January 2010 (Basis points))



* As of 18 January 2010.
Source: Bloomberg, CBRT calculations.

Taking into account the favorable developments in the credit markets and the moderate recovery in the economic activity in the last quarter of 2009, the Monetary Policy Committee (MPC) slowed the pace of rate cuts, and finally decided to keep rates unchanged during the last two meetings. However, it was also noted that lingering problems across the global economy were still a concern and that uncertainties regarding the strength and durability of the recovery remain. Taking these factors into account, the MPC reiterated that it would be necessary to keep policy rates at low levels for a long period of time.

The MPC indicated in its January meeting that tax adjustments and base effects would cause inflation to rise significantly over the next two months and also remain above target for some time. Noting that the underlying trend implied by core inflation indicators would remain at levels consistent with medium-term targets, the Committee emphasized that, given the low levels of resource utilization, the precarious state of labor markets, and global economic conditions, general pricing behavior would not be affected adversely by the temporary rise in inflation, and therefore, inflation would display a declining trend once the transitory factors taper off.

Market yields have been broadly shaped by the monetary policy stance during the last quarter of 2009. Market interest rates have increased in October with rising perceptions that the policy rate cut cycle is coming to an end.

However, with the improving risk appetites towards the end of the year, the market interest rates have once again recently eased to historically low levels.

1.3. Outlook for Inflation and Monetary Policy

The third-quarter gross domestic product (GDP) release was broadly in line with the outlook presented in the October Inflation Report. The impact of the fiscal stimulus package on domestic demand has moderated, while external demand continued to recover gradually. Accordingly, output continued to expand in seasonally adjusted quarterly terms, although the pace of growth was slower than the previous quarter. Aggregate demand conditions continued to support disinflation, while the inventory de-stocking process decelerated.

Recent data releases indicate that the economic activity continues to recover gradually. However, private domestic demand has been slowing down somewhat, as the expansionary impact of the fiscal measures have been receding. Although private investment has recovered partially in the second half of the year, investment demand is not expected to accelerate in the short term—let alone reach pre-crisis levels—given the high demand uncertainty and the low levels of capacity utilization.

The significant decline in external demand has been one of the main factors driving the sharp contraction in the economic activity during the last quarter of 2008 and the first quarter of 2009. External demand conditions would continue to play a critical role regarding the pace of the recovery in economic activity in the forthcoming period as well. Recent data releases suggest that a gradual upturn in exports is continuing. However, external demand is not expected to reach its pre-crisis levels for a long period of time, given the current levels of the exports and the expected pace of the global economic recovery.

The weak course of external demand would restrain economic activity and employment growth through its impact on industrial production. Indicators such as capacity utilization rates and per capita hours worked across industries suggest that resource utilization remains low throughout the economy. Given that ample slack would continue to be a drag on investment and employment, recent signs of improvement in the employment data is not expected to turn into a significant recovery, suggesting that the unemployment rate will likely remain elevated for an

extended period. Therefore, unit labor costs and domestic demand would continue to support disinflation.

The tightness in credit conditions have been moderating since the publication of the July Inflation Report. Easing financial conditions and declining loan rates have been strengthening the expansionary impact of monetary policy. The October Inflation Report had stated that the credit channel would begin to support domestic economic activity during the fourth quarter of the year. In fact, credit demand has started to recover in this period, especially with commercial loans picking up significantly. However, the effectiveness of the credit channel in supporting the economic activity is still partly restrained owing to the ongoing tightness in lending standards for the small- and medium-sized enterprises (SME).

It is expected that credit channel will continue to support domestic activity, and the impact of the cumulative rate cuts would become more prevalent over the medium term. However, the rising domestic borrowing requirement of the government, ongoing problems in the global economy, and elevated levels of unemployment would continue to restrain credit expansion.

Overall, recent data releases have shown that economic activity is on a gradual recovery path, which is expected to continue in the period ahead. However, resource utilization is anticipated to remain below the long-term average for some time. In this context, our medium-term forecasts suggest that the output gap—albeit closing faster than envisaged in the October Report—will remain disinflationary until the beginning of 2012.

Although the course of economic activity have been in line with the outlook presented in the October Inflation Report, there have been some developments which necessitated an upward revision in the short-term inflation forecast:

- The tax measures implemented in January on fuel, alcohol, and tobacco products, to increase budget revenues, will add around 1.5 percentage points to 2010 inflation. Forecasts presented in the October Inflation Report assumed that prices of these products would increase in line with the target inflation in 2010, and thus total contribution for these items was envisaged as 0.5 percentage points. Accordingly, tax measures in January have shifted the

inflation forecast path by around 1 percentage point through 2010. It should be noted that this impact will be seen immediately in January 2010 and disappear in January 2011.

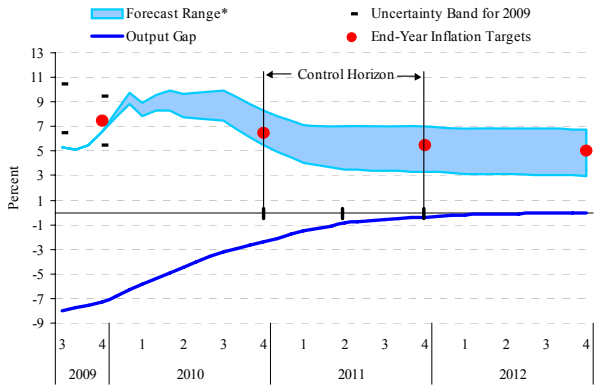
- Commodity prices continued along a rising trend during the last quarter of 2009, with the improving perception regarding the global economic recovery. Accordingly, oil price realizations were above our assumption of 70 USD per barrel for the fourth quarter. Therefore, the oil price assumptions stated in the past Report have been revised in line with futures prices registered during the first half of January. In this context, the previous assumption of oil prices are revised up from 75 USD per barrel to 80 USD for 2010, and from 80 USD to 85 USD for 2011 and thereafter. This revision has shifted the 2010 inflation forecast up by 0.2 percentage points. Moreover, in line with oil prices, imported input prices are also assumed to increase gradually throughout the forecast horizon in response to the gradual recovery in the global economy.

- The October Inflation Report envisaged food inflation to be 5.8 percent at the end of 2009 and 6 percent for the following years. However, worse than expected outcomes regarding unprocessed food prices led to an upward revision in the assumption for food inflation from 6 percent to 7 percent for end-2010, which further added around 0.3 percentage points to the 2010 inflation forecast. Similarly, assumptions for 2011 food inflation have been raised to 6.5 percent from 6 percent. Food inflation is assumed to stabilize at 6 percent in the following years.

Finally, regarding fiscal policy, it is assumed that the consistent framework outlined in the Medium Term Program (MTP) will be implemented and further enhanced by institutional and structural measures. In other words, it is assumed that administered prices would be set in line with inflation targets over the next three years. Moreover, it is assumed that fiscal stance will remain expansionary—but less so than in 2009—throughout 2010, and then fiscal tightening would be gradually adopted starting from 2011. In this respect, it is envisaged that the rising debt-to-GDP ratios would reverse course steadily starting from 2011, and hence the risk premium would not display any significant changes throughout the forecast horizon.

Against this background, assuming policy rates are kept constant for a long period followed by limited rises thereafter, with policy rates staying at single digits throughout the three-year forecast horizon, the medium-term forecasts suggest that, with 70 percent probability, inflation will be between 5.5 and 8.3 percent with a mid-point of 6.9 percent at end-2010, and between 3.4 and 7.0 percent with a mid-point of 5.2 percent by the end of 2011. Furthermore, inflation is expected to decline to 4.9 percent by the end of 2012 (Graph 1.3.1).

Graph 1.3.1. Inflation and Output Gap Forecasts*



*The shaded region indicates the 70 percent confidence interval for the forecast.

Overall, there has not been any major changes in the medium-term forecasts and the monetary policy stance, since the economic activity has evolved in line with the outlook presented in the October Inflation Report. However, short-term forecasts were revised significantly upwards, as all the main variables affecting short-term forecast (such as food, energy and administered prices) have been subject to an upward revision. In this respect, while the short-term forecasts were revised upwards significantly, there has been no major change regarding the medium-term forecasts.

The revised forecasts indicate that there will be no significant upside pressures on inflation, even if policy rates remain at low levels for a long period. However, as depicted in Graph 1.3.1, inflation is likely to display a significant increase over the next two months due to tax hikes and strong base effects. Moreover, the base effects would continue to be important in the second quarter of 2010, as the downside impact of the global crisis on consumer prices was significant during the previous year's first half. Therefore, inflation is expected to stay above the target for some time. However, as the

impact of the tax hikes gradually dissipate, inflation is expected to trend downwards, stabilizing at around 5 percent over the medium term.

The fact that inflation would stay at elevated levels for some time due to tax adjustments and strong base effects, highlights the importance of expectations management. In this respect, with the awareness of these temporary factors, it is critical that the economic agents focus on medium-term inflation trend, and therefore, take the inflation targets as a benchmark for their pricing plans and contracts.

It should be emphasized that any new data or information regarding the inflation outlook may lead to a change in the monetary policy stance. Therefore, assumptions regarding the future policy rates underlying the inflation forecast should not be perceived as a commitment on behalf of the CBRT.

1.4. Risk Factors and Monetary Policy

The outlook for domestic economy has been largely shaped by global developments since the intensification of the global crisis during the last quarter of 2008. Given the important role of the trade and global financial channels in the contraction of domestic economic activity during 2009, it is expected that the global developments would continue to be the main driving factor for the outlook for domestic activity and inflation in the forthcoming period. Accordingly, in this subsection, both global and domestic economic activity, as well as their impact on inflation will be considered jointly.

Rising budget deficits and ongoing problems in credit and real estate markets continue to pose downside risks for global activity, especially for developed economies. Although the probability of another disruption in global economic activity has been decreasing, it is still an important source of downside risk on domestic economic activity and inflation. Should the global conditions deteriorate again, and consequently delay the domestic recovery, the CBRT would consider further monetary easing.

Despite the prevailing downside risks on global and domestic economic activity, upside risks have also been emerging since the second half of 2009, given the pace of the global recovery over this period. Moreover, it should be noted that the impact of the unprecedented expansionary policy measures since

the last quarter of 2008 would be observed with a lag. Similarly, the 1025 basis points cumulative easing in the CBRT policy rates between November 2008 and November 2009 would also be fully transmitted with a lag. In this respect, should the recovery in domestic economic activity turn out to be faster than expected, the limited monetary policy tightening implied in the baseline scenario could be implemented earlier than envisaged.

The fact that inflation will rise in the forthcoming period due to base effects and recent tax hikes, poses an important risk factor through its potential impact on inflation expectations. Several adverse factors (such as food and oil price increases, base effects and administered price hikes) have been leading to upward movements in inflation since the last quarter of 2009. Although these factors are temporary, they will likely cause headline inflation to stay at elevated levels for sometime. It is crucial that the economic agents fully understand the temporary nature of these developments while forming their medium- and longer-term expectations. Given the low levels of resource utilization, the adverse impact of the depressed labor market conditions on consumption expenditure, and the gradual removal of fiscal stimulus, these temporary factors as well as other cost push pressures would not lead to a significant deterioration in general pricing behavior. Currently, services and core inflation are consistent with medium-term inflation targets, and resource utilization is at low levels. Therefore, it is foreseen that the policy rates would be maintained at low levels for a long period. However, it should also be underscored that the CBRT will not hesitate to tighten monetary policy sooner than envisioned under the baseline scenario, should any unforeseen developments lead to a deterioration in general price setting behavior.

Increasing budget deficits on a worldwide scale, especially in developed economies, continue to pose risks on inflation expectations and thus on longer-term global interest rates. Countries with relatively sounder banking systems and prudent fiscal policies would be more resilient against these risks. In this respect, the CBRT will continue to monitor fiscal policy developments closely while formulating monetary policy. Should the goals set out in the MTP be implemented through institutional and structural measures, rather than tax and administred price hikes, it would be possible to keep policy rates at single digits throughout the forecast horizon.

The course of oil and other commodity prices constitutes another important risk factor. Ample liquidity driven by countercyclical policies on a global scale facilitates speculative movements for commodity prices. Fast growth trends in countries like China and India, and the rising share of these economies in global commodity demand, exacerbate these speculative motives. Therefore, oil and other commodity price developments may continue to rise, even under a scenario of a gradual global economic recovery. At this point it is worth noting that weak domestic demand conditions would limit the pass-through stemming from upside cost-push shocks. Therefore, the CBRT will not react to the first round effects of short-term volatility in commodity prices, especially when the resource utilization remains at depressed levels. However, if an uptrend in commodity prices reflects a strong and durable rebound in global economic activity that would in turn have adverse effects on inflation expectations, then the CBRT will tighten monetary policy appropriately to keep inflation in line with medium-term inflation targets.

Since the last quarter of 2008, the CBRT, without endangering its main objective of price stability, has focused on containing the adverse effects of the global crisis on the domestic economy, and this task has been achieved to a large extent. Monetary policy will continue to focus on price stability in the period ahead. Strengthening the commitment to fiscal discipline and the structural reform agenda would support the improvement of Turkey's sovereign risk, and thus facilitate macroeconomic and price stability. In this respect, timely implementation of the structural reforms envisaged by the Medium Term Program and the European Union accession process remains to be of utmost importance.

Box 1.1 A BACKWARD GLANCE ON END-2009 INFLATION FORECASTS

The global crisis that erupted in the financial markets of advanced economies and spread across the globe starting from the fourth quarter of 2008 had a major impact on Turkey's economy throughout 2009. The fact that the crisis was unusual and unconventional policies have been implemented in response, has fed into uncertainty about inflation forecasts. Moreover, unprocessed food prices fluctuated at historically high levels during the second half of the year. Against this backdrop, assumptions about factors affecting inflation forecasts, such as financial markets, global growth, domestic economic activity, commodity and food prices, had to be extensively revised quarter-on-quarter over the past one year. This Box summarizes the basic changes in end-2009 inflation forecasts and their reasons, resulting from revisions to the quarterly reports in 2009.

January Inflation Report

Amid the uncertainty driven by the global crisis, economic activity fell sharply in the final quarter of 2008, while credit conditions tightened dramatically, leading to an upsurge in risk premiums and loan rates. The massive loss of confidence and the continued financial tightening caused global growth rates to decline markedly in early 2009, also bringing commodity prices rapidly down (Table 1). In other words, factors affecting inflation outlook experienced an apparent downtrend.

Table. 1. Inflation Report Assumptions

		Jan 09	Apr 09	Jul 09	Oct 09
Growth Forecasts*					
World	2009	-0.2	-2.1	-2.6	-2.3
	2010	2.0	1.9	2.1	2.7
United States	2009	-1.8	-2.7	-2.6	-2.5
	2010	2.3	1.8	2.1	2.6
Euro Area	2009	-1.4	-3.4	-4.4	-3.9
	2010	0.8	0.3	0.4	1.1
Food Inflation	2009	7.5	7.5	7.5	5.8
	2010	6	6	6	6
Brent Crude Oil Prices per Barrel *(US dollar)*	2009	55	55	60	70
	2010	55	55	70	75

*Consensus Forecasts.
Source: CBRT.

April Inflation Report

Accordingly, the year-end inflation forecast for 2009 has been announced as 6.8 percent in January 2009 Inflation Report . However, first-quarter data pointed to a deeper contraction in domestic demand than envisaged in January Inflation Report, while many international institutions continued to revise down their global growth forecasts in view of the economic developments. Thus, recognizing that the economic slowdown was more severe than expected, we assumed that aggregate demand conditions provided a greater support for disinflation than in the previous report, and significantly revised our output gap forecasts downwards (Graph 1a). This led to a downward revision of 0.8 percentage points in underlying inflation forecast. Therefore, we brought our year-end inflation forecast down to 6.0 percent in the 2009 April Inflation Report (Table 2).

Table. 2. Sources of Revisions to End-2009 Inflation Forecasts

	Jan 09	Apr 09	Jul 09	Oct 09
Inflation Forecasts (percent)	6.8	6.0	5.9	5.5
Sources of The Difference Between Two Inflation Report Forecasts (percent contribution)				
	Jan-Apr	Apr-Jul	Jul-Oct	Oct-Dec*
Food	0.0	0.0	-0.5	1.0
Oil	0.0	0.2	0.5	0.1
Additional Fiscal Measures	0.0	0.5	0.0	0.0
Underlying Inflation	-0.8	-0.8	-0.4	-0.1

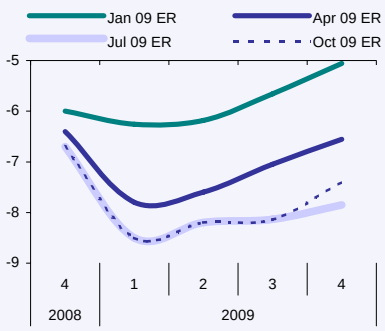
*Sources of the difference between forecasts and realizations. Inflation ended 2009 at 6.5 percent.
Source: CBRT.

July Inflation Report

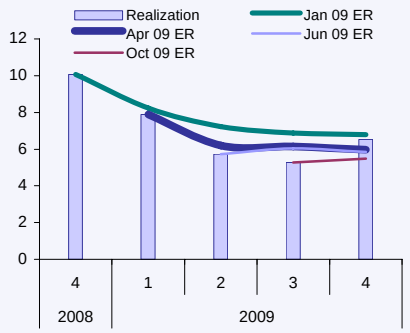
In the following period, both upside and downside risks on inflation have emerged: the deeper-than-expected economic contraction during the first quarter of 2009 and the even worsening expectations for Euro Area growth in 2009 put downward pressure on the revised forecasts of the 2009 July Inflation Report, whereas higher oil prices and tax adjustments to restore fiscal balance put upward pressure on the forecasts. The outlook that appeared as a result of the changes in aggregate demand conditions caused a slight downward revision in output gap forecasts (Graph 1a). Moreover, the impact of the economic slowdown on inflation was more severe than expected. Therefore, the underlying inflation forecast had been down by 0.8 percentage points from the previous report.

Meanwhile, the increase in oil prices led to an upward revision in oil price assumptions, driving the year-end inflation forecast up by 0.2 percentage points. Furthermore, the July hike in tobacco prices was estimated to add 0.5 percentage points to year-end inflation, which was incorporated into forecasts. Accordingly, the year-end inflation forecast was revised down to 5.9 percent in the 2009 July Inflation Report (Table 2).

Graph.1a. Output Gap Forecasts in 2009



Graph.1b. Inflation Forecasts in 2009



Source: TURKSTAT, CBRT.

October Inflation Report

Third-quarter changes in domestic economic activity were consistent with the outlook presented in the July Inflation Report, while assumptions about the global economy were slightly upgraded in view of the forecasts by international institutions. In this respect, the aggregate demand outlook in the October Inflation Report remained virtually unchanged from the previous report. Yet, third-quarter core inflation measures showed that aggregate demand conditions had a more significant than expected impact on underlying inflation. This was confirmed by the historical plunge in the annual services inflation and the diffusion index. Against this background, our underlying inflation forecast was slightly revised downwards.

Despite higher-than-expected oil prices, annual food inflation slumped at a faster-than-expected pace during the third quarter of 2009, triggering a downward revision to short-term forecasts. Meanwhile, oil prices rose from 60 USD/bbl in the second quarter to 70 USD/bbl in the third quarter, as non-producing investors switched towards commodity markets. These changes in spot prices prompted us to upgrade our year-end oil price assumption, thereby adding 0.5 percentage points to our year-end inflation forecast.

On the other hand, seasonally adjusted food prices dropped in the third quarter, unlike in previous years, and food inflation remained below the forecasts for the first nine months. This was primarily due to the faster-than-expected decline in the annual rate of increase in unprocessed food prices. Accordingly, our annual food inflation forecast for 2009 was revised down from 7.5 to 5.8 percent in the 2009 October Inflation Report, driving end-2009 forecasts down by 0.5 percentage points (Table 1). As a result, our year-end inflation forecast was revised down from 5.9 percent to 5.5 in the 2009 October Inflation Report (Table 2).

End-2009 Inflation

Developments in the last quarter of 2009 confirmed the consistency between the factors affecting underlying inflation and the outlook presented in the 2009 October Inflation Report. Nevertheless, due to an unforeseen rally in unprocessed food prices, food inflation, which was forecasted to be 5.8 percent in the October Inflation Report, ended 2009 at 9.3 percent (Box 3.1). Developments in food inflation largely account for the deviation between the October forecast of 5.5 percent and the year-end inflation of 6.5 percent (Graph 1b).

In sum, the CBRT projected in its January Inflation Report that inflation would plunge in the first half of 2009 and undershoot the year-end target, and accordingly launched an aggressive rate cut policy. Subsequent data confirmed CBRT's projections; inflation dropped markedly year-on-year to 6.5 percent in 2009, undershooting the target. However, uncertainties about the effects of the global crisis on aggregate demand and unforeseen movements in oil and food prices caused the year-end inflation forecast to fluctuate quarter-on-quarter. The forecast revisions and corresponding policy measures were transparently disclosed to public through Inflation Reports, thereby enabling the Bank to regularly fulfill the accountability requirement.

2. International Economic Developments

Indicators for the second half of 2009 have confirmed that the global economy is on a recovery path. This has provided improvement in the global risk sentiment and normalization of the financial markets to continue. Nevertheless, the fact that issues concerning the global economy still remain partially resolved feeds the uncertainty about the pace and sustainability of the recovery.

While the extensive monetary and fiscal stimulus measures adopted worldwide, especially by advanced economies, have been the key driver of the recent economic recovery, inventory buildups have also supported growth. Despite the positive developments in the global financial markets, the failure in relieving banks' troubled assets and financial fragility to be persisting still to a large extent, restrict the effectiveness of the credit mechanism. This heightens concerns about the sustainability of the increase in consumer and investment spending, and thus impedes the stable growth of the global economy.

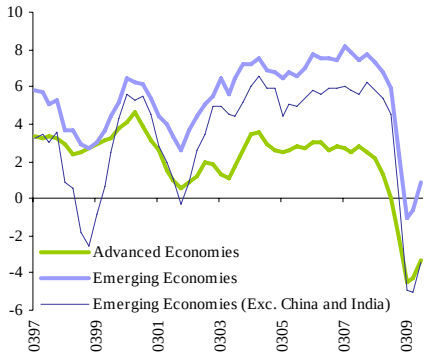
The global economic outlook has been positive recently, yet downside risks remain. The most significant risk in the short term is the misperception that global growth has become permanent or the premature withdrawal of public stimulus measures due to less room for maneuver resulting from widening budget deficits. Secondly, continuing high unemployment rates may depress aggregate demand by reducing household spending. Moreover, rapidly growing budget deficits and public debt stocks, particularly in advanced economies, due to conduct of expansionary fiscal policies stands out as a risk factor that can increase long-term interest rates and dampen private demand. Another major risk is the speculative capital flows in commodity markets that may cause short-term hikes in commodity prices. This may not only adversely affect growth but also put upward pressure on global inflation.

In sum, global growth forecasts were revised slightly upwards in the final quarter of 2009. Yet, the fact that the recent economic growth has largely been driven by transitory factors indicates that the recovery may be slow and gradual, even bumpy. Accordingly, as in the October Inflation Report, medium-term forecasts in the final chapter of this Report are produced based on an outlook where the weakness in the foreign demand remains.

2.1. Global Growth

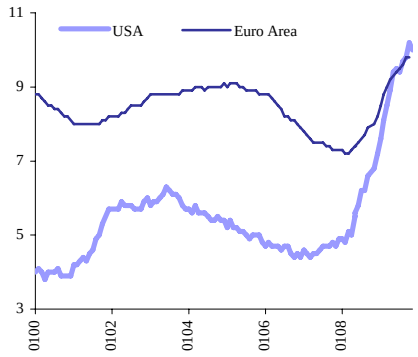
Having bottomed out in the first quarter of 2009, the year-on-year growth rates in both advanced and emerging economies moved upwards in the subsequent two quarters (Graph 2.1.1).[1] Although the weighted average of growth rates in emerging economies implies that growth resumed during the third quarter, contraction seems to continue when China and India are excluded. In addition, most economies grew during the third quarter thanks to inventory buildup and government expenditures. This positive outlook has largely been owed to expansionary monetary and fiscal policies pursued worldwide. In advanced economies, particularly in the US and the Euro area, however, the tight labor markets conditions continue to prevail (Graph 2.1.2). High unemployment rates and the fact that the improving outlook has mostly been based upon temporary expansionary measures, pose a risk towards sustainability of growth, thereby signaling a slow economic recovery.

Graph 2.1.1. Year-on Year Growth Rates in Advanced and Emerging Economies (Percent)



Source: Bloomberg, CBRT.

Graph 2.1.2. Unemployment in Advanced Economies (Percent)



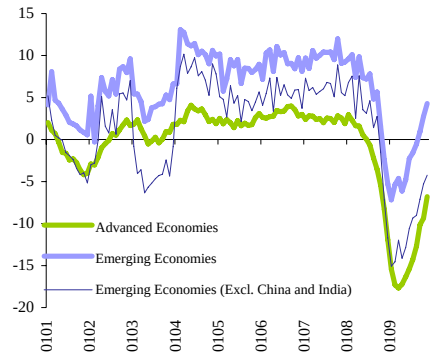
Source: Bloomberg.

In advanced economies and emerging economies excluding China and India, the year-on-year decline rate in industrial production continued to slow down evidently in November (Graph 2.1.3). Including China and India, the annual percentage change in the industrial production index for emerging economies yielded positive values in October and November. This, along with growth figures, indicates that China and India are likely to play an active and leading role in global recovery. Yet, it should be noted that, considering their economic size, the performance of China and India alone may not be enough to provide a stable global growth. Moreover, taking into account of the growth

[1] Growth rates denote the year-on-year percentage change of quarterly national income.

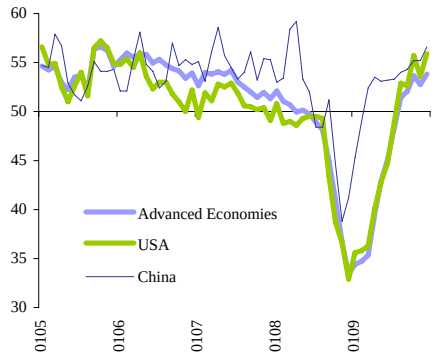
outlook in export markets, uncertainties exist over the sustainability of China's export-oriented growth strategy.

Graph 2.1.3. Industrial Production in Advanced and Emerging Economies
(Annual Percentage Change)



Source: Bloomberg.

Graph 2.1.4. PMI



Source: Bloomberg.

The Purchasing Managers Index (PMI) continued to hover above the neutral level of 50 points during October-December 2009 (Graph 2.1.4). In the said period, the US PMI followed a similar trend and had a reading of 55.9 in December 2009. Having recovered earlier, the Chinese PMI remained firmly above the neutral level during October-December. Combined with industrial production indices, the PMI data signaled that economic activity has started to pick up in both advanced and emerging economies during the fourth quarter.

Table 2.1.1. Growth Forecasts
(Annual Percentage Change)

	2009		2010	
	Previous	Revised	Previous	Revised
Consensus Economics				
World	-2.3	-2.2	2.7	3.0
United States	-2.5	-2.5	2.6	2.9
Euro Area	-3.9	-3.9	1.1	1.3
Eastern Europe	-5.6	-5.8	2.2	2.9
Latin America	-2.4	-2.3	3.1	3.8
Asia Pacific	1.0	1.3	5.0	5.2

Source: Consensus Forecasts, October 2009 and January 2010.

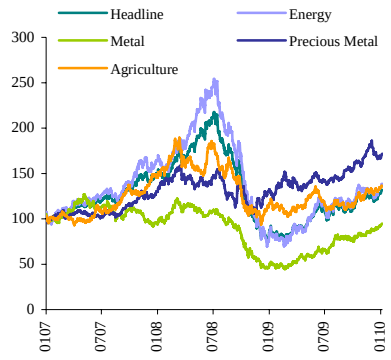
Given the economic upturn during the final quarter, annual global growth forecasts have been revised upwards (Table 2.1.1). According to these forecasts, the recovery in the Euro area is expected to be more limited and lagged than in the US. On the other hand, the recovery in the Asia-Pacific is likely to be more pronounced and earlier. Despite these upward revisions, due to significant downside risks, forecasts support the view that the global economic recovery will be slow and gradual.

2.2. Commodity Prices

Ample global liquidity, US dollar keeping its weak trend and prospects of higher demand for commodities in the upcoming period in view of the impending global economic recovery have been the main factors affecting commodity prices during the fourth quarter. Expectations of higher demand for metals in the upcoming period and the increase in financing opportunities have been effective in increased level of inventories, while also causing metal prices to soar. On the other hand, even though grain prices have been affected by similar conditions, poor harvest caused by adverse weather conditions also add to factors contributing to higher grain prices. Meanwhile, after climbing to a historic-high in early December due to weaker US dollar, gold prices fell slightly with the appreciation of the US dollar. Oil prices, on the other hand, increased moderately.

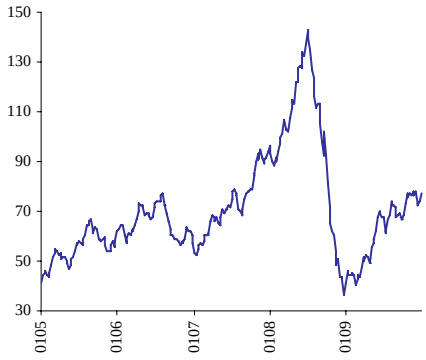
Against this backdrop, the S&P Goldman Sachs (GS) Commodity Price Index jumped by 11.6 percent quarter-on-quarter and 50 percent year-on-year in December. The GS energy, industrial metals, agriculture and precious metals indices, the sub-items of commodity price index, increased by 10.9, 14.1, 15.2 and 12.2 percent quarter-on-quarter, respectively (Graph 2.2.1 and 2.2.2).

Graph 2.2.1. S&P Goldman Sachs Commodity Price Indices*



* The average for January 2007 is taken to be 100.
Source: Goldman Sachs.

Graph 2.2.2. Crude Oil (Brent) Prices
(USD/bbl)

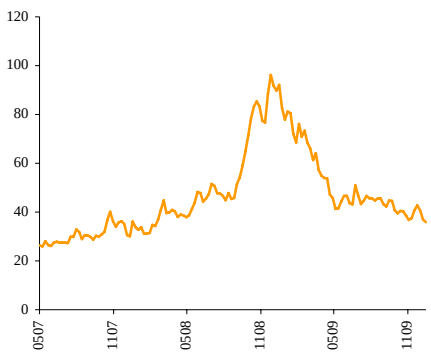


Source: Bloomberg.

The oil volatility index was largely flat during the fourth quarter and declined moderately thanks to the relative stability in oil prices (Graph 2.2.3). The slope of the yield curve remained unchanged during the past three months, while prices increased at every maturity in response to spot market developments (Graph 2.2.4). Thus, our forecasts in the final chapter of this

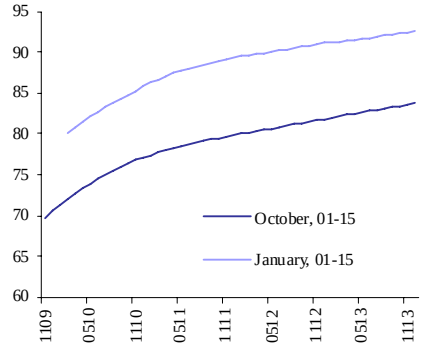
Report are based on an upward revision of the oil price assumptions presented in the October Inflation Report.

Graph 2.2.3. Crude Oil Market Volatility Index (OVX)
(Percent)



Source: Bloomberg.

Graph 2.2.4. Crude Oil (Brent) Yield Curves
(USD/bbl)



Source: Bloomberg.

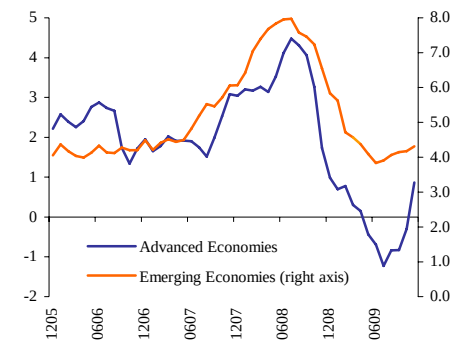
The International Energy Agency (IEA) has revised the OECD oil demand forecast for the first half of 2010 down from three months earlier. Moreover, in view of the continuing uncertainty surrounding economic recovery, OPEC members agreed to leave oil output quotas unchanged at the extraordinary meeting on December 22, 2009. Yet, harsher-than-expected winter conditions and stronger-than-expected growth in advanced economies constitute an upside risk on oil prices.

Ample liquidity due to stabilizing policies of public authorities worldwide and falling borrowing costs may expose emerging market exchange rates as well as commodity prices to speculative movements. Hence, the possible trend of commodity prices continues to be a significant risk factor in the upcoming period.

2.3. Global Inflation

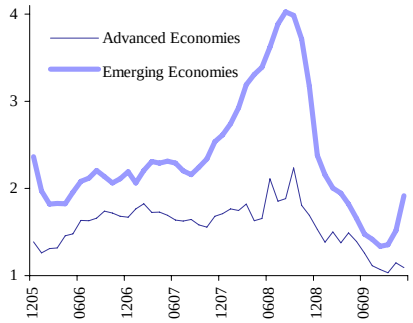
Having slumped due to downward pressure caused by demand and cost conditions since mid-2008, global inflation started to pick up slightly as of August 2009 particularly due to low base of commodity prices a year earlier (Graph 2.3.1).

Graph 2.3.1. CPI Inflation in Advanced and Emerging Economies
(Annual Percentage Change)



Source: Bloomberg, CBRT.

Graph 2.3.2. Core CPI Inflation in Advanced and Emerging Economies (Annual Percentage Change)



Source: Bloomberg, CBRT.

As of November, core inflation figures hover around 1 and 2 percent in advanced and emerging economies, respectively. Recently, core inflation has been stable in advanced economies, whereas it started to follow an upward trend in emerging economies (Graph 2.3.2).

Table 2.3.1. Inflation Forecasts
(Annual Percentage Change)

	2010	
	Previous	Revised
Consensus Economics		
World	2.4	2.6
United States	1.9	2.2
Euro Area	1.2	1.2
Eastern Europe	6.3	5.9
Latin America	6.7	6.8
Asia-Pacific	1.8	1.9

Source: Consensus Forecasts, October 2009 and January 2010.

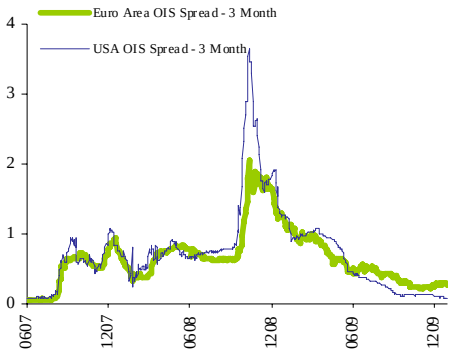
According to the Consensus Forecasts figures, global CPI inflation forecasts for 2010 have been revised upwards (Table 2.3.1). In January 2010, inflation forecasts for 2010 are revised upwards for the US, Latin America and Asia-Pacific, downwards for Eastern Europe, and left unchanged for the Euro area, compared to October 2009.

2.4. Financial Conditions and Risk Indicators

The fourth quarter of 2009 was marked by sustained positive performance in financial markets supported by stronger-than-expected growth rates in advanced economies, ongoing fiscal stimulus measures and expectations for continued global recovery (Graph 2.4.1). Having declined steadily amid improving risk sentiment during the second and third quarters, borrowing costs of high-risk companies continued to fall in the final quarter,

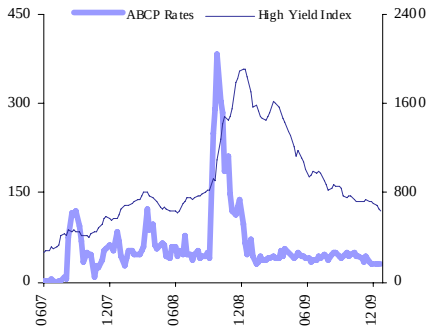
while interest rates on asset-backed commercial paper, a relatively more reliable instrument for borrowers, remained stable (Graph 2.4.2).

Graph 2.4.1. Money Market Rates
(Percent)



Source: Bloomberg.

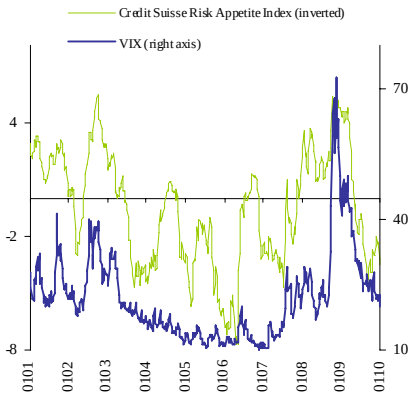
Graph 2.4.2. Corporate Borrowing Costs
(Basis Points)



Source: Bloomberg.

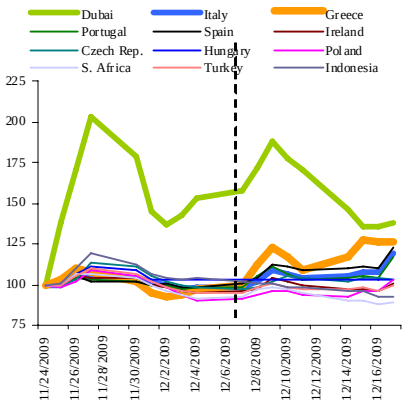
The global risk appetite, has mainly been driven by stronger signs of economic recovery during the fourth quarter, and continued to recover, albeit at a slower pace (Graph 2.4.3). Although the financial problems associated with Greece and Dubai caused temporary setbacks in the global risk appetite, the perception of these issues by investors as country-specific, helped risk appetite to resume its uptrend (Graph 2.4.4). The ongoing repayment of funds by the largest US banks within TARP (Troubled Asset Relief Program) has been another driver of risk appetite towards the end of the year.

Graph 2.4.3. Global Risk Appetite Indices



Source: Bloomberg.

Graph 2.4.4. CDS Rates in Selected Countries*

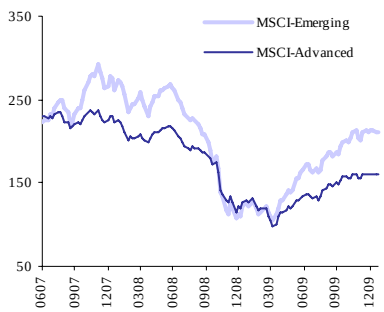


* The 5-year CDS spread is assumed to be 100 as of November 24, 2009.
Source: Bloomberg.

Higher global risk appetite and low-yielding government bonds of advanced economies continued to boost the demand for emerging-market

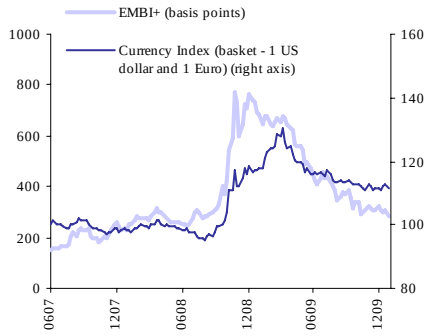
financial assets, and the Morgan Stanley Capital International (MSCI) Emerging Markets Index increased further during the final quarter, albeit at a slower pace (Graph 2.4.5).

Graph 2.4.5. Global Stock Market Developments



Source: Bloomberg.

Graph 2.4.6. Currency and Risk Premium Indicators for Emerging Economies*

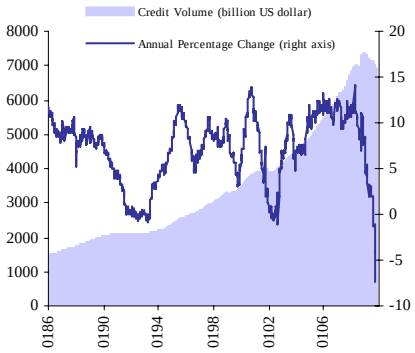


* Simple average of the value of emerging market currencies against the currency basket of 1 Euro and 1 US dollar. Equals 100 on June 2007 and an upward movement denotes a depreciation in emerging market currencies.
Source: Bloomberg.

Amid improved global risk appetite, the JP Morgan Emerging Markets Bond Index (EMBI+) declined further during the fourth quarter. Accordingly, emerging market currencies continued to appreciate in the final quarter of 2009, albeit more moderately than in the second and third quarters (Graph 2.4.6).

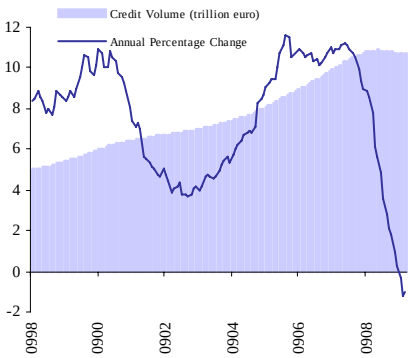
Despite the normalization process in financial markets, tight credit conditions continued during the fourth quarter as well. As a matter of fact, the ongoing contraction in US credit volume since the outburst of the crisis has continued though at a slower pace after October. On the other hand, the Euro area credit volume has dropped year-on-year for the first time in October (Graph 2.4.7 and 2.4.8).

Graph 2.4.7. Credit Developments in the US



Source: Bloomberg.

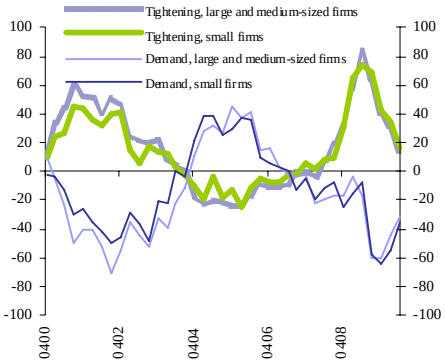
Graph 2.4.8. Credit Developments in the Euro Area



Source: ECB.

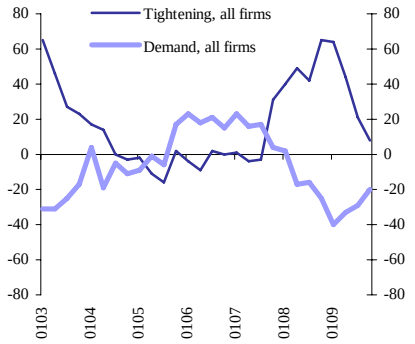
The US Federal Reserve's (Fed) and the European Central Bank's (ECB) October 2009 Bank Lending Surveys announcing third-quarter credit developments and fourth-quarter expectations reveal that standards on loans to firms improved to some extent during the second and third quarters, though credit conditions would continue to tighten by the final quarter, albeit more slowly (Graph 2.4.9 and 2.4.10). Banks in both economies attributed the tight loan conditions to expectations about future economic activity, reduced tolerance for risk and uncertainties about industry-specific problems. Furthermore, the reasons cited for weaker demand were reduced needs for working capital as well as decreased financing needs amid lower investments for fixed capital and inventories.

Graph 2.4.9. Fed Credit Development: Survey Results
(Percent, Net)



Source: Fed.

Graph 2.4.10. ECB Credit Development: Survey Results
(Percent, Net)



Source: ECB.

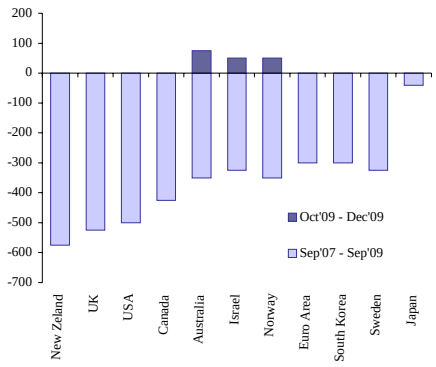
2.5. Global Monetary Policy Developments

In the final quarter, most central banks continued to pursue an expansionary monetary policy to stimulate economic activity by keeping policy rates at low levels and adopting non-conventional measures. The easing cycle is largely over as of the end of 2009, and signs of a likely exit strategy from expansionary monetary policy measures have emerged.

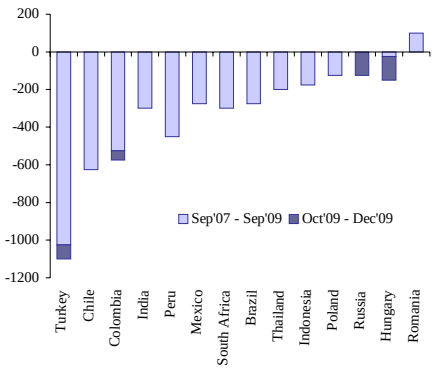
More specifically, monetary easing in advanced economies has ended completely by the fourth quarter of 2009 (Graph 2.5.1). Moreover, the extensive use of some monetary policy instruments for providing liquidity is also expected to end in the near term. Nearing the end of monetary easing, most central banks signal that policy rates are likely to remain around their current low levels throughout 2010. On the other hand, a number of central banks in

advanced economies have already abandoned expansionary policies by raising policy rates. Having been hiked by 25 basis points in August, the Bank of Israel's policy rate was left unchanged in September and October and raised by a further 50 basis points in November and December. The Reserve Bank of Australia continued to raise policy rates during November and December, by a cumulative 75 basis points in the final quarter. The Norges Bank is another central bank that hiked its policy rate during the fourth quarter, by 50 basis points.

Graph 2.5.1. Policy Rate Changes in Advanced Economies: September 2007-December 2009* (Basis Points)



Graph 2.5.2. Policy Rate Changes in Emerging Economies: September 2007-December 2009* (Basis Points)

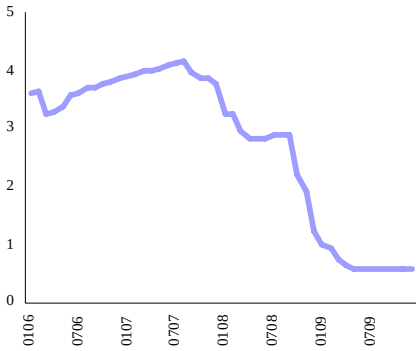


* As of end-December 2009.
Source: Bloomberg, CBRT calculations.

Central banks in emerging economies are also near the end of monetary easing cycle, with fewer banks compared to the previous quarter cutting policy rates(Graph 2.5.2). Emerging-market central banks signal rate hikes for 2010. However, the timing and magnitude of possible rate hikes may vary across countries. Most emerging-market central banks are expected to tighten monetary policy by mid-2010, while Brazil is likely to start monetary tightening in early 2010 depending on the pace of recovery.

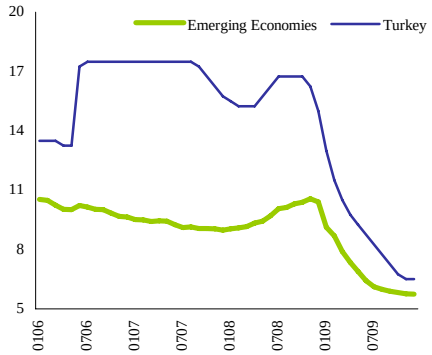
Global policy rates were almost flat during the final quarter of 2009. With the limited hike in policy rates during the past three months, the composite policy rate for advanced economies rose by 2 basis points quarter-on-quarter, ending December at 0.58 percent (Graph 2.5.3). Meanwhile, the monetary easing in emerging economies largely ended in the final quarter of 2009, and the composite policy rate for these economies dropped slightly quarter-on-quarter to 5.75 percent (Graph 2.5.4).

Graph 2.5.3. Policy Rate in Advanced Economies



Source: Bloomberg, CBRT calculations.

Graph 2.5.4. Policy Rate in Inflation-Targeting Emerging Economies



Source: Bloomberg, CBRT calculations.

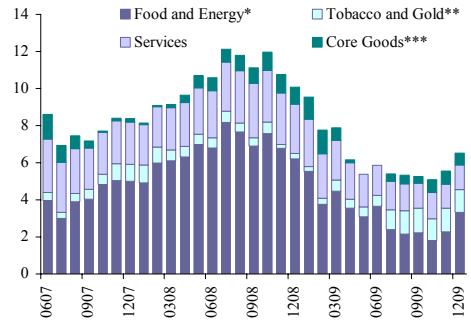
3. Inflation Developments

3.1. Inflation

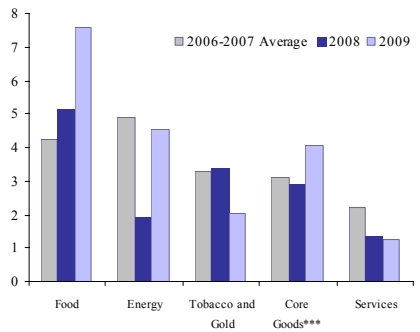
Factors affecting underlying inflation coincided with the outlook provided in the October Inflation Report during the fourth quarter of 2009. Yet, the unforeseen, record high run-up in unprocessed food prices caused the year-end inflation to exceed the October forecast by 1 percentage point. Moreover, the upsurge in oil and other commodity prices and the expiration of temporary tax incentives intended to stimulate the economy also drove inflation higher. Accordingly, annual inflation rose from 5.27 to 6.53 percent in the final quarter of 2009.

Owing to the economic outlook, prices of services increased slightly during the fourth quarter, while energy price increases accelerated and unprocessed food prices rose at a historically brisk pace. As a result, the contribution of food and energy to annual inflation increased, while that of other sub-items remained virtually unchanged (Graph 3.1.1). Although import prices rose moderately during the fourth quarter, the general pricing behavior remained stable. Consistent with medium-term targets, main inflation indicators continued to hover around low levels, on account of the ongoing support from disinflationary aggregate demand conditions.

Graph 3.1.1. Contribution to Annual CPI Inflation



Graph 3.1.2. CPI by Categories
(Fourth Quarter Percentage Change)

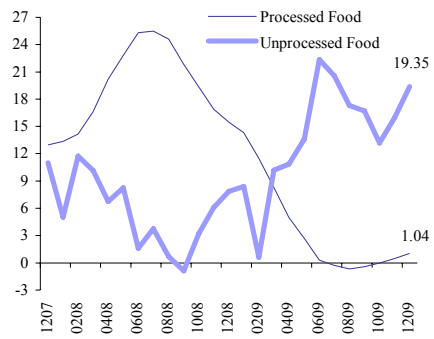


*Food and energy: Food, nonalcoholic beverages and energy.
**Tobacco and gold: Alcoholic beverages, tobacco and gold.
***Core goods: Goods other than food, energy, alcoholic beverages, tobacco and gold.
Source: TURKSTAT, CBRT.

Another highlight of the fourth quarter was the expiration of the temporary tax incentives designed to lessen the impact of the global crisis on the domestic economy. Accordingly, prices of core goods rose at a faster pace

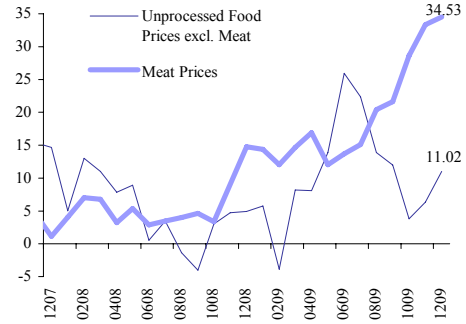
in the fourth quarter than in the previous years (Graph 3.1.2), however, adjusted for tax changes, the price hike remained well below that of the previous years.

Graph 3.1.3. Food Prices
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

Graph 3.1.4. Unprocessed Food Prices
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

Processed food prices were in line with the outlook presented in the October Inflation Report, whereas unprocessed food prices increased at a surprisingly rapid pace (Graph 3.1.3). Thus, having soared amid higher processed food prices in 2008, overall food prices remained elevated during 2009 resulting from increases in unprocessed food prices. Processed food prices recorded a historically low hike in 2009, while unprocessed food prices increased at a historically high rate, bringing food price inflation up to 9.26 percent year-on-year.

Unprocessed food prices in Turkey have been quite volatile, creating significant forecast uncertainty (Box 3.1). In fact, having faced the lowest third-quarter percentage change in five years in 2009, unprocessed food prices grew at their fastest pace in six years during the fourth quarter due to soaring prices of fruits/vegetables and meat. Accordingly, the annual rate of increase in unprocessed food prices amounted to 19.35 percent (Table 3.1.1). More specifically, meat prices rose at a particularly fast clip during the second half of 2009, which put upward pressure on food prices as well as on prices for catering services, a major recipient of meat (Graph 3.1.4). Despite having fallen to as low as 3.8 percent year-on-year in October, unprocessed food inflation excluding meat was back on the rise amid higher fruit/vegetable prices during November-December.

Processed food prices remained moderate through 2009 and annual processed food inflation ended 2009 at 1.04 percent (Graph 3.1.3). Prices for bread and cereals as well as solid/liquid fats were down from their year-ago level due to favorable manufacturing and import prices in 2009, whereas the reduction in livestock numbers and foreign demand related factors caused processed meat and dairy prices to soar during the second half of 2009. Supply conditions are unlikely to improve soon, therefore, meat and dairy prices pose a significant risk to the unprocessed food prices. Moreover, it should also be noted that the annual processed food inflation may increase during the first quarter of 2010 due to base effects.

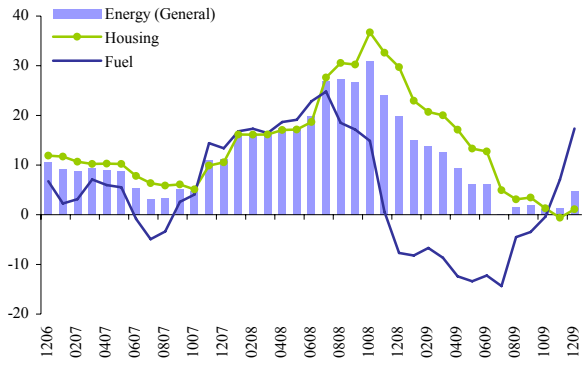
Table 3.1.1. Prices for Goods and Services
(Quarterly and Annual Percentage Change)

	2008		2009				
	IV	Annual	I	II	III	IV	Annual
CPI	**3.03**	**10.06**	**1.05**	**0.77**	**0.34**	**4.26**	**6.53**
1. Goods	**3.61**	**9.93**	**1.22**	**0.60**	**-0.22**	**5.32**	**7.01**
Energy	1.91	19.81	-0.28	-1.90	2.32	4.54	4.64
Unprocessed Food	12.45	7.87	13.29	-3.68	-4.90	15.00	19.35
Processed Food	-0.20	15.46	-0.93	0.09	0.61	1.27	1.04
Goods excl. Energy and Food	3.04	3.75	-1.89	4.21	0.17	3.65	6.15
Durable Goods	2.45	5.54	-0.27	-2.76	2.70	4.18	3.76
(excl. gold)	0.61	3.19	-2.49	-2.23	2.83	3.25	1.22
Semi-Durable Goods	3.42	11.54	-3.46	4.55	-1.65	5.33	4.55
Non-Durable Goods	4.07	9.99	5.21	-1.22	0.04	5.62	9.80
2. Services	**1.39**	**10.46**	**0.53**	**1.27**	**1.96**	**1.28**	**5.13**
Rents	2.25	11.85	1.51	1.14	1.43	1.10	5.28
Restaurants and Hotels	2.34	13.44	1.88	1.19	1.73	2.32	7.31
Transport	1.54	16.89	-1.29	1.43	1.15	1.25	2.53
Other	0.49	6.40	0.13	1.31	2.57	0.87	4.96

Source: TURKSTAT, CBRT.

Energy prices increased by 4.54 percent during the fourth quarter (Table 3.1.1). Electricity tariffs rose sharply, while bottled gas and fuel prices continued to soar amid higher international oil prices. After averaging around 56 USD/bbl in the final quarter of 2008, oil prices climbed to an average of 75 USD/bbl a year later. Thus, annual energy inflation picked up with the waning of the favorable effect of 2008's plunging oil prices on domestic fuel prices (Graph 3.1.5). Likewise, the annual rate of increase in energy prices is expected to rise in the first quarter of 2010 owing to base effects. In addition, the January tax hike on fuel and bottled gas may add about 0.4 percentage points to CPI inflation.

Graph 3.1.5. Energy Prices
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

Having flattened out during the fourth quarter, inflation in alcoholic beverages and tobacco ended 2009 at 20.91 percent year-on-year. The new tax regulations aimed to restore government balances, effective January, have led to a major price adjustment on some products in this category. These tax adjustments are expected to contribute by about 1.1 percentage points to CPI inflation in 2010.

Inflation in core goods (goods excluding food, energy, alcoholic beverages, tobacco and gold) was in line with the projection in the October Inflation Report. Given the expiration of tax incentives, durable goods continued to rise in the fourth quarter (Table 3.1.2), driving the annual rate of increase in prices of core goods higher. Although the average exchange rate was up year-on-year, prices for durable goods rose by a mere 1.22 percent during 2009 owing to falling import prices and economic contraction. The annual rate of increase in clothing and footwear prices remained well below the average CPI figures, due to weaker domestic consumption and foreign demand.

Table 3.1.2. Prices for Durable Goods
(Quarterly and Annual Percentage Change)

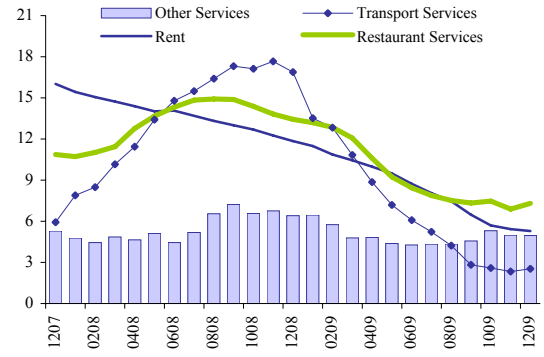
	2008		2009				
	IV	Annual	I	II	III	IV	Annual
Durable goods (excluding gold)	**0.61**	**3.19**	**-2.49**	**-2.23**	**2.83**	**3.25**	**1.22**
Furniture	-1.31	9.17	-3.17	-7.61	1.03	7.86	-2.51
Electric and Non-Electric Appliances	6.04	8.13	-4.26	-2.54	3.53	-1.11	-4.47
Automobiles	-2.30	-2.56	-1.36	-0.11	3.20	4.72	6.49
Other	2.27	4.29	0.36	0.20	1.81	0.41	2.79

Source: TURKSTAT, CBRT.

Prices of services rose by 1.28 percent in the final quarter, while the rate of increase in this category slowed to 5.13 percent year-on-year (Table 3.1.1). As a result, annual services inflation sank to historically low levels. Moreover,

annual rental inflation continued to fall steadily, while inflation in other sub-items remained flat at the low rates reached at the end of the third quarter (Graph 3.1.6). Compared with end-2008, annual inflation was down by 14.4, 6.6 and 6.1 percentage points in transport services, rents and restaurants/hotels, respectively. Although prices of services are not expected to face a significant upward pressure in the first quarter of 2010, the annual rate of increase may pick up slightly due to base effects.

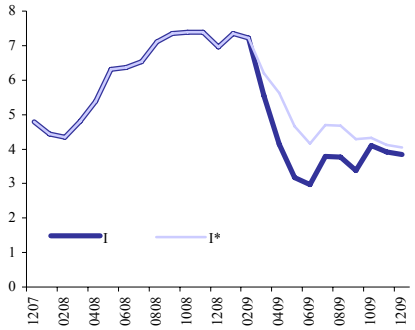
Graph 3.1.6. Prices of Services
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

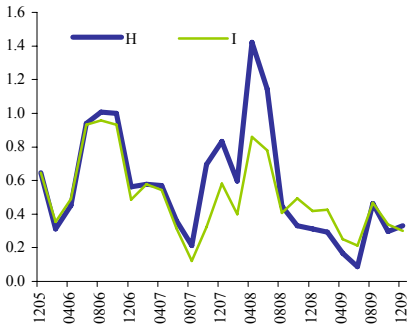
Core CPI measures remained in line with medium-term targets. Following the expiration of tax cuts on durable goods, the annual inflation in special CPI aggregates increased moderately during the fourth quarter (Graph 3.1.7). Accordingly, inflation in the core CPI index excluding energy, unprocessed food, alcoholic beverages, tobacco and gold (SCA-H) rose to 3.18 percent year-on-year, while, with a further exclusion of processed food, inflation in the CPI index (SCA-I) climbed to 3.84 percent year-on-year. However, adjusted for tax changes and seasonal factors, neither of these indices points to a deterioration in underlying inflation (Graph 3.1.8), thereby indicating that the fourth-quarter rise in inflation was largely driven by factors relatively outside the monetary policy scope as well as by transitory factors, rather than core components of the CPI. On balance, inflation may increase periodically towards mid-2010 due to strong base effects (Box 3.2), whereas, core inflation measures are expected to maintain their currently favorable levels.

Graph 3.1.7. Core CPI Measures I and I*
(Annual Percentage Change)



I*: SCA-I adjusted for tax changes.
Source: TURKSTAT, CBRT.

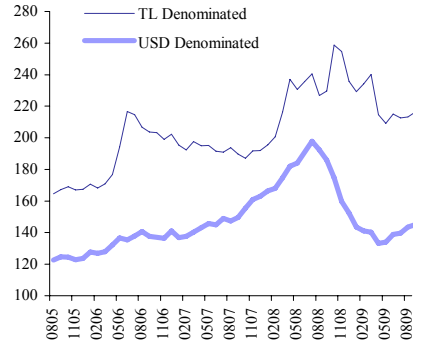
Graph 3.1.8. Core CPI Measures H and I
(Adjusted for Tax and Seasonal Effects, 2-Month Averages)



Source: TURKSTAT, CBRT.

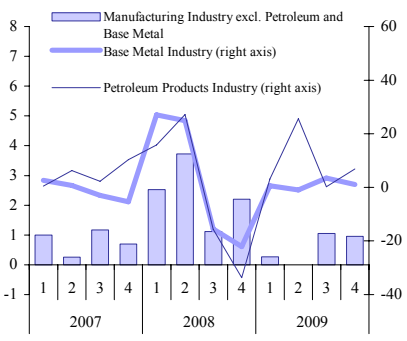
The recent moderate rise in import prices also stands out among factors affecting inflation. Import prices have increased both in US dollar and in Turkish lira terms in the last quarter (Graph 3.1.9). In line with this development in import prices, manufacturing industry prices rose by 1.52 percent during the final quarter. Across sub-categories, the acceleration in prices for base metal production slowed quarter-on-quarter, whereas producer prices for petroleum products increased sharply. During this quarter, manufacturing industry prices excluding oil and base metals, rose by 0.95 percent on the back of higher prices for food production like in the third quarter (Graph 3.1.10).

Graph 3.1.9. Import Unit Value Index



Source: TURKSTAT, CBRT.

Graph 3.1.10. Manufacturing Industry Prices
(Quarterly Percentage Change)

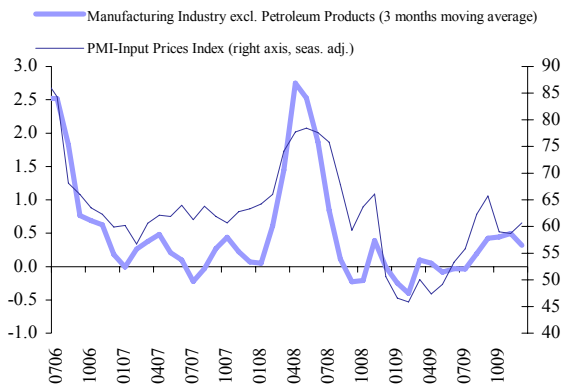


Source: TURKSTAT, CBRT.

In sum, changes in manufacturing industry prices and the seasonally adjusted PMI input prices index indicate that despite having increased fairly during the last two quarters, input costs at present are not likely to exert significant upward pressure on inflation (Graph 3.1.11). The currently weaker

demand conditions limit the pass-through of upward shocks in cost into domestic prices.

Graph 3.1.11. Manufacturing Industry Prices and PMI Input Prices

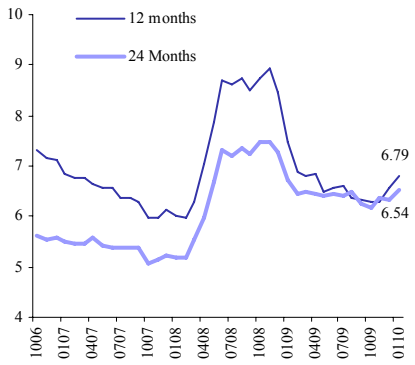


Source: TURKSTAT, CBRT, Markit.

3.2. Expectations

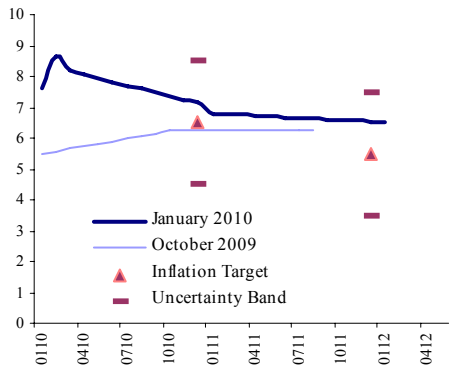
Despite being on a downward trend through 2009, 12-month ahead inflation expectations rose slightly in the fourth quarter, whereas 24-month expectations remained flat (Graph 3.2.1). However, the higher-than-projected year-end inflation, resulting from the fourth-quarter rise in food prices, as well as the tax adjustments effective January 2010, caused expectations to soar in January, though the longer the maturity, the more limited the change in expectations (Graph 3.2.2).

Graph 3.2.1. 12- and 24-Month Ahead CPI Expectations*
(Annual Percentage Change)



* CBRT Business Tendency Survey results from the second survey period.
Source: CBRT.

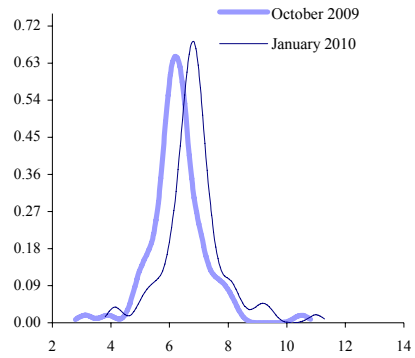
Graph 3.2.2. Inflation Expectations Curve *
(Annual Percentage Change)



* Calculated by linear interpolation of expectations at different maturities in the CBRT Expectations Survey. Expectations are from the second survey period of the CBRT Expectations Survey.
Source: CBRT.

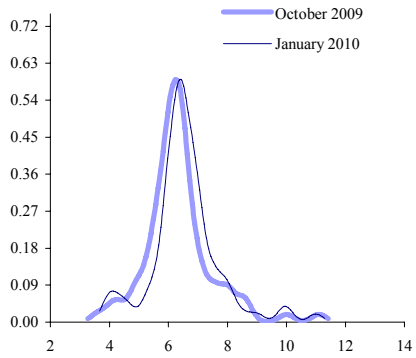
Currently, expectations for end-2010 are anchored at 7.15 percent, slightly above the target. The implied average year-end inflation expectation for 2011 appears to be 1 percentage point above the target.

Graph 3.2.3. Distribution of 12-Month Ahead Inflation Expectations*



* Horizontal axis shows inflation rate, vertical axis indicates Kernel forecast..
Source: CBRT.

Graph 3.2.4. Distribution of 24-Month Ahead Inflation Expectations*



* CBRT Expectations Survey results from the second survey period.
Source: CBRT.

The dispersion of participants' 12-month ahead expectations did not change significantly during the final quarter, but the average of expectations increased (Graph 3.2.3). On the other hand, the dispersion and the level of 24-month expectations remained quite unchanged compared to the previous quarter (Graph 3.2.4).

Box 3.1 VOLATILITY OF UNPROCESSED FOOD INFLATION IN TURKEY: A REVIEW OF THE CURRENT SITUATION

Food prices are analyzed in two main categories: unprocessed food and processed food. Unprocessed food includes products that are not subject to major processing, such as fruits, vegetables, meat and fish, whereas processed food are products that undergo some processing and enter the value-added chain for household consumption. Being more volatile than processed food prices, unprocessed food prices constitute a major source of uncertainty on both outlook and forecast of inflation. This box aims to analyze the current state of unprocessed food price volatility in Turkey, in comparison with EU countries.

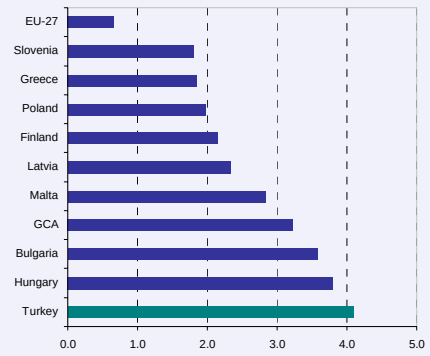
Studies at the CBRT reveal that unprocessed food prices are mostly influenced by fruit/vegetable production and foreign demand, while processed food prices are determined by sectoral demand conditions, import prices, exchange rate movements, weather conditions and prices of inputs such as diesel oil and wheat.[1] Therefore, unprocessed food prices are affected essentially by supply-side factors, whereas, processed food prices are affected by changes in economic conditions. In 2009, unprocessed food prices jumped by 19.35 percent due to supply shocks, whereas, processed food prices rose by a mere 1.04 percent on the back of falling input and import prices and weaker demand.

The annual unprocessed food price inflation has been on a roller-coaster ride in recent years, while the annual rate of increase in processed food prices has been relatively less volatile (Graph 3.1.3). In 2009, after registering the lowest third-quarter rate of change in five years, unprocessed food prices recorded the fastest rate of increase in six years during the final quarter amid higher fruit/vegetable and meat prices. Accordingly, the year-end CPI inflation ran 1 percentage point above the October Inflation Report forecast, where the deviation has been completely due to unprocessed food prices. Therefore, considering their weight in the consumption basket, changes in processed and unprocessed food prices create a major forecast uncertainty.

[1] Başkaya, S., Gürgür, T. and F. Öğünç, (2008), "Global Warming, Globalization and Food Crisis – An Empirical Study on Processed Food Prices in Turkey", Central Bank Review, 2 (2008) 1-32.

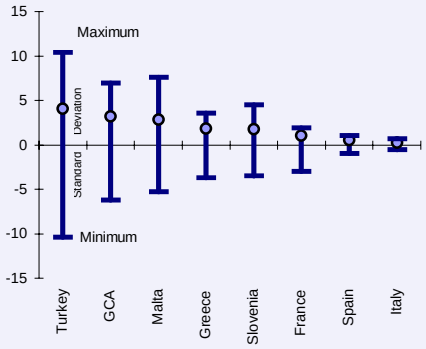
The supply of products such as fruits and vegetables hinges on weather conditions, and thus, unprocessed food prices fluctuate naturally. Yet, the volatility is much higher in Turkey than in other countries. According to comparisons of monthly inflation rates between Turkey and EU-27 member states,[2] month-on-month food price changes in Turkey were nearly four times more volatile than in EU-27 countries during 2006-2009.[3] The volatility of monthly unprocessed food price changes is almost six times higher in Turkey than in the entire EU-27, and is higher than in any EU-27 member states. (Graph 1). Moreover, unprocessed food accounts for a larger share in the consumption basket in Turkey, and therefore, the contribution of unprocessed food prices to CPI inflation displays a sharp volatility.

Graph 1. Volatility of Monthly Unprocessed Food Inflation: EU-27 vs. Turkey* (2006-2009, Standard Deviation)



*First nine EU-27 countries with the highest volatility, and Turkey.
Source: Eurostat, CBRT.

Graph 2. Volatility of Monthly Unprocessed Food Inflation in Mediterranean Countries (2006-2009)



Source: Eurostat, CBRT.

[2] The reason for making a comparison to EU-27 is to examine the current relative state of unprocessed food prices in Turkey on the path towards EU accession and to eliminate the potential volatility effect on prices that may result from our calculation method, because most countries adopt similar methods to calculate prices.
[3] In our analysis, the measure of volatility is standard deviation. Such comparisons should preferably be based on the "coefficient of variation" including the average inflation effect. However, as the average monthly inflation rates for unprocessed food prices remained unvaried and close to zero over the period in question (monthly changes in unprocessed food prices usually have negative values; even averages are negative in some countries), our analysis is not based on the coefficient of variation.

Table 1 gives comparison of major sub-items of unprocessed food prices. Accordingly, prices of sub-categories such as fruits, vegetables and meat are quite volatile in Turkey. Especially, meat prices (red and white) hold first place for being ten times more volatile than in EU-27 within the last four years. During the period of analysis, Turkey ranked second after Hungary in terms of fruit price volatility, and third after Bulgaria and the Greek Cypriot Administration (GCA) in terms of vegetable price volatility.

Table 1. Descriptive Statistics of Monthly Food Inflation in EU-27 and Turkey (2006-2009)

	Mean	Lowest	Highest	Range	Standard Deviation	Ranking of Volatility* (compared to EU-27)
Turkey						
Unprocessed Food	0.95	-10.38	10.39	20.77	4.09	1
Fruits	1.45	-22.27	30.98	53.25	9.39	2
Vegetables	0.91	-20.11	23.43	43.54	9.11	3
Meat	1.16	-6.95	6.37	13.32	2.74	1
EU-27						
Unprocessed Food	0.21	-1.46	1.38	2.84	0.66	
Fruits	0.19	-4.66	4.25	8.90	1.80	
Vegetables	0.21	-4.24	4.76	9.00	2.29	
Meat	0.24	-0.32	0.79	1.11	0.26	

* From the highest to the lowest.
Source: Eurostat, CBRT.

There are several reasons why Turkey has a more volatile unprocessed food price structure. Firstly, in contrast to many EU countries, Turkey is a key producer of unprocessed food. Hence, seasonal factors may have a more pre-dominant role on prices in Turkey than in Europe due to its geography, soil texture, product diversity etc.[4] Compared with the EU27 Mediterranean countries, the second highest volatility is found in the Greek Cypriot Administration (GCA), which is in close proximity to Turkey, while in Spain, a major producer of fruits and vegetables like Turkey, unprocessed food prices barely fluctuate (Graph 2). As a matter of fact, in seasonally adjusted terms, Turkey's unprocessed food prices are still highly volatile, and therefore volatility appears to be influenced by factors other than seasonality.

[4] On the other hand, non-producing countries may diversify the sources of supply for the domestic consumption of unprocessed food and lower the risk of price volatility stemming from the individual shocks associated with these sources.

Beyond seasonal factors, high volatility may be attributable to consumption preferences and habits. In our country, products such as fruits, vegetables and meat are widely consumed as unprocessed, and therefore, the price elasticity of demand for these products is lower than in other countries, leading to relatively higher price changes in response to supply fluctuations.

Especially for products such as fruits and vegetables, the length of the distribution chain linking producers to final consumers may cause pricing decisions to interact at each stage, exacerbating the effects of economic shocks on inflation. Moreover, fluctuating transportation costs, lack of infrastructure in irrigation, production and storage technologies (packaging areas, cold stores etc.)[5], and structural problems such as unregistered economy increase the volatility of prices[6]. These factors highlight the importance of structural reforms in maintaining price stability. Hence, the completion of the impending law on regulation of fruit and vegetable trade and meeting the goals in practice are vital.

[5] About 24 percent of the fruits and vegetables produced in Turkey spoils during marketing before reaching consumers (Draft Law Regulating the Fruit and Vegetable Trade (2009), General Explanation). In addition, the lack of infrastructure reduces buffer stocks opportunities that may hedge against price volatility. The use of advanced technology can help contain the output fluctuations resulting from supply shocks.

[6] Other structural issues are: the lack of large producers with strong financial standing to help mitigate supply shocks, the ineffectiveness of forward markets, the lack of long-term contracts, and the composition of the retail markets mostly of small businesses.

Box 3.2 BASE EFFECTS AND THEIR IMPLICATIONS FOR THE 2010 INFLATION OUTLOOK

2009's fluctuating commodity prices and especially the severe, first-quarter contraction in aggregate demand will have a major impact on annual inflation over 2010. The well-perception of this development, which can also be defined as "base effect", is significant in terms of expectations management. Therefore, this box describes the base effect and provides a simple illustration of its impact on the annual inflation path for 2010.

Base Effect as a Technical and Economic Term: The calculation of monthly annual inflation is comparing the price level in the month for the current year to the same month of a year ago.[7] The comparison, therefore, is based on the price level of a year earlier. Technically, the contribution of the base year's monthly change to the monthly change of the current year's annual inflation is defined as the base effect.[8] A striking example for the base effect would be the implications of the massive increase in tobacco prices during August 2005 for annual CPI inflation. While in general, seasonal drops in fruit/vegetable prices leads consumer prices to decrease during August, higher tobacco prices brought monthly consumer prices up by a marked 0.85 percent in 2005 on contrast. In August 2006, however, prices had fallen by 0.44 percent month-on-month. Accordingly, annual CPI inflation had declined by 1.43 percentage points month-on-month in August 2006. Hence, the base effect from tobacco prices accounted for a substantial part of the decline in annual inflation.

In economic terms, it is crucial whether price changes during the base period are extreme or different from the general average. Hence, to attribute the annual inflation change to a base effect, one must decide whether price changes in the base period differ from the general trend. Thus, in economic terms, a base effect is said to occur when price changes in a base period are driven by exogenous factors (e.g. hike in tobacco prices), unexpected seasonal fluctuations (e.g. earlier discounts in clothing) and moving seasonality (e.g. private school prices are set at different times each year).[9]

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[7] Annual inflation is calculated by the formula: $\Pi_t = \frac{(p_t - p_{t-12})}{p_{t-12}} \times 100$, where Π_t is annual inflation and p_t is the price level in month t. $\Pi_t = (\ln(p_t) - \ln(p_{t-12})) \times 100$ is a formula for approximating the annual inflation rate.

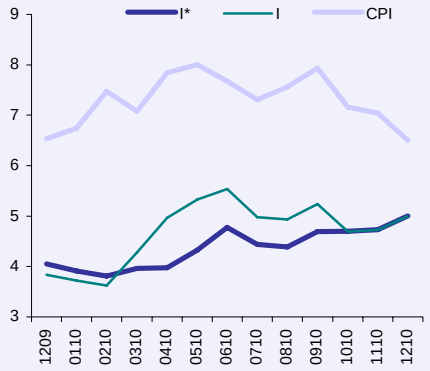
[8] The annual inflation rate change between two consecutive months can be described by the equation: $\Pi_t - \Pi_{t-1} = [(\ln(p_t) - \ln(p_{t-1})) - (\ln(p_{t-12}) - \ln(p_{t-13}))] \times 100$. The expression $\ln(p_{t-12}) - \ln(p_{t-13})$ technically gives the base effect.

[9] European Central Bank, January 2005, Monthly Bulletin.

Inflation Outlook for 2010: Base Effects and Annual Inflation: After the deepening of the global crisis in 2008, the contraction in aggregate demand and the sharp decline in import prices caused annual inflation to plunge during the first half of 2009. In addition, the temporary tax incentives intended to stimulate the economy had a significant impact on consumer prices.

In view of the above developments, annual inflation in 2010 is likely to be affected by both the low base effects from the first half of 2009 as well as the temporary tax adjustments. The Graph shows a hypothetical illustration of the implications of base effects for annual inflation in 2010: Accordingly, based on the assumption that CPI inflation averages 6.5 percent and SCA-I rises by 5 percent year-on-year over 2010, annual inflation will fluctuate solely due to base effects.[10]

Graph 1. CPI and SCA-I
(Annual Percentage Change)



I*: SCA-I adjusted for tax incentives on several durable goods in 2009.
Source: TURKSTAT, CBRT.

According to the illustration, annual CPI inflation moves higher during the first months of 2010, flattens out in the subsequent months, and declines in the fourth quarter. The impact of tax incentives on the SCA-I index can be clearly seen. In other words, the annual rate of change in SCA-I increases dramatically during the second quarter. Even the increase in tax adjusted SCA-I during the first half of 2010 can be attributed to the low level of underlying inflation in 2009; in other words, to the low base effect from the corresponding period.

In sum, underlying inflation is not expected to deteriorate in coming months, but both the average CPI inflation and the core inflation measures may rise on base effects during the first half of 2010. Coupled with January's tax hikes aimed to restore budget balance, these base effects will send inflation soaring, especially during January and February. Therefore, these factors should be taken into consideration in assessing the path of inflation over 2010.

[10] In assigning 2010 path values to these indicators, the average of time series seasonal factors are inserted into the monthly rate of increases that help meet the year-end inflation target.

4. Supply and Demand Developments

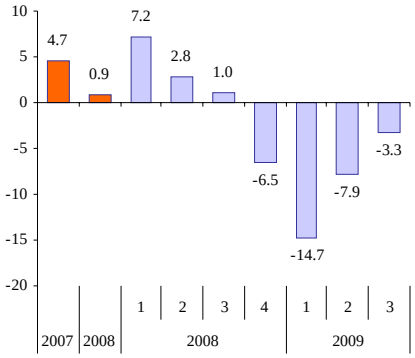
The third-quarter national accounts data confirmed the outlook presented in the October Inflation Report. The impact of fiscal measures on domestic demand waned and weak demand conditions continued despite the relatively stronger foreign demand. Accordingly, GDP continued to expand quarter-on-quarter, though at a slower pace, and displayed growth for two consecutive quarters. De-stocking slowed considerably during the third quarter, and aggregate demand conditions further supported disinflation.

Latest data indicate that the economy is now on a modest upward trend, but with the expiration of fiscal incentives, growth continued to slow down in the fourth quarter as well. The slow yet stable economic recovery also stimulates the labor market, though very moderately. The weak foreign demand continues to restrict economic activity and employment in general through industrial sector. Thus, employment and domestic demand are unlikely to recover strongly unless there is a marked improvement in the outlook for foreign demand, fueled by global growth or access to new export markets. Ongoing problems in the global economy reinforce the belief that aggregate demand and economic activity would recover slowly and gradually. Due to lower resource utilization, aggregate demand conditions are expected to further support the downtrend in inflation in the medium term.

4.1. Gross Domestic Product Developments and Domestic Demand

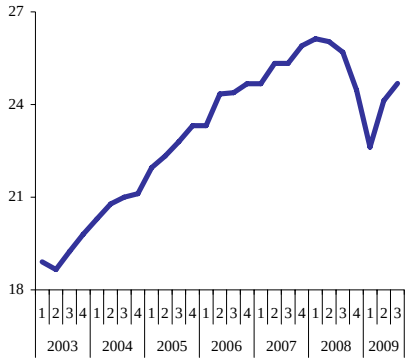
According to the national accounts data released by the Turkish Statistical Institute (TURKSTAT), GDP narrowed by 3.3 percent in the third quarter of 2009 from a year earlier (Graph 4.1.1). With the downward revision for the first half of 2009, GDP declined by a total of 8.4 percent during January-September relative to the same period of the previous year.

Graph 4.1.1. Annual GDP Growth Rates by Quarters
(Percent)



Source: TURKSTAT.

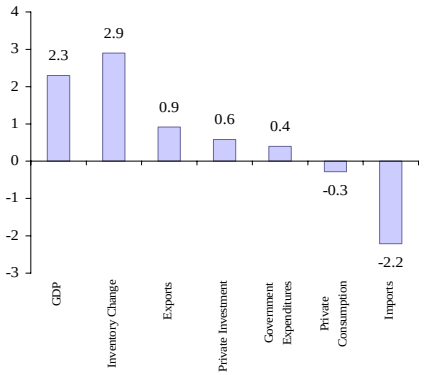
Graph 4.1.2. GDP
(Seasonally Adjusted, at 1998 Prices, Billion TL)



Source: TURKSTAT, CBRT.

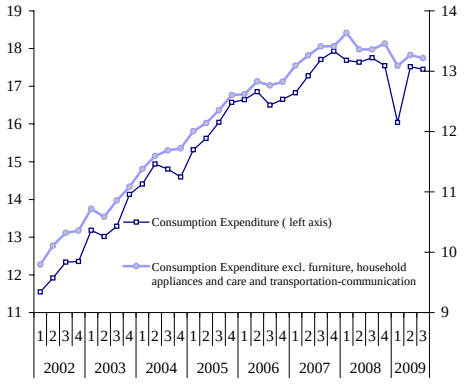
In seasonally adjusted terms, GDP expanded by 2.3 percent quarter-on-quarter. Accordingly, after the fiscal stimulus-driven rapid increase in the second quarter, the economy continued to grow, albeit more slowly (Graph 4.1.2). On the expenditures side, inventory changes were the primary contributor of the quarterly growth, while private investments increased quarter-on-quarter for the first time in a long while. Available data are consistent with the earlier observation that the demand for private consumption has lost momentum owing to the gradual withdrawal of tax incentives after the sharp run-up in the second quarter (Graph 4.1.3). Meanwhile, the demand for goods that are not subject to fiscal incentives and are more sensitive to current income remains weak (Graph 4.1.4).

Graph 4.1.3. Contribution to Quarterly GDP Growth from Expenditures
(Percentage Points)



Source: TURKSTAT, CBRT.

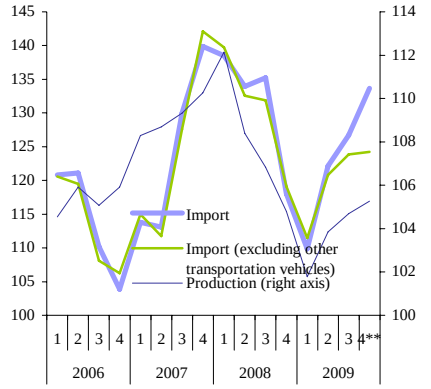
Graph 4.1.4. Resident and Non_Resident Household Expenditures
(Seasonally Adjusted, at 1998 Prices, Billion TL)



Source: TURKSTAT, CBRT.

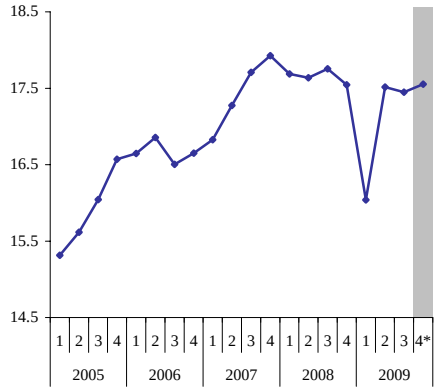
The recent outlook for domestic demand shows that the underlying trend for consumer demand has become more evident with the expiration of tax cuts. The production of consumer goods continued to increase during October-November, though at a slower pace. The imports of consumer goods, on the other hand, remained virtually flat (Graph 4.1.5). Therefore, consumer demand is expected to grow slightly quarter-on-quarter in the final quarter of 2009 (Graph 4.1.6). The production and imports data for investment demand suggest that investments continued to recover in the fourth quarter, but remained below levels associated with strong economic growth (Graph 4.1.7 and 4.1.8).

Graph 4.1.5. Production* and Import Quantity of Consumer Goods
(Seasonally Adjusted, 2005=100)



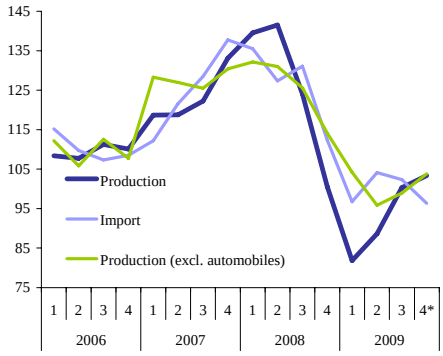
* Aggregated based on the weight of production indices for durable and non-durable goods in the industrial production index.
** October-November figures.
Source: TURKSTAT, CBRT.

Graph 4.1.6. Private Consumption Expenditures
(Seasonally Adjusted, at 1998 Prices, Billion TL)



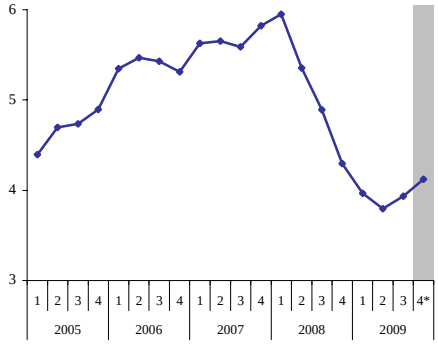
* Forecast.
Source: TURKSTAT, CBRT.

Graph 4.1.7. Production and Import Quantity of Capital Goods
(Seasonally Adjusted, 2005=100)



* October-November figures.
Source: TURKSTAT, CBRT.

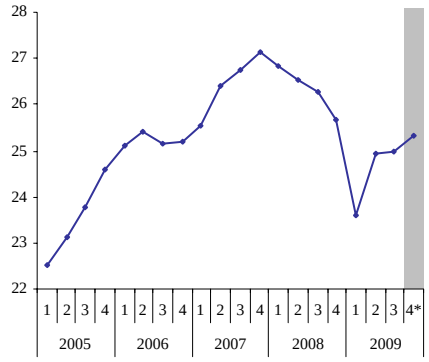
Graph 4.1.8. Private Investment Expenditures
(Seasonally Adjusted, at 1998 Prices, Billion TL)



* Forecast.
Source: TURKSTAT, CBRT.

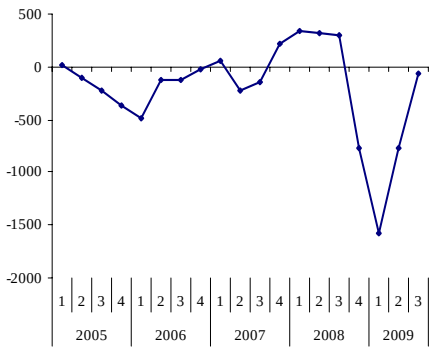
In sum, fourth-quarter data indicate that final domestic demand continues to recover moderately (Graph 4.1.9). The de-stocking process that started with the abrupt demand contraction in the fourth quarter of 2008 and continued vigorously into the first half of 2009 helped the demand for final goods to give an added support to disinflation. However, the role of inventory changes on dampening the inflationary demand effects moderated significantly in the fourth quarter (Graph 4.1.10).[1] On balance, domestic demand is likely to support disinflation in the fourth quarter, albeit to a lesser degree than in the first half of 2009.

Graph 4.1.9. Final Domestic Demand
(Seasonally Adjusted, at 1998 Prices, Billion TL)



*Forecast.
Source: TURKSTAT, CBRT.

Graph 4.1.10. Inventory Changes
(Seasonally Adjusted, at 1998 Prices, Million TL)



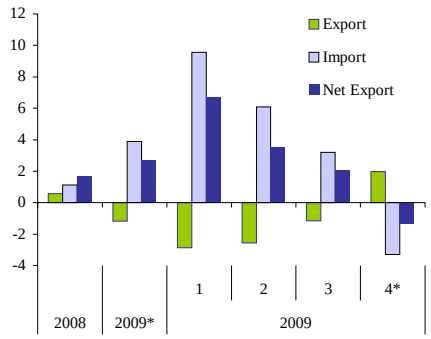
Source: TURKSTAT, CBRT.

4.2. Foreign Demand

Exports and imports of goods and services dropped by 4.6 and 11.9 percent year-on-year, respectively, in the third quarter of 2009. Therefore, net exports contributed 2 percentage points to annual GDP growth, accounting for –1.2 and 3 percentage points, respectively, of export and import growth (Graph 4.2.1). Seasonally adjusted data are in line with the outlook presented in the October Inflation Report. Accordingly, exports and imports grew quarter-on-quarter during the third quarter (Graph 4.2.2). Amid weaker de-stocking, the improved aggregate demand helped boost the demand for imported goods, and net exports made a negative contribution to quarterly GDP growth (Graph 4.1.3).

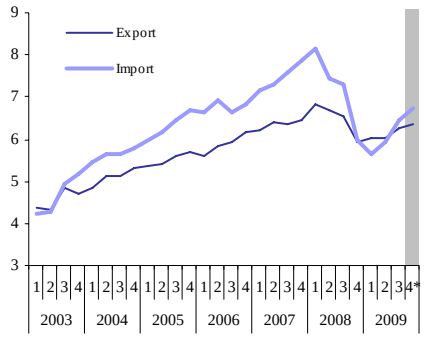
[1] The total demand uncertainty forces companies to be vigilant about production plans and, therefore, more reluctant about inevntory buildup, compared to periods of strong growth. This tendency is likely to continue into the upcoming period. In other words, inventory changes are expected to make a smaller contribution to quarterly GDP growth. Yet, despite their negative contribution since the final quarter of 2008, inventories are now likely to make a strong contribution to annual GDP growth until mid-2010 due to the low base effect from the crisis.

Graph 4.2.1. Contribution to Annual GDP Growth from Exports, Imports and Net Exports
(Percentage Points)



* Forecast.
Source: TURKSTAT, CBRT.

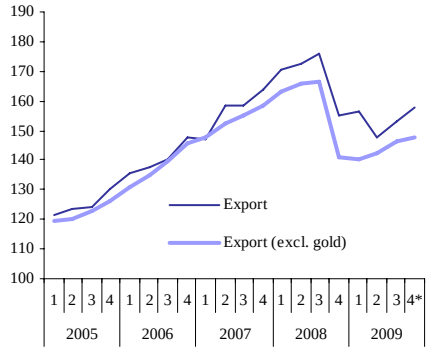
Graph 4.2.2. Exports and Imports of Goods and Services
(Seasonally Adjusted, at 1998 Prices, Billion TL)



* Forecast.
Source: TURKSTAT, CBRT.

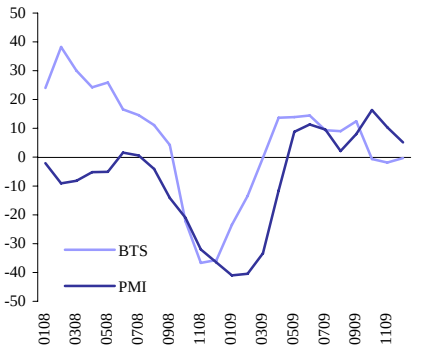
Recent data indicate that moderate recovery in underlying exports continue. The quantity index for exports increased by 0.7 percent year-on-year during October-November, rising above the average for the previous quarter in seasonally adjusted terms (Graph 4.2.3). Therefore, exports of goods and services are expected to display a further quarter-on-quarter growth during the fourth quarter and to contribute to annual GDP growth again on the back of the low base effect from the same period of the previous year (Graph 4.2.1 and 4.2.2).

Graph 4.2.3. Quantity Index for Exports
(Seasonally Adjusted, 2003=100)



* October-November figures.
Source: TURKSTAT, CBRT.

Graph 4.2.4. 3-Month Ahead Expectations for BTS Export Orders
(Up–Down, Percent) and PMI Exports Orders* (Percent)

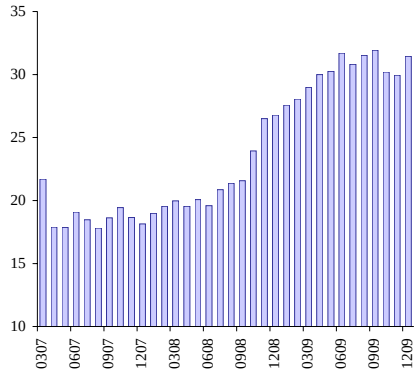


* PMI Index reports percentage deviations from the value of 50. Values above (below) zero indicate an increase (decrease).
Source: TURKSTAT, CBRT.

The foreign demand in the upcoming period will depend on the pace of global economic recovery. Order indicators from the surveys do not signal a robust recovery for exports in the short run, while the lack of demand in external markets remains a major reason for manufacturing firms not to operate at full capacity (Graph 4.2.4 and 4.2.5). Meanwhile, the medium-term outlook

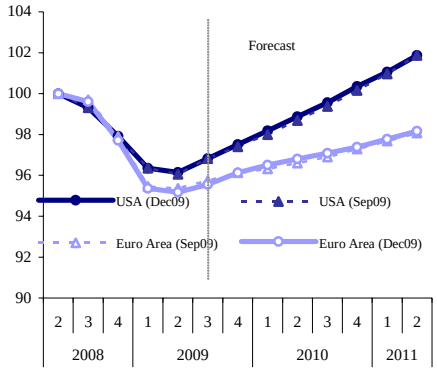
for global growth indicates that weak foreign demand is likely to continue to restrain aggregate demand for an extended period of time. In fact, as of December, growth forecasts for advanced economies have been revised upwards only marginally since the October Inflation Report. Moreover, forecasts for the Euro area, our major trading partner, reinforce the belief that it would take a long time before foreign demand bounces back to previous levels (Graph 4.2.6).

Graph 4.2.5. Reduced Foreign Demand in Manufacturing Industry
(Seasonally Adjusted, Percent)



Source: TURKSTAT, CBRT.

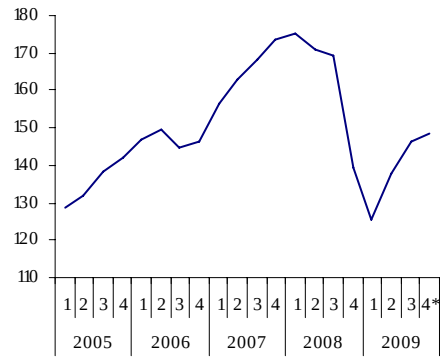
Graph 4.2.6. Growth Forecasts for Advanced Economies
(Seasonally Adjusted, 2008Q2=100)



Source: Consensus Forecasts, September and December.

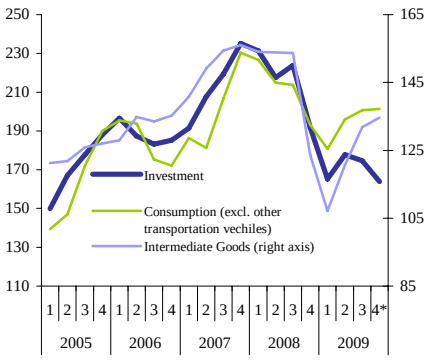
The improved aggregate demand helped imports of goods and services rebound further in the third quarter. The quantity index for imports increased by 3.3 percent year-on-year during October-November, running above its quarter-ago average in seasonally adjusted terms (Graph 4.2.7). On the other hand, imports of consumer and investment goods slowed down following the gradual withdrawal of tax incentives (Graph 4.2.8).

Graph 4.2.7. Quantity Index for Imports
(Seasonally Adjusted, 2003=100)



* October-November figures.
Source: TURKSTAT, CBRT.

Graph 4.2.8. Quantity Index for Imports by Sub-Items
(Seasonally Adjusted, 2003=100)



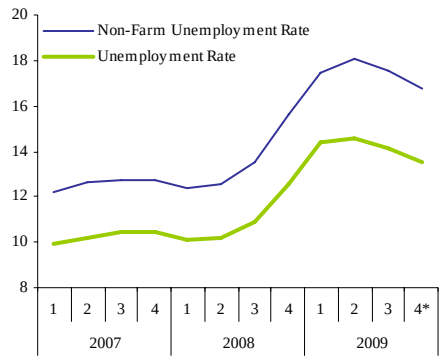
* October-November figures.
Source: TURKSTAT, CBRT.

Having continued to grow quarter-on-quarter during the final quarter of 2009, imports of goods and services are expected to increase year-on-year and make a negative contribution to GDP growth, due to the comparatively low level a year ago (Graph 4.2.1 and 4.2.2). In view of the short-term outlook for exports and imports, the contribution of net foreign demand to annual GDP growth is projected to be negative in the fourth quarter for the first time in a long while (Graph 4.2.1). The medium-term outlook of the demand for imported goods will be determined depending on the terms of gradual recovery in aggregate demand conditions. Thus, imports are likely to remain below pre-crisis levels for some time.

4.3. Labor Market

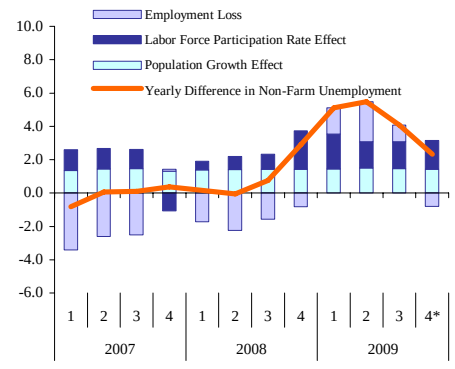
Indicators for the labor market have been on a recovery path as of the third quarter of 2009. During this period, the uptrend in unemployment has been reversed in seasonally adjusted terms (Graph 4.3.1). However, unemployment is still extremely above pre-crisis levels. In fact, non-farm unemployment increased by 2.4 percentage points from a year ago to 16.4 percent in October. Meanwhile, non-farm employment grew year-on-year, reducing the annual change in unemployment (Graph 4.3.2).

Graph 4.3.1. Unemployment
(Seasonally Adjusted, Percent)



* As of October.
Source: TURKSTAT, CBRT.

Graph 4.3.2. Composition of the Change in Non-Farm Unemployment
(Annual Change, Percentage Points)



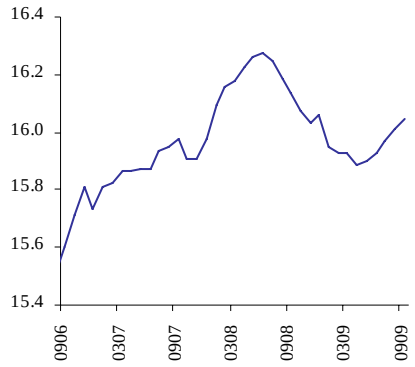
* As of October.
Source: TURKSTAT, CBRT.

The improvement in unemployment since the third quarter of 2009 has largely been fuelled by the recovery in non-farm employment (Graph 4.3.3). After being severely hit by the crisis and pushing non-farm employment to record lows amid weaker foreign demand, industrial employment is now on a

moderate rise (Graph 4.3.4). In addition, services and construction sectors have also contributed to non-farm employment (Graph 4.3.5).

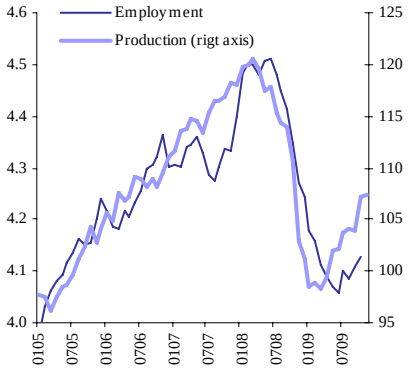
October data signal that industrial employment continued to recover in the fourth quarter. November's industrial production and the current PMI employment indices confirm this outlook (Graph 4.3.6). Given the positive impact of the industrial rebound on service sectors with strong industrial linkages, the uptrend in non-farm value added and employment is expected to continue in the final quarter of 2009 (Graph 4.3.7).

Graph 4.3.3. Non-Farm Employment
(Seasonally Adjusted, Million)



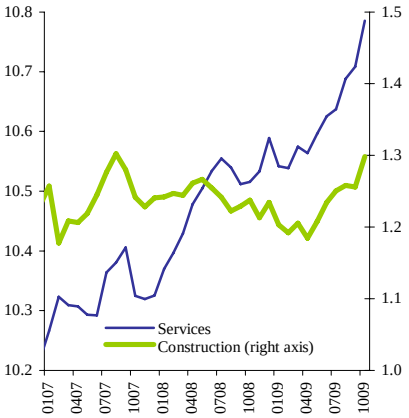
Source: TURKSTAT, CBRT.

Graph 4.3.4. Industrial Employment (Million) and Production
(2005=100)
(Seasonally Adjusted)



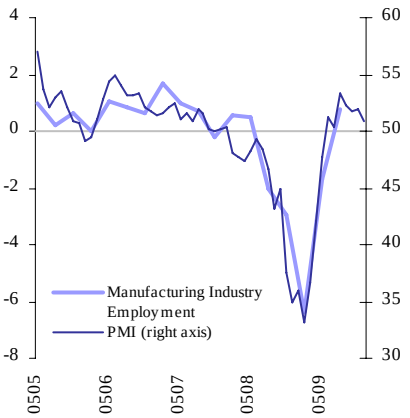
Source: TURKSTAT, CBRT.

Graph 4.3.5. Services and Construction Employment
(Seasonally Adjusted, Million)



Source: TURKSTAT, CBRT.

Graph 4.3.6. Manufacturing Industry Employment Index
(Quarterly Percentage Change) and PMI Employment Index

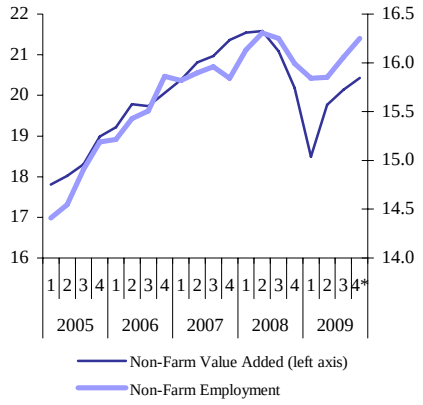


Source: TURKSTAT, CBRT, Markit.

The outlook for employment and wages is critical for the medium-term direction of domestic demand. After having been flat for a year since the second half of 2007, real wages fell rapidly following the contraction in

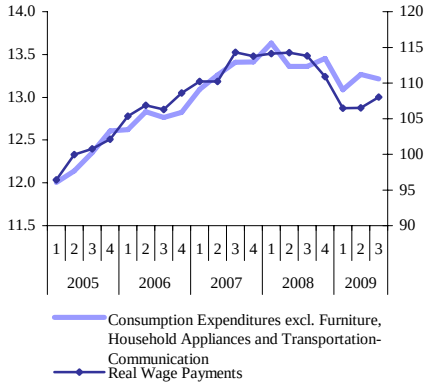
employment during the deepening of the global economic crisis in late 2008, and put a strain on consumer demand. Given the moderate economic recovery, real wages started to rise again during the third quarter of 2009, mainly owing to the improved outlook for industrial and trade sectors (Graph 4.3.8). Envisioning that the rise in employment is currently slow and unemployment would remain elevated for a long time, real wages are unlikely to return to pre-crisis levels in the near term. Nevertheless, careful consideration should also be given to the impact of the government's recent wage adjustments on expectations and the general pricing behavior.

Graph 4.3.7. Value-Added (at 1998 Prices, Billion TL) and Employment (Million) in Non-Farm Industry
(Seasonally Adjusted)



*Forecast.
Source: TURKSTAT, CBRT.

Graph 4.3.8. Real Wages* (2005=100) and Consumption (at 1998 Prices, Billion TL)
(Seasonally Adjusted)



* Calculated by taking the weighted average of total wages paid in industrial, construction, trade, restaurants/hotels and transportation/communication sectors. Converted to a real index by using CPI data.
Source: TURKSTAT, CBRT.

In sum, the economic recovery that started in the second quarter of 2009 has started to be reflected in the labor market. Yet, the currently weak foreign demand restrains economic activity and employment in general by suppressing industrial activity, and therefore, wages provide little support for domestic demand. The significant role of the industrial sector in spreading the improvement in employment conditions across the broader economy draws attention to the global growth outlook. In view of the lingering problems in the global economy, employment is unlikely to grow rapidly in the short term, and thus changes in aggregate demand and unit labor costs are not expected to put upward pressure on inflation. On the other hand, the improved credit conditions may boost domestic demand, producing a faster-than-expected recovery in construction and services employment.

5. Financial Markets and Financial Intermediation

5.1. Financial Markets

The fourth quarter of 2009 was marked by the growing perception that the worst of the global crisis was over and an exit was imminent. Fourth-quarter data indicate that the risks to the financial system have subsided and the world economy has moved into recovery thanks to stimulus packages introduced by government authorities. This has provided further optimism and normalization in financial markets. However, there are still downside risks to the global economy, prolonging the uncertainty about the pace and durability of the recovery.

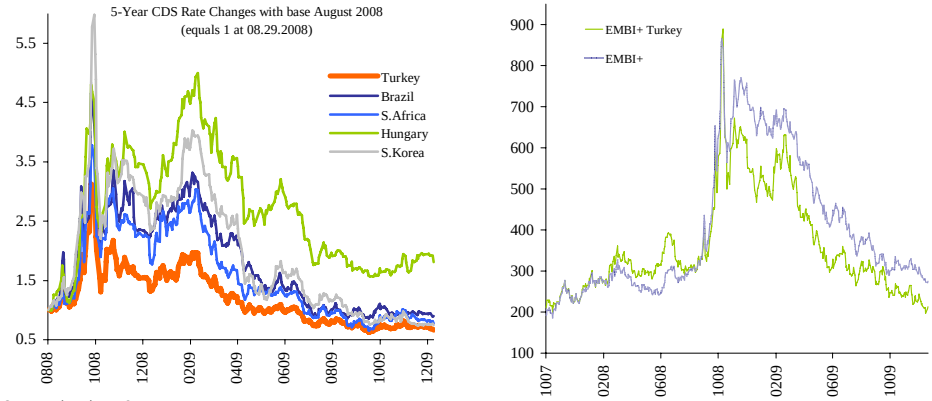
The most notable among downside risks to the world economy is the slow and lagged recovery of employment conditions. This has boosted the already high level of precautionary savings and put downward pressure on consumer spending in advanced economies. Moreover, the high, post-crisis idle capacity continues to hamper investment spending. In addition, the massive loss encountered by financial institutions during the crisis, their need to raise capital and failure to completely remove distressed assets off balance sheets continue to restrict loanable funds. Coupled with the still-elevated perception of credit risk driven by high unemployment, this impedes the easing of financial conditions. On balance, concerns about the pace and durability of the post-crisis recovery persist, while fears of interrupted recovery are more moderate, yet still non-negligible.

Compared with advanced countries, emerging market economies have recovered more rapidly, as confirmed by fourth-quarter data. Economies with relatively less deteriorated financial markets have seen a more robust recovery. Yet, the ongoing weakening in foreign demand and the shortage of funds needed to finance the economic recovery continue to pose risk on the pace of recovery in these countries.

The mounting perception that the worst of the crisis is behind and the economy is heading towards recovery drove global risk appetite higher during the fourth quarter. This led to a massive injection of low-cost liquidity into the markets amid the worldwide monetary and fiscal expansion, and therefore boosted optimism in financial markets and promoted further bias towards

riskier assets. Thus, emerging markets continued to attract portfolio capital inflows in the fourth quarter, as has been the case since the second quarter. Meanwhile, most emerging market currencies appreciated and stock exchanges rose further. In addition, risk premiums for many emerging economies continued to hover below pre-crisis levels (Graph 5.1.1).

Graph 5.1.1. Risk Premium Indicators

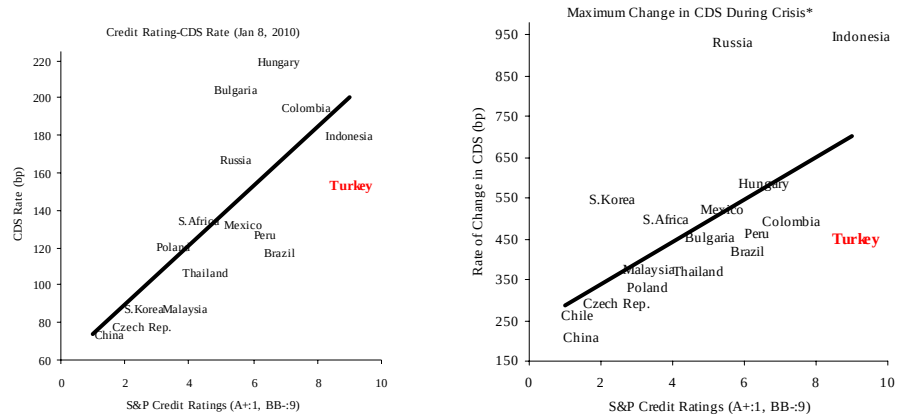


Source: Bloomberg, CBRT.

Risk assessments are likely to be revised across the world following the crisis that has shaken the foundations of the global financial system; because the financial crisis has not only revealed the fragility of advanced economies and financial markets, which were assumed to be a safe haven before the crisis, but also shown that most emerging economies, which were previously seen as a danger zone, are not as risky as once believed. Thus, many emerging economies with strong growth potential and a solid economic and financial base are expected to have better global risk ratings, resulting in a stronger position in global financial markets and an easier access to global capital. As emphasized in previous inflation reports, Turkey ranks among the top within these emerging economies, and its post-crisis credit rating has not been consistent with the market price of the CDS (Graph 5.1.2). In fact, Turkey's CDS rating changed dramatically during the fourth quarter, in line with the CBRT 's remarks and forecasts. Medium to long-term forecasts for Turkey were revised upwards, many investors increased the weight of Turkish assets in their portfolios, and more importantly, the most prominent credit-rating agencies upgraded Turkey's credit rating. However, Turkey's credit rating remains far below the investment grade implied by the actual CDS spread (Graph 5.1.2). There may be some credit rating upgrades in coming months, in

case of adoption of new measures and structural reforms aimed to strengthen fiscal discipline.

Graph 5.1.2. Link Between Risk Premiums and CDS Spreads

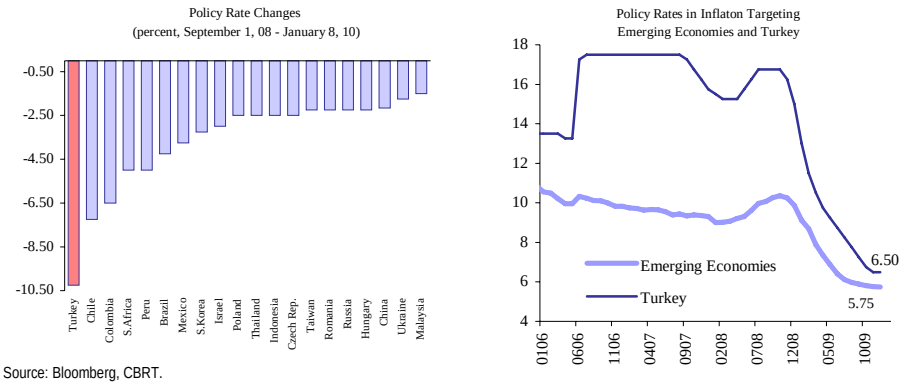


*The difference between the highest CDS spread during the crisis and CDS spreads before the crisis.

The CBRT's prudent yet prompt and vigorous monetary policy decisions played a major role in lowering Turkey's risk rating, while most advanced and emerging economies were associated with higher risk after the crisis. Having foreseen that global inflation would decline and aggregate demand conditions would trend further downward for a long time, the CBRT provided a reliable guide for market actions. In order to minimize the possible damage to economic activity, the Bank not only cut short-term interest rates aggressively but also pursued a countercyclical liquidity policy to ease the credit crunch. Accordingly, the CBRT began to lower policy rates in November 2008, totaling 1025 basis points as of November 2009. Thus, taking a leading role, Turkey has been the only inflation-targeting country that cut policy rates aggressively during the crisis (Graph 5.1.3).

The data on both local and global economic activity since the start of monetary easing in November 2008 have justified the accuracy of the CBRT's forecasts and policy decisions, which, coupled with the CBRT's effective communication policy and expectations management, has enhanced the impact of policy decisions on financial variables and expectations.

Graph 5.1.3. Policy Rate Changes in Emerging Economies

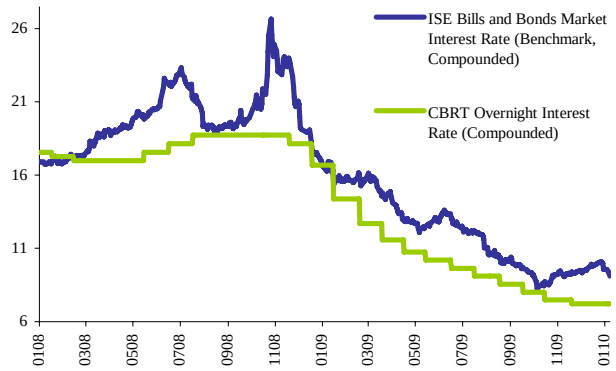


Source: Bloomberg, CBRT.

The Bank's increased influence on financial markets is also evident in market rates. Market rates were previously set by the risk sentiment in Turkey during times of global volatility, leading to a spurt in market rates. In the recent crisis, market rates have been determined by the economic climate and the monetary stance, even in periods of extreme risk aversion. Therefore, they fell to an all-time low.

After having plunged to a historic low, market rates picked up slightly during the fourth quarter with the growing market consensus that CBRT's monetary easing has ended. As has been the case throughout the crisis, policy rates continued to be the key driver of market rates in the fourth quarter, while the spread between policy rates and market rates remained relatively low compared to previous periods (Graph 5.1.4). In an era where ballooning government deficits are likely to put upward pressure on medium to long-term interest rates across the globe and markets are still sensitive to risk appetite, the fact that market rates continue to be primarily determined by CBRT's policy rates is an evidence of the increased effectiveness of monetary policy. Yet, monetary policy is not, by itself, sufficient to keep market rates low. In order to keep market rates at low levels for a long time, the consistent framework outlined in the Medium Term Program should further gain ground by supportive structural measures that would strengthen fiscal discipline.

Graph 5.1.4. Changes in Interest Rates
(Percent)

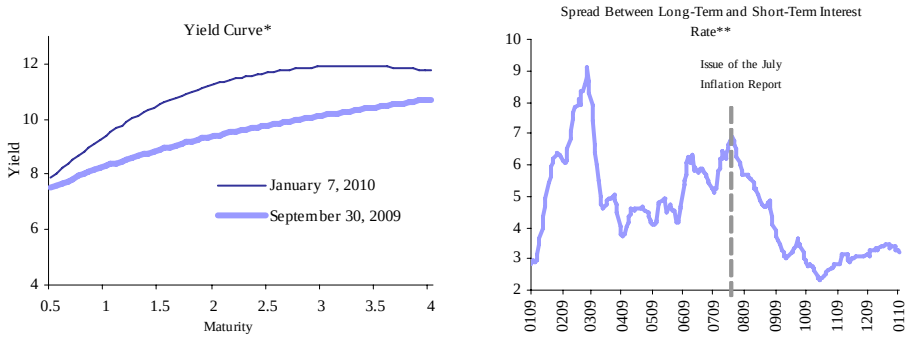


Source: ISE, CBRT.

Market rates increased slightly across all maturities during the fourth quarter. In fact, government bond yields on January 4, 2010 were up from those on September 30, 2009 in every maturity range. Yet, despite the moderate increase in yields, the yield curve continued to be flat, compared with previous quarters (Graph 5.1.5).

The flattening of the yield curve is largely attributable to CBRT's well-established perspective on future monetary policy outlined in the July 2009 Inflation Report. In this report, the CBRT stated that, if fiscal discipline is restored, policy rates could remain at single-digit levels over the forecast horizon. This statement helped narrow the gap between long-term and short-term yields. The subsequent data on inflation and economic activity supported CBRT's projection, and thus, helped market expectations converge towards CBRT's perspective.

Graph 5.1.5. Maturities of Market Rates



* Calculated from the compound return on bonds from the ISE Bonds and Bills Market, by using the Extended Nelson-Siegel method.
** The spread between the 4-year and 6-month yields, 5-day moving average.
Source: CBRT.

The course of real rates and financial tightening measures during the crisis is also another indicator for the improved effectiveness of monetary policy in Turkey. Real market rates declined continuously amid CBRT's policy rate cuts and reached to historic lows. The tendency of real rates to fall is quite common in well-functioning economies during times of recession; yet, it is quite unprecedented for Turkey. In this regard, the current level of real rates is an indicator for the improved effectiveness of monetary policy. Similarly, CBRT's monetary policy actions helped reduce both business and consumer loan rates and ease the credit tightness gradually. Nevertheless, during the peak of the crisis, CBRT's monetary policy actions had a less significant impact on the credit market, compared to market rates, while financial conditions eased only moderately, due to abnormally higher credit risk perceptions, which lessened the effect of falling market rates on economic activity. Yet, thanks to CBRT's monetary policy actions and the sound banking system in Turkey, tight credit conditions eased to a great extent over time.

The minor upturn in market rates passed through to medium-term real interest rates during the fourth quarter. Despite the recent increase, real interest rates continued to hover around all-time lows. The tightness in credit markets continues to ease with lower credit risk perceptions and CBRT's monetary policy actions, while loan rates remain on the decline (Graphs 5.1.6 and 5.2.4).

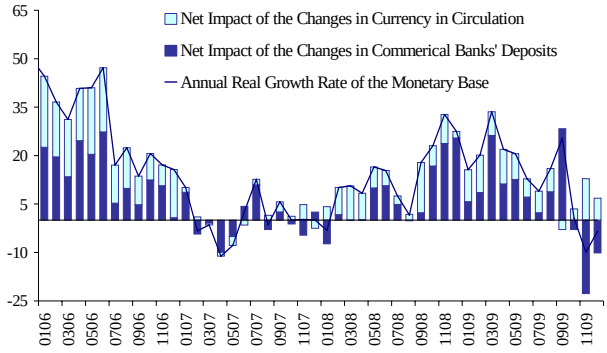
Graph 5.1.6 Medium-Term Real Interest Rates from the Yield on Government Securities*

* 2-year real interest rates, calculated using 2-year nominal interest rates from the yield curve and inflation expectations from CBRT's Expectations Survey.
Source: ISE, CBRT.

The currency in circulation increased year-on-year in real terms following the economic recovery in the fourth quarter, whereas bank deposits fell year-on-year in real terms. This has been attributable to the rapid growth of

bank deposits during the peak of the global crisis in the final quarter of 2008 driven by the shift in the portfolios of households and financial institutions towards risk-free assets. In other words, the fourth-quarter decline in bank deposits is primarily due to the base effect and when compared to the previous quarter, the decline is limited. Due to the high real year-on-year decline in bank deposits, the monetary base (currency in circulation + bank deposits) declined year-on-year in real terms (Graph 5.1.7).

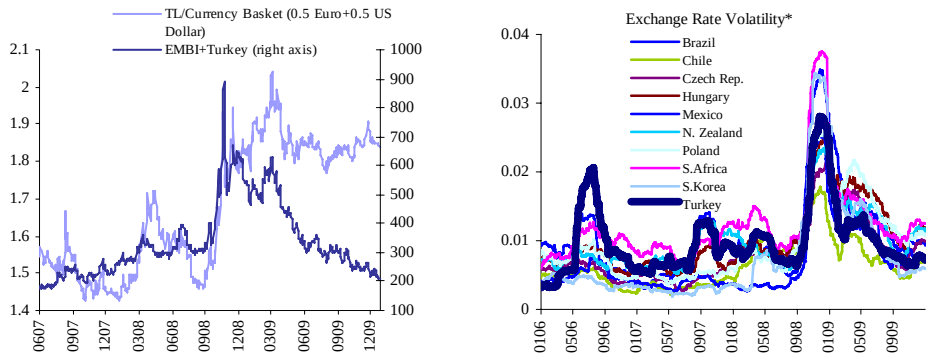
Graph 5.1.7. Annual Real Growth of Monetary Base
(Percent)



Source: CBRT.

The improved perception of global risk during the fourth quarter led to an appreciation in many emerging market currencies. In terms of changes in currency values, the Turkish lira did not significantly differ from other emerging market currencies. Despite having been historically volatile and extremely sensitive to global risk appetite, the Turkish lira remained relatively stable in the fourth quarter of 2009 following the worst period of the crisis (Graph 5.1.8). As has been the case in previous quarters, the monetary policy decisions of central banks in emerging economies continued to have a very limited short-term effect on their currencies in the fourth quarter, and the value of these currencies continued to be mainly determined by global risk appetite. However, as financial markets normalize, country-specific conditions are likely to unfold in coming months, and the currencies of countries with lower risk ratings, solid economic and financial foundation and prospects of rapid growth are expected to perform better.

Graph 5.1.8. Exchange Rate Changes

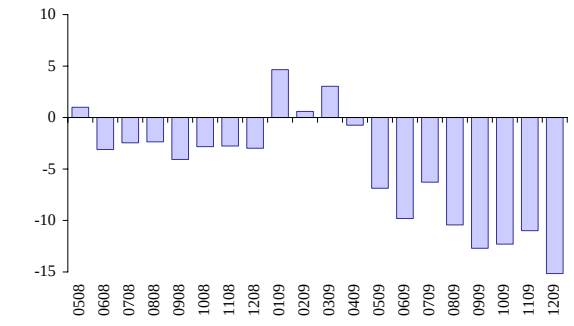


* 50-day moving standard deviation of exchange rate changes per day.
Source: CBRT.

With the easing of the global liquidity shortage and the restored stability in foreign exchange markets, the CBRT resumed the foreign exchange buying auctions on August 4, 2009, aiming to secure a strong foreign exchange position within its general strategy. Accordingly, the Bank bought a total of 2.51 billion US dollars from the market in the fourth quarter, generating a liquidity of 3.74 billion Turkish liras.

In addition to foreign exchange buying auctions, the Bank provided a permanent liquidity injection of about 3.2 billion Turkish liras into the banking system by lowering the Turkish lira reserve requirement from 6 to 5 percent on October 16, 2009. This reduction is expected to help ease credit conditions and boost Turkish lira loans. On the other hand, Treasury's high borrowing-to-redemption ratio exacerbated the liquidity crunch. As a result, the liquidity shortage in the overnight market continued into the fourth quarter (Graph 5.1.9). During the fourth quarter, the Bank provided liquidity through regular 1-week and 3-month repo auctions.

Graph 5.1.9. Excess TL Liquidity
(Monthly Averages, Billion TL)



Source: CBRT.

Reverse repo is another tool of liquidity management used by the CBRT and involves the transaction of government securities in the Bank's portfolio. Thus, as a precaution, the Bank has to technically hold government securities in its open market operations portfolio in order to guide interest rates in ISE's Repo-Reverse Repo Market and to maintain diversified liquidity management tools and operational flexibility.

In consideration of the expiration of its government securities in 2010, the CBRT decided to buy government securities from the secondary market in the traditional auction format, details of which were announced in the press release of December 10, 2009, "The Monetary and Exchange Rate Policy for 2010". The Bank expects to buy a maximum of 5 billion worth of government securities in a series of auctions until June 23, 2010. The purchase of government securities may total about 8 billion Turkish liras by end-2010.

These purchases do not aim to support the Treasury's borrowing schedule, but are rather conducted for technical reasons, in pursuit of monetary policy objectives. Moreover, the purchase of government securities may also boost market liquidity, which would help offset the redemption pressure on the balance sheet of the banking system.

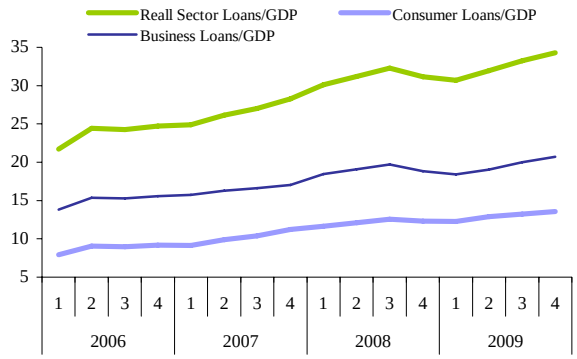
The purchase of government securities would account for less than 5 percent of the domestic borrowing projected in the Treasury's baseline scenario for 2010, and therefore is unlikely to have a significant impact on market conditions. Yet, the Bank will strive to make sure that these purchases do not affect market rates, and hence the yield curve, and allow interest rates on transactions to reflect market conditions. In fact, auctions held after December 23, 2009 had no effect on either market returns or the maturity structure of returns (Box 5.1).

To sum up, during the fourth quarter, policy rate cuts and countercyclical liquidity measures continued to have a major impact on money and credit markets, while financial conditions continued to ease. CBRT's monetary policy measures are expected to have a more pronounced impact on economic activity in the medium term.

5.2. Financial Intermediation and Loans

The run-up in the ratio of real sector loans to GDP that started in the second quarter of 2009 continued into the fourth quarter (Graph 5.2.1). Unlike the previous two quarters, both consumer loans and business loans rose markedly in the third quarter.

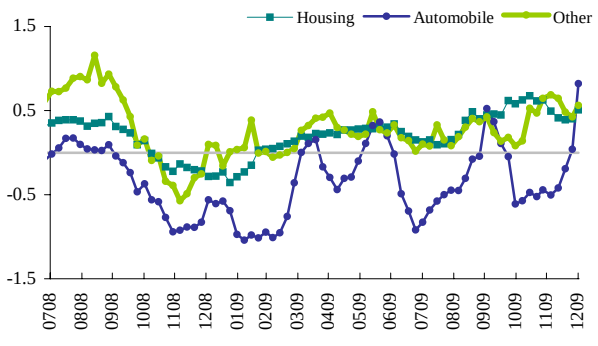
Graph 5.2.1. Real Sector Loans / GDP*
(Percent)



* Real sector loans are composed of household loans and domestic business loans. Estimated figures for 2009Q4 GDP.
Source: CBRT.

Consumer loans continued to rebound vigorously in the fourth quarter. Housing and other loans were particularly up at a steady pace. Having contracted during July-August, automobile loans rose rapidly with the sales promotions in December, yet ended the quarter down from a quarter earlier (Graph 5.2.2).

Graph 5.2.2. Subcategories of Consumer Loans
(Moving Average of Weekly Changes, Percent)

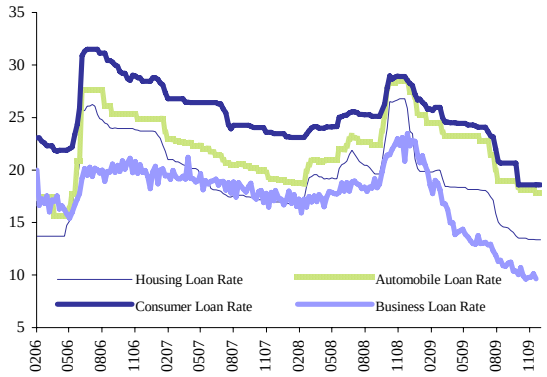


Source: CBRT.

Consumer and business loan rates continued to fall in the fourth quarter (Graph 5.2.3). After having plunged during late September, consumer loan

rates declined only slightly in the remainder of the year with the growing consensus that the monetary easing ended. The relatively faster drop in automobile loan rates during the last weeks of December is considered to have stemmed from the competition among banks and appears to be temporary. Similarly, business loan rates declined more rapidly in October, and continued to fall in the following months at a slower pace.

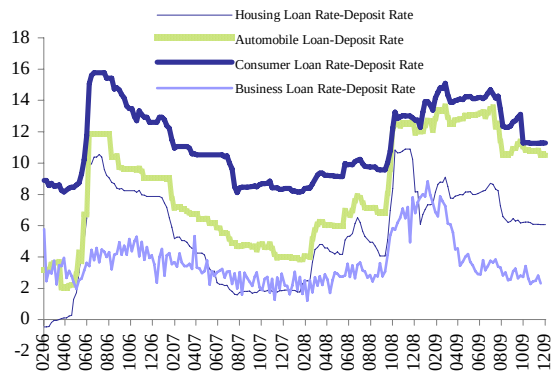
Graph 5.2.3. Loan Rates*
(Percent)



* Yearly interest rates on consumer and business loans.
Source: CBRT.

The spread between loan rates and deposit rates widened as the deposit rates responded faster to the policy rate cuts than the loan rates in October 2009. However, with the lagged response of loan rates, the spread narrowed again. The gap has especially closed for corporate loan rates, indicating that credit conditions continued to ease in the final quarter (Box 5.3).

Graph 5.2.4. Spread Between Loan Rates and Deposit Rates
(Compound, Percent)



Source: CBRT.

In sum, both the policy rate cuts totaling 1025 basis points since November 2008 and the measures taken for liquidity management had a more significant positive effect on the credit market during the fourth quarter. Credit conditions ease further, while loan demand recovers amid an improved economic climate and falling loan rates, thus resulting in a marked increase in both consumer and business loans (Box 5.3). Yet, the lingering problems in the global economy and limited access of SME to credit cause credit conditions to remain tight, though not completely (Boxes 5.2 and 5.3). Therefore, in the face of an unfavorable outlook for employment prospects, the credit volume is not expected to expand dramatically in the short run.

Box 5.1 THE IMPACT OF CENTRAL BANK'S PURCHASES OF GOVERNMENT SECURITIES ON MARKET RETURNS

As announced in the press release of December 10, 2009, "The Monetary and Exchange Rate Policy for 2010", the CBRT decided to buy government securities from the secondary market in an auction format, in order to maintain diversified liquidity management tools and operational flexibility and to guide interest rates in the ISE's Repo-Reverse Repo Market. The auctions started on December 23, 2009 to be held each Wednesday and Friday, and will expire on June 23, 2010. Amounting to a nominal value of 100 million Turkish liras at each auction, the purchase of securities totals 650 million Turkish liras, equaling a nominal value of 700 million Turkish liras as of January 15, 2010.

In the process of both determining the auction format, bid amounts and securities and conducting buying auctions, the Bank strives to make sure that the market rates and the maturity structure of market rates remain intact. Thus, auctions usually offer securities with varying maturities that are highly liquid in the secondary market. In addition, the Bank announces the amount for each month on the first business day of the relevant month and the amount for each auction on the day of the relevant auction. Therefore, the amount of securities to be bought in December and January were announced on December 10, 2009 and January 4, 2010, respectively (Table 1).

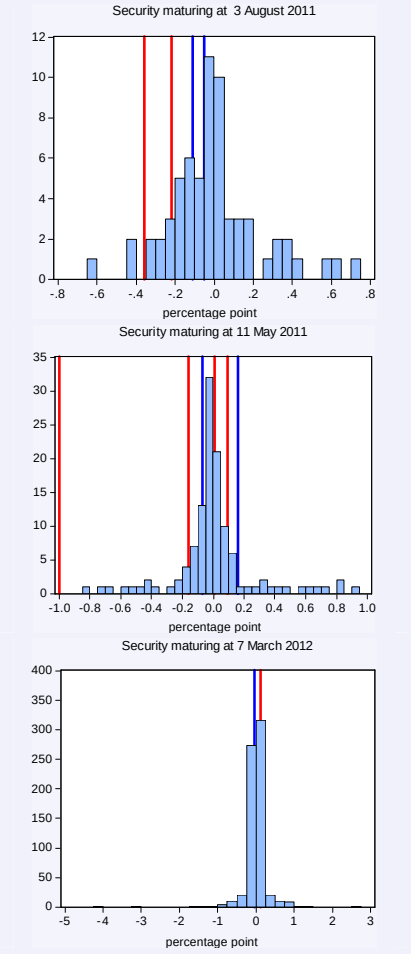
Table 1. Auction Announcements and Calendar

Dates	Government Securities
Auctions	
December 23, 2009	TRT030811T14
December 25, 2009	TRT110511T17
December 30, 2009	TRT110511T17
January 6, 2010	TRT030811T14
January 8, 2010	TRT110511T17
January 13, 2010	TRT070312T14
January 15, 2010	TRT110511T17
Announcements	
December 10, 2009	TRT030811T14/TRT110511T17
January 4, 2010	TRT030811T14/TRT110511T17/TRT070312T14

For a better understanding of whether the Bank's purchases of government securities from the secondary market affect market returns, this Box analyzes to what extent the returns on securities deviate from the general norm on the days of announcements and auctions. In case the announcements and auctions affect market returns, the yields on auctioned securities should drastically deviate from the estimated yield.[1] In order to see whether securities display such a deviation, the spread between actual and estimated yield curves that occurs on the days of announcements and auctions should be compared with the values in previous periods.

Graph 1 plots the distribution of the daily changes in forecast errors for auctioned securities. Vertical lines denote the changes in forecast errors for the days of announcements and auctions. Blue lines are the announcements, while red lines are the auctions. In general, the graphs show that the deviation of forecast errors on relevant days barely differs from the historical pattern. Moreover, the changes in forecast errors are not statistically significant. However, the forecast error for the security bought on December 30, 2009 and due on May 11, 2011 shows a major deviation, which seems to have resulted from the transaction volume on both the day of auction and the ISE Bills and Bonds Market that generally tends to slow at the end of the year.

Graph 1.Histograms of the Daily Change in Forecast Errors



[1] Based on the yield curves that are estimated by using the Extended-Nelson-Siegel method. For further information, see Akıncı, Ö., Gürcihan, B., Gürkaynak, R. and Ö. Özel, (2006), "Estimating the Yield Curve for Government Securities", CBRT Working Paper, No. 06/08.

Furthermore, the comparison of returns on CBRT's buying auctions and the ISE Bills and Bonds Market proves that purchases have no effect on market returns. In fact, as shown on Table 2, the weighted average daily returns on the market were close to the returns on CBRT's auctions, indicating that CBRT's purchases do not disturb the supply/demand balance in the market.

Table 2. Auction and ISE Returns

	CBRT's Buying Auctions			ISE
	Minimum Compound Return	Average Compound Return	Maximum Compound Return	Weighted Average Compound Return
23.12.2009	9.45	9.46	9.47	9.46
25.12.2009	9.51	9.52	9.55	9.54
30.12.2009	9.33	9.35	9.44	9.35
06.01.2010	8.93	8.94	8.95	8.94
08.01.2010	8.59	8.60	8.61	8.57
13.01.2010	8.84	8.84	8.84	8.98
15.01.2010	8.39	8.42	8.44	8.42

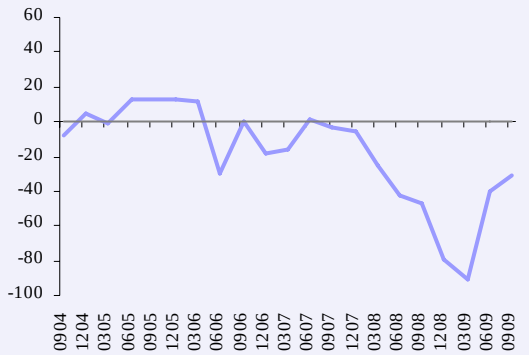
In sum, we believe that CBRT's announcements and buying auctions have no significant impact on market returns. Announcing all the details of CBRT's buying auctions aims to remove the uncertainty about the purpose and size of auctions and to prevent expectations from being priced into market rates. Moreover, as the buying auctions are run over a long time horizon and offer a limited amount of government securities, which are relatively more liquid in the secondary market, they do not seem to affect market rates.

Box 5.2 BANKS' LOANS TENDENCY SURVEY AND CHANGES IN LOANS

The global crisis that deepened during the final quarter of 2008 had major implications for both the financial sector and the real sector in Turkey. In many countries, including Turkey, economic shocks added to the financial tightening (Inflation Report 2009-II, Box 5.2). Data from the Loans Tendency Survey indicate that credit conditions remained tight in the following period, but began to ease in the second quarter of 2009. In other words, according to the survey, the crisis-driven changes in credit markets have been less dramatic. Loan demand is expected to rebound, albeit gradually, in coming months amid a moderate economic recovery. Therefore, it is now much more important to monitor and detect the changes in the credit market. Based on the latest Loans Tendency Survey, this Box assesses the changes in supply and demand in credit markets, particularly regarding corporate loans.

The survey reports that the tightening of corporate lending standards continued to fade in the third quarter (Graph 1). The level of tightening in the post-crisis period has hardly varied by the size of the borrowing firm, but differed much across maturities. Yet, the direction of changes in standards is common for all types of loans.

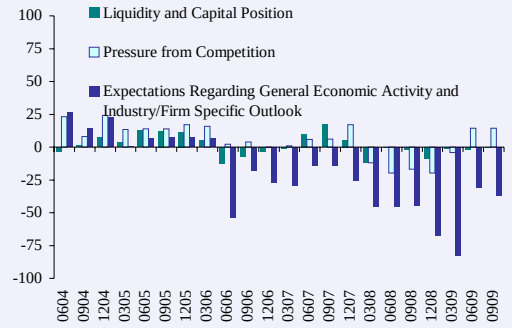
Graph 1. Changes in Business Loan Standards*



*Positive/negative values denote easing/tightening in standards.
Source: CBRT.

The survey reveals the evolution of factors contributing to the tightening (Graph 2). The most significant mid-crisis supply-side factors regarding corporate loans are perceptions about the broader economy, and particularly about the outlook for the relevant industry and firm. These factors appear to reflect concerns about the credit repayment risk. However, the tightening impact of these factors was smaller in the second and third quarters than in the first quarter.

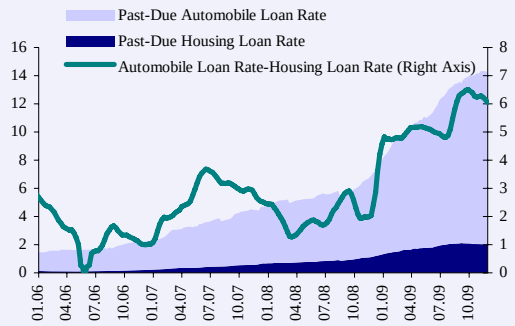
Graph 2. Factors Affecting Business Loan Standards*



* Positive/negative values denote easing/tightening in loan standards.
Source: CBRT.

On the other hand, the increased repayment risk in the general economy affects not only loan standards but also the profit margin on loan rates, which is evidenced by the fact that the difference among consumer loan rates is consistent with the ratio of overdue consumer loans (Graph 3). Thus, the CBRT cut policy rates to offset the impact of the rising repayment risk on interest rate costs and to reduce the repayment risk by supporting economic activity.

Graph 3. Spread Between Housing Loan Rates (36-month) and Automobile Loan Rates (36-month) and Overdue Loans



Source: CBRT.

Liquidity and capital restrictions during the crisis had less impact on the supply of corporate loans than of consumer loans. This seems controversial, but stems from the maturities of both types of loans.[2] As maturities are much longer in consumer loans than in business loans, the expansion of consumer loans would aggravate the maturity mismatch problem and the resulting risks, thus prompting banks to seek access to longer-term funds.[3] The banks had less access to external funds during the crisis due to the sharp contraction in international capital flows, which had an immediate and severe impact on long-term funds and hence the supply of consumer loans. The liquidity injections by the Bank eased the supply shortage of short-term loans. Survey data show that balance sheet and financing constraints again had no adverse impact on business loans during the third quarter, and had a weaker effect on consumer loans.

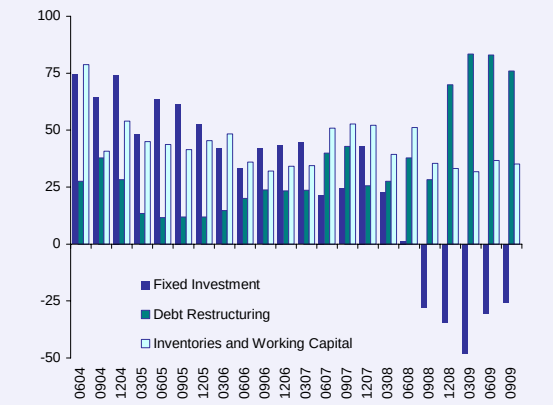
Having played a negative role on the supply side since the outburst of the crisis, the competition pressure began to help ease supply constraints in the second quarter and has been the only factor to improve loan standards since then. The increase in the competition pressure indicates that the sector's aims and concerns about market shares emerge again after a period of heightened uncertainties. In this sense, the evolution of this indicator suggests that credit markets are moving from cautiousness toward normalization.

Latest survey contains some findings that the crisis-driven patterns of loan demand have been changing. The drop in the demand for investment loans during the crisis put downward pressure on loan demand, while factors such as debt restructuring, working capital and inventory buildups put upward pressure on loan demand (Graph 4). The loan demand for investment purposes began to have less impact on total loan demand in the second quarter. The upward contribution of debt restructuring to loan demand was weaker during the third quarter, whereas the contributions from working capital and inventory buildups remained stable.

[2] In addition, as the purposes for demanding funds may vary across companies in times of crisis, these restrictions would have less impact on business loans. Funds are demanded for purposes of financing the working capital rather than investment during the crisis, facilitating short-term loans to businesses.

[3] The most striking indicator for this restriction is the fact that banks are reluctant to offer high-rate consumer loan quotes in the post-crisis period (See Inflation Report 2009-II).

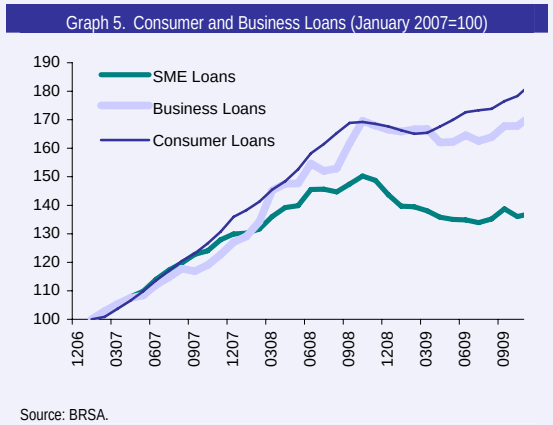
Graph 4. Factors Affecting Business Loan Demand*



* Positive/negative values denote easing/tightening in loan demand.
Source: CBRT.

To sum up, credit conditions continue to recover gradually. The improved outlook for the broader economy has a positive effect on banks' approach towards loan standards. The positive effect of increased competition on loan supply has increased; while like previously, banks' own restrictions have not been effective in credit markets in the third quarter. Meanwhile, the changing patterns of loan demand reflect the gradual economic recovery. Given the improved loan supply, credit markets are unlikely to weigh on economic growth in the upcoming period, unless there is an unexpected increase in loan demand. However, the relatively tight standards for loans extended to SME continue to minimize somewhat the favorable effects of monetary expansion on economic activity (Graph 5).

Graph 5. Consumer and Business Loans (January 2007=100)



Source: BRSA.

Box 5.3 THE FINANCIAL STRUCTURE OF A FIRM AND THE CREDIT TRANSMISSION MECHANISM

The balance sheet channel of the credit transmission mechanism suggests that a firm's access to external funds is closely related to firm's balance sheet. Thus, the difference between the cost of external borrowing and the alternative cost of domestic borrowing varies across firms. For example, the cost of external borrowing by a firm with a strong balance sheet is smaller than that of a firm with a weak balance sheet, the former also experiencing easier access to credit. In this regard, studies in the academic literature emphasize that external shocks that are able to change the financial structure of firms may unevenly affect the real activities of firms, thereby affecting the wealth distribution in the economy, and play a major role in the monetary transmission mechanism.[4]

In order to take correct policy measures, the channels through which the global crisis and the additional tightening in financial conditions are transmitted into the economy should be accurately identified. Due to firms' varying responses to external shocks, the interaction between a firm's financial structure and the credit transmission mechanism should be analyzed in detail. Therefore, based on the theoretical and empirical studies[5] in the literature, this Box discusses the financial structure of Turkish firms in the manufacturing industry using data from the 1996-2008 period, and analyzes the impact of policy rates on external borrowing choices by various groups of firms during periods of tight and loose financial conditions.

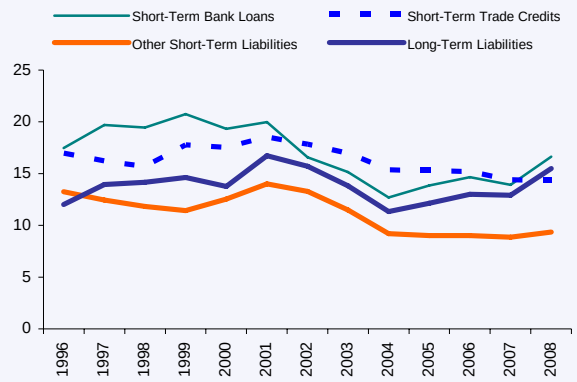
In the classical credit transmission mechanism, firms may only access banks and capital markets for external funds. According to the theory of the bank-lending channel, which assumes that firms not borrowing from capital markets rather borrow from banks as an alternative source of financing, the supply of bank loans to firms decreases in a monetary contraction, restraining the real activities of firms that are deprived of an alternative external source of financing.[6] Yet, extensive studies have shown that, unlike the perspectives inspired by the theory of the bank-lending channel, most firms that are unable to have adequate access to bank loans continue to operate by resorting to trade credit during a monetary contraction.[7]

[4] See Bernanke, Gertler and Gilchrist (1996, 1998).
[5] See Mateut (2005); Mateut et al. (2006).
[6] See Bernanke and Blinder (1988); Kashyap, Stein and Wilcox (1993).
[7] Mateut (2005).

Similarly, a growing number of studies on advanced economies suggest that small firms that are deprived of bank lending use trade credit as an alternative source of financing in a monetary contraction, thereby enabling many firms to operate further. In a financial (or monetary) contraction, well-reputed firms with strong balance sheets are found to have easy access to capital markets and banks and even increase their supply of trade credit to other firms lacking access to funds. [8,9] On the other hand, though their number is very limited, studies regarding emerging economies[10] show that the share of trade credits in emerging economies is much higher than in advanced economies.

Data on CBRT's sectoral balance sheets report that the external borrowing composition of the studied manufacturing industry firms is heavily tilted towards trade credit (Graph 1).

Graph 1. Financial Structure of A Firm in the Manufacturing Industry (1996-2008)*



* In percent of total balance sheet.
Source: CBRT Sectoral Balance Sheets.

[8] See Nilsen (2002); Mateut et al. (2006); Mateut (2005).
[9] In the financial literature, this structure is referred to as the redistribution view, suggesting that the loan demand of small firms does not weaken in a monetary contraction, whereas the loan supply to such firms does.
[10] See Davis and Stone (2004); Love et al. (2007).

Broken down into small and large firms, equity financing is low before the financial crisis in 2001, particularly among large firms, while during the crisis year; the share of long-term borrowing is especially high for large firms. On the other hand, the trade credits of small firms and their liabilities to their partners, creditors and other parties are substantially high. These observations suggest that firms with stronger balance sheets are able to operate further by compensating their mid-crisis profit losses with long-term borrowing, while firms with weaker balance sheets resort to trade credit to weather the crisis. In the post-crisis period, equity financing rises in both categories of firms. The ratio of trade credit in small firms tends to decline, but remains significant (Table 1).

Table 1. Financial Structure of Turkish Firms (Manufacturing Industry/1996-2008)*

	1996-2008	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Small Firms														
Current Liabilities	49.75	57.87	62.33	55.89	57.2	58.22	57.53	54.17	52.3	46.87	49.18	50.23	49.32	44.5
Short-Term Loans	17.89	18.05	22.12	18.62	16.98	17.79	15.21	17.13	15.48	14.64	16.99	19.46	20.83	18.79
Short-Term Bank Loans	17.57	17.89	21.93	18.47	16.83	17.44	14.77	16.94	15.25	14.25	16.68	19.11	20.40	18.53
Short-Term Trade Credits	18.18	24.37	25.41	23.09	24.91	25.07	24.28	21.18	19.88	17.35	18.02	17.12	16.62	15.6
Short-Term Liabilities to Partners	6.55	7.46	6.41	6.78	8.03	8.09	9.61	7.95	9.62	8.07	6.44	5.85	5.27	4.17
Other Short-Term Liabilities	7.11	7.97	8.37	7.39	7.26	7.26	8.41	7.9	7.31	6.79	7.72	7.78	6.58	5.92
Long-Term Liabilities	9.34	6.82	8.83	10.04	10.72	9.41	12.59	11.46	9.62	7.45	7.95	8.8	8.73	11.21
Shareholders' Equity	40.89	35.29	28.82	34.05	32.07	32.36	29.87	34.36	38.07	45.67	42.85	40.96	41.94	44.28
Number of Observations	**18736**	**1235**	**1230**	**1265**	**1473**	**1609**	**1565**	**1791**	**1653**	**1660**	**1601**	**1352**	**1276**	**1026**
Large Firms														
Current Liabilities	38.54	45.22	45.66	44.96	48.91	48.64	52.30	46.86	41.80	34.70	35.17	35.75	34.36	37.99
Short-Term Loans	14.88	16.84	19.09	19.54	22.43	20.81	21.39	16.89	14.84	12.33	13.25	13.73	12.76	15.94
Short-Term Bank Loans	14.33	16.58	18.78	19.12	21.58	20.09	20.96	16.33	14.28	11.81	12.70	13.20	12.26	15.31
Short-Term Trade Credits	14.74	15.55	14.45	14.43	16.43	16.13	17.31	16.95	16.14	14.57	14.38	14.26	13.72	13.93
Short-Term Liabilities to Partners	2.32	2.44	2.27	2.54	2.26	3.24	3.60	3.73	2.77	2.47	2.09	1.71	1.67	2.24
Other Short-Term Liabilities	6.59	10.37	9.83	8.43	7.78	8.44	9.98	9.28	8.03	5.30	5.43	6.04	6.20	5.87
Long-Term Liabilities	14.55	12.86	14.73	15.18	15.07	14.37	17.74	17.13	15.03	12.19	13.15	13.96	13.45	16.46
Shareholders' Equity	46.9	41.9	39.6	39.84	36.00	36.98	29.95	36.00	43.16	53.10	51.66	50.27	52.17	45.53
Number of Observations	**9779**	**667**	**675**	**688**	**700**	**732**	**750**	**770**	**767**	**855**	**830**	**813**	**789**	**743**

* Average values weighted according total asset size of firms that regularly reported for more than 3 years during 1996-2008. Values are in percent of total balance sheet size. Firms are grouped as small and large-sized firms. Firms with less than 50 employees are classified as small, whereas firms with 250 or more employees are large-sized.
Source: CBRT Sectoral Balance Sheets.

The components of a firm's financial structure have a major impact on the monetary transmission mechanism, and therefore such an interaction is instrumental in building the monetary policy framework. In this respect, based on the theoretical and empirical studies in the literature, we analyzed the relationship between a firm's financial structure and the monetary transmission mechanism by using the data on CBRT's sectoral balance sheets, income statements and selected firms.[11] This Box gives a brief account of the findings. In our panel data estimation, dependent variables are: the ratio of trade credit to total liabilities, the ratio of trade credits to the sum of bank loans and trade credits, and the ratio of bank loans to total liabilities.[12] The estimates are complementary and aim to determine the substitution between trade credits and bank loans (Table 2).

[11] The number of observations and selected firms in the manufacturing industry is about 50,000 and 5500, respectively.
[12] In our estimation, we used a set of explanatory variables such as firm size, profitability, collateral and leverage to control for firm-specific factors that affect trade credits and bank loans.

Table 2. Impact of Policy Rates on the Use of External Funds*

	The Ratio of Trade Credit to Total Liabilities			The Ratio of Trade Credit to the Sum of Trade Credit and Bank Loans			The Ratio of Bank Loans to Total Liabilities		
	All Firms	Small Firms	Large Firms	All Firms	Small Firms	Large Firms	All Firms	Small Firms	Large Firms
ON	**0.059*** **	**0.067*** **	**0.020*** **	**0.057*** **	**0.117*** **	**-0.037*** **	**-0.051*** **	**-0.101*** **	**0.022** **
	(14.76)	(8.47)	(2.83)	(10.78)	(11.66)	(3.64)	(11.47)	(12.27)	(2.50)
ON*D	**-0.023*** **	**-0.019**	**-0.030** **	**-0.090*** **	**-0.102*** **	**-0.078*** **	**0.082*** **	**0.091*** **	**0.060*** **
	(3.73)	(1.60)	(2.55)	(11.20)	(6.83)	(4.70)	(12.08)	(7.41)	(4.14)
Collateral	-0.097***	-0.119***	-0.067***	-0.117***	-0.142***	-0.116***	0.102***	0.105***	0.129***
	(11.94)	(8.14)	(3.99)	(11.02)	(7.62)	(4.87)	(11.44)	(6.90)	(6.18)
Collateral*D	0.004	0.009	0.003	0.043***	0.067***	0.038	-0.035***	-0.051***	-0.036*
	(0.50)	(0.62)	(0.16)	(4.02)	(3.63)	(1.60)	(3.93)	(3.39)	(1.74)
Lever	-0.485***	-0.513***	-0.386***						
	(65.63)	(36.64)	(28.76)						
Lever*D	-0.014	-0.003	-0.053***						
	(1.64)	(0.20)	(3.03)						
Real Asset	-0.008	2.511***	-3.410***	-10.152***	-8.034***	-11.735***	9.709***	8.009***	10.849***
	(0.04)	(7.76)	(8.84)	(43.50)	(19.26)	(21.03)	(50.32)	(24.03)	(22.58)
Real Asset*D	0.128	0.308	-0.14	0.656***	1.122***	0.298	-0.515***	-1.033***	-0.826**
	(1.32)	(1.14)	(0.52)	(5.15)	(3.24)	(0.77)	(4.82)	(3.68)	(2.47)
Profit	-0.035***	-0.023*	-0.048***	0.186***	0.123***	0.266***	-0.165***	-0.096***	-0.235***
	(4.87)	(1.79)	(3.52)	(20.35)	(7.58)	(14.82)	(21.50)	(7.28)	(15.04)
Profit*D	-0.023**	-0.03	-0.015	0.015	-0.004	0.01	-0.018	-0.01	-0.024
	(2.13)	(1.53)	(0.71)	(1.06)	(0.18)	(0.34)	(1.54)	(0.50)	(0.95)
D	-0.105	-2.888	4.682	-8.094***	-13.820***	-3.811	5.605***	12.202***	13.617**
	(0.07)	(0.72)	(0.97)	(3.92)	(2.67)	(0.55)	(3.24)	(2.91)	(2.26)
Constant	45.113***	8.778*	102.430***	216.038***	174.243***	261.393***	-119.081***	-84.463***	-156.279***
	(15.86)	(1.83)	(14.72)	(57.09)	(27.82)	(25.90)	(38.09)	(16.91)	(17.99)
Number of Observations	51197	18713	9777	50919	18467	9771	51197	18713	9777
Number of Firms	5655	2297	919	5655	2297	919	5655	2297	919
R-squared	0.13	0.12	0.15	0.07	0.06	0.08	0.09	0.07	0.1

Collateral: The ratio of tangible asset to total assets, Lever: the ratio of short-term bank loans to total assets, Real Asset: logarithm of real assets, Profitability: The ratio of profit to total assets, PR: policy rate.
*The first row reports the impact of policy rates on dependent variables in financial tightening. The third row shows the coefficient of the change in financial conditions between tightening and loosening. The sum of the first two coefficients represents the net impact of policy rates in financial loosening. Numbers in parentheses refer to the t-value, *10 percent error, **5 percent error and ***1 percent error.

Estimation results show that external borrowing composition of firms varies with policy rate changes, from financial tightening to financial loosening.[13] In financial tightening, higher policy rates are estimated to raise the ratio of trade credits to total liabilities and to the sum of bank loans and trade credits for small firms. This effect is relatively weaker during financial easing. On the other hand, the ratio of bank loans to total liabilities is inversely related to policy rates. In financial tightening, higher policy rates are estimated to reduce the ratio of bank loans to total liabilities.[14] Results are different for large firms. In other words, during financial tightening, higher policy rates raise the ratio of bank loans to total liabilities. Although policy rates increase, large firms are able to access bank loans in both periods. Even though findings are consistent with most theoretical and empirical studies in the literature, they imply that balance sheet channel operate through small and medium-sized firms.

[13] After the external shocks and financial crisis the Turkish economy encountered in 1998, 2001 and 2006, real interest rates increased, economic activity declined, and financial conditions were relatively tight. Thus, the 1996-1997, 2000 and 2003-2004 periods are chosen to represent relatively loose financial conditions. The corresponding dummy variable (D) takes 1, while periods with relatively tighter financial conditions take a 0 value.
[14] Medium-size firms are also analyzed. The results coincide with those of small firms.

In sum, the financial structure of Turkish firms suggests that external funds have a greater share in total financial resources and are mostly composed of short-term bank loans and trade credits. Findings for the period in question suggest a substitution between trade credits and bank loans, which is more significant in small firms. Unlike large firms, small firms are unable to have adequate access to bank loans in tight financial conditions and tend to resort to trade credit. Coinciding with other studies in the literature, these results indicate that large firms act as a non-bank intermediary in tight financial conditions to enable small firms to access credit, easing the impact of monetary contraction on the real sector.

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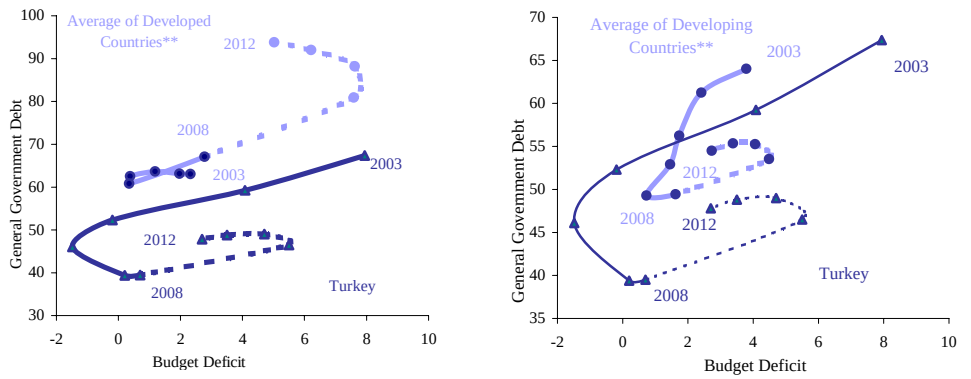
6. Public Finance

Contraction in economic activities and the corresponding countercyclical fiscal measures taken in 2009 to insulate the economy against the global recession boosted government budget deficits and debt ratios in both advanced and emerging economies. The economic contraction led to a reduction in tax revenues, while the decline in employment caused the payment of social security premiums to fall and unemployment benefits to rise (Graph 6.1).

Graph 6.1. General Budget Deficit and Debt Ratio
(In percent of GDP)



*Dashed lines represent forecasts.
**United States, UK, Germany, France, Spain, Ireland, Iceland, Japan, Portugal, Israel, Greece, Italy, Austria, New Zealand and South Korea.
Source: IMF. Turkey data from the Ministry of Finance, Treasury, Medium-Term Program (2010-2012) and 2009 Annual Program.

*Dashed lines represent forecasts.
**Hungary, Mexico, Romania, Argentina, Brazil, Bulgaria, Czech Republic, India, Indonesia, Israel, Malaysia, Poland, Singapore, South Africa.
Source: IMF. Turkey data from Ministry of Finance, Treasury, Medium-Term Program (2010-2012) and 2009 Annual Program.

In accordance with the global trend, Turkey's public sector budget deficit increased in 2009, pushing the debt-to-GDP ratio higher. The prudent implementation of fiscal discipline in previous years helped cut the ratio of government budget deficit and debt to GDP, to a level well below the average for both advanced and emerging economies (Graph 6.1). Although Turkey's budget deficit expanded at a faster pace than in many other emerging economies in 2009, according to the MTP projections, government debt is likely to remain below the average of other emerging economies in the upcoming periods.

Amid the current economic climate, in order to reinforce the optimisim about sustainable macroeconomic stability and ensure a better management of expectations in the medium term, the government has to make credible commitments to curb the growth of public deficit and debt. In this regard,

strong commitment to the MTP that is launched in September to resolve the uncertainties about public finance and to bring public deficit and debt gradually down during 2010-2012 is critical. In this respect, the central government deficit for 2009 performed better than MTP forecasts. The less-than-expected budget deficit was largely due to higher-than-expected tax revenues and lower-than-expected interest expenditures. Hence, public debt ratios are also expected to perform better than forecasts.

Table 6.1. Central Government Budget Performance and Targets
(In Percent of GDP)

	2007	2008	2009*	2010**	2011**	2012**
Budget Expenditures	**24.2**	**23.9**	**28.2**	**27.9**	**26.7**	**25.6**
Non-Interest Expenditures	18.4	18.6	22.6	22.4	21.7	21.1
Personnel Expenditures	5.2	5.1	5.9	5.9	5.7	5.6
Government Premiums to SSA	0.7	0.7	0.8	1.1	1.0	1.0
Purchases of Goods and Services	2.6	2.6	3.1	2.4	2.5	2.3
Current Transfers	7.5	7.4	9.7	9.9	9.8	9.6
Capital Expenditures	1.5	1.9	2.1	1.8	1.6	1.6
Capital Transfers	0.4	0.3	0.5	0.3	0.3	0.3
Interest Expenditures	5.8	5.3	5.6	5.5	4.9	4.5
Budget Revenues	**22.6**	**22.1**	**22.7**	**23.0**	**22.6**	**22.4**
Tax Revenues	18.1	17.7	18.2	18.8	18.8	18.7
Non-Tax Revenues	3.8	3.7	3.8	3.6	3.2	3.1
Budget Balance	**-1.6**	**-1.8**	**-5.5**	**-4.9**	**-4.0**	**-3.2**
Primary Balance	4.2	3.5	0.1	0.6	0.9	1.3

*GDP data from the Medium-Term Program (2010-2012).
** Target.
Source: Ministry of Finance, Medium-Term Program (2010-2012), Medium-Term Fiscal Plan (2010-2012), 2010 Central Government Budget Law.

The 2010 Central Government Budget Law prepared in accordance with the MTP was enacted in late 2009. According to the Budget Law, the ratio of non-interest expenditures to GDP is expected to decrease slightly in 2010 due to lower purchases of goods and services. Similarly, the ratio of interest expenditures to GDP is likely to decline fairly amid falling interest rates (Table 6.1). Meanwhile, in an effort to keep the budget discipline, 2010 salaries of public officials are hiked at a rate close to the inflation forecasts. Conversely, minimum wages were increased at a rate above inflation forecasts.[1] Likewise, pensions received a higher raise compared to inflation forecasts. The government expects to increase the budget revenues-to-GDP ratio basically by indirect tax revenues. Accordingly, the Special Consumption Tax (SCT) on fuel products, tobacco and alcoholic beverages has been dramatically hiked since early 2010.

[1] Salaries of public officials are hiked by 5.1 percent in 2010 (2.5 percent in each half), while the gross minimum wage is increased by 9.7 percent (5.2 percent in the first half and 4.3 percent in the second half).

As projected by the MTP, the government debt stock-to-GDP ratio is expected to be back on a downward slope in the medium term thanks to the gradual narrowing of budget deficits (Table 6.2). Moreover, the government is planning to introduce a fiscal rule by 2011 to ensure budget discipline, restrain government debt over the medium term and strengthen the institutional framework. According to the MTP, the legal framework for the fiscal rule should be completed by the end of the first quarter of 2010. These legal regulations are intended to ensure a better management of expectations by enhancing the medium-to-long term predictability of the fiscal policy.

Table 6.2. EU-Defined Central Government Nominal Debt Stock Performance and Targets
(In Percent of GDP)

	2007	2008	2009*	2010**	2011**	2012**
EU-Defined Central Govt. Nominal Debt Stock	39.4	39.5	46.5	49.0	48.8	47.8

*Forecast.
**Target.
Source: Medium-Term Program (2010-2012), Medium-Term Fiscal Plan (2010-2012), Treasury.

6.1. Budget Developments

The central government budget produced a deficit of 52.2 billion Turkish liras in 2009, while the primary balance delivered a surplus of 1.0 billion Turkish liras (Table 6.1.1). The higher-than-targeted rise in non-interest expenditures and the lower-than-targeted increase in tax revenues were the main reasons behind the weak budget performance.

Table 6.1.1. Central Government Budget Aggregates
(Billion TL)

	2008	2009	Rate of increase (Percent)	Performance / Target (Percent)
Central Government Expenditures	**227.0**	**267.3**	**17.7**	**103.1**
Interest Expenditures	**50.7**	**53.2**	**5.0**	**92.5**
Non-Interest Expenditures	**176.4**	**214.1**	**21.4**	**106.2**
Central Government Revenues	**209.6**	**215.1**	**2.6**	**86.5**
I. Tax Revenues	168.1	172.4	2.6	85.3
II. Non-Tax Revenues	34.5	35.9	4.1	87.9
Budget Balance	**-17.1**	**-52.2**	**-**	**502.2**
Primary Balance	**33.6**	**1.0**	**-97.1**	**2.1**

Source: Ministry of Finance.

Among non-interest expenditure items, current transfers had a distinct role in the increase of expenditures. In fact, current transfers accounted for 62.7 percent of the total change in non-interest expenditures (Table 6.1.2).

Table 6.1.2. Non-Interest Expenditures
(Billion TL)

	2008	2009	Change (Percent)	Share of Change (Percent)
Non-Interest Expenditures	**105.9**	**131.2**	**23.8**	**100.0**
1. Personnel Expenditures	32.3	37.7	17.0	21.7
2. Purchase of Goods and Services	13.1	15.4	17.2	8.9
a) Defense-Security	4.0	5.0	26.9	4.2
b) Healthcare Expenditures	4.3	4.6	6.6	1.1
3. Current Transfers	44.3	60.2	35.8	62.7
a) Duty Losses	1.2	2.6	120.7	5.7
b) Health, Pension, Social Benefits	21.5	34.8	62.3	52.9
c) Agricultural Support	5.1	3.8	-26.0	-5.3
d) Shares Reserved from Revenues	12.4	13.5	9.1	4.5
4. Capital Expenditures	7.8	8.0	2.8	0.9
5. Capital Transfers	1.8	1.8	-2.2	-0.2

Source: Ministry of Finance.

Among current transfer items, expenditures on health, pension and social benefits increased by 62.3 percent year-on-year, becoming the main driver of the growth in spending. This massive increase stemmed from the Treasury's financing of 5 percentage points of employer's social security contribution since November 2008. These transfers amounted to 3.5 billion Turkish liras in 2009. Moreover, the slowdown in social security premiums amid economic downturn boosted the transfers to finance the deficit of the Social Security Agency. Meanwhile, main expenditure items other than current transfers were broadly close to the levels envisaged in the 2009 budget law.

The economic contraction in 2009 weighed on tax revenues. Tax revenues increased by a mere 2.6 percent in 2009, while non-tax revenues increase by 4.1 percent (Table 6.1.3). The slight growth in tax revenues was attributable to the steep contraction in imports and the resulting 12.8 percent drop in VAT on imports. Although tax reductions from April to late September helped consumption-related tax revenues to grow markedly by the second half of 2009, tax revenues still remained well below targets throughout the year. On the other hand, despite slumping privatization revenues, non-tax revenues were slightly up year-on-year owing to transfers of some cash surplus from the Unemployment Insurance Fund and Privatization Fund into the general budget.

Table 6.1.3. General Budget Revenues
(Billion TL)

	2008	2009	Rate of increase (%)	Performance / Target (%)
General Budget Revenues	**203.03**	**208.7**	**2.8**	**85.9**
I-Tax Revenues	168.11	**172.4**	**2.6**	85.3
Income Tax	38.03	**38.4**	**1.1**	85.0
Corporate Tax	16.91	**18.0**	**6.6**	89.5
Domestic VAT	16.80	**20.9**	**24.1**	104.4
Special Consumption Tax	41.83	**43.6**	**4.3**	88.3
VAT on Import	29.97	**26.1**	**-12.8**	67.9
II-Non-Tax Revenues	34.51	35.94	**4.1**	**87.9**
Enterprise and Property Income	7.42	9.94	**34.0**	**135.1**
Interests, Shares and Fines	17.13	23.07	**34.7**	**118.8**
Capital Revenues	9.11	2.04	**-77.6**	**15.6**

Source: Ministry of Finance.

General budget revenues grew by 21.7 percent year-on-year during the fourth quarter of 2009, suggesting that the recent economic recovery translated into improved tax revenues in the final quarter (Table 6.1.4).

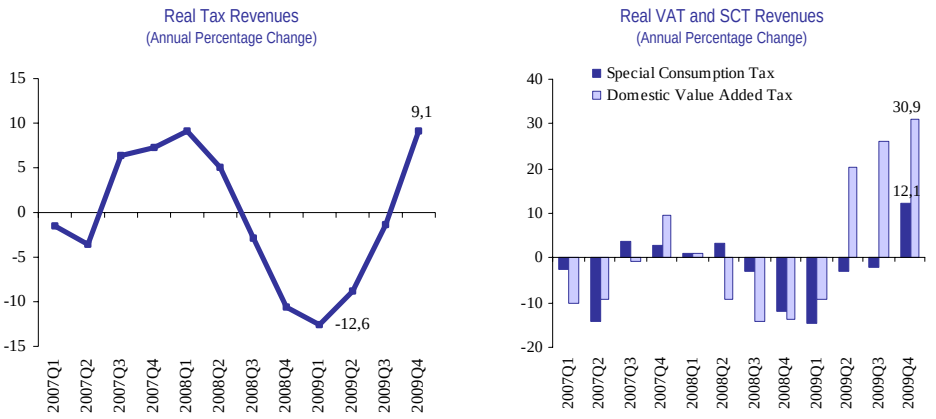
Table 6.1.4. Fourth-Quarter General Budget Revenues
(Billion TL)

	2008 Q4	2009 Q4	Rate of increase (%)
General Budget Revenues	**46.67**	**56.8**	**21.7**
I-Tax Revenues	40.83	47.1	15.3
Income Tax	10.04	9.9	-0.9
Corporate Tax	4.52	6.0	32.0
Domestic VAT	4.08	5.7	38.4
Special Consumption Tax	10.09	12.0	18.5
VAT on Import	6.66	7.5	13.2
II-Non-Tax Revenues	**5.71**	**9.61**	**68.2**
Enterprise and Property Income	1.06	1.42	34.5
Interests, Share and Fines	3.59	7.43	106.7
Capital Revenues	0.86	0.59	-30.6

Source: Ministry of Finance.

In real terms, the contraction in tax revenues that started in the third quarter of 2008 has lost pace by the second quarter of 2009 with the recovery in private consumption demand. The adjustments in VAT and SCT rates on certain goods and services during the second quarter of 2009 has helped VAT revenues to recover, while real SCT revenues increased year-on-year in the fourth quarter of 2009 for the first time since the second quarter of 2008 (Graph 6.1.1).

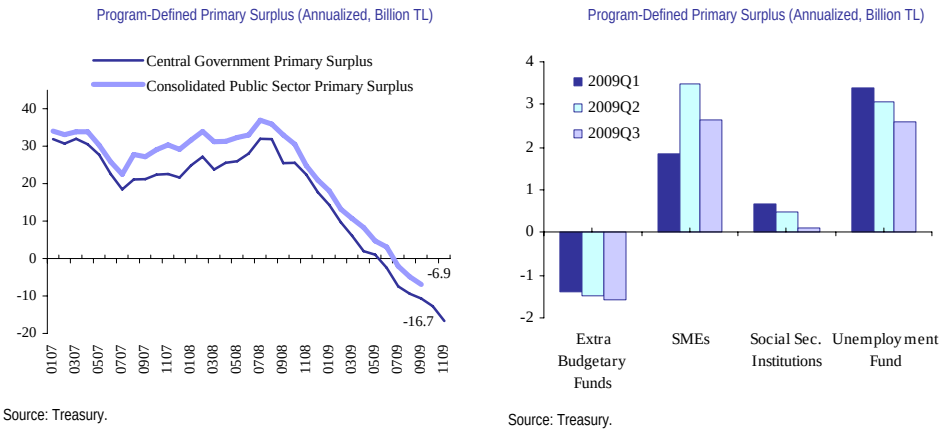
Graph 6.1.1. Real Tax Revenues



Source: Ministry of Finance.

On a 12-month cumulative basis, the public-sector primary surplus performance has been weakening considerably since September 2008 (Graph 6.1.2). In annualized terms, the program-defined central government primary surplus and the consolidated public-sector primary surplus have fallen to their lowest levels in recent years. In parallel with the weakening of the central government primary balance, the non-interest performance of extra-budgetary funds, the Social Security Fund and social security institutions has also worsened throughout 2009, while that of State Economic Enterprises increased in the second quarter and fell in the third quarter (Graph 6.1.2).

Graph 6.1.2. Primary Surplus



Source: Treasury.

Source: Treasury.

With the acceleration in central government primary budget expenditures since the third quarter of 2008, public investments and public spending made a positive contribution to GDP growth during January-September 2009. The recently announced budget data suggest that this continued into the final quarter as well. According to the 2010 Central Government Budget Law, primary budget expenditures are expected to maintain its high share in GDP, thereby indicating that the positive contribution from public expenditures to GDP growth is expected to continue in 2010, although at a decelerating pace. In this context, medium-term forecasts presented in the final chapter of this Report are built on the assumption that public spending would continue to stimulate economic activity in 2010, and become neutral by 2011.

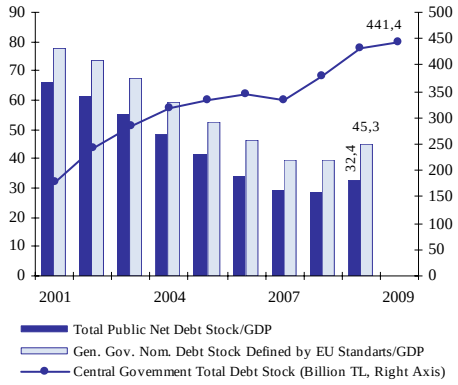
6.2. Developments in Debt Stock

The prudent fiscal policy implemented over the past few years reduced the debt burden rapidly and improved the maturity and currency composition of public debt stock significantly. However, the sharp drop in total public primary surplus since the final quarter of 2008 pushed the government's borrowing requirement higher. Despite the high debt rollover ratio, robust demand of commercial banks for government papers balanced public borrowing costs against any strains. The MTP aims to contain the rise in the government debt-to-GDP ratio over the next three years.

The central government debt stock increased by 16.1 percent year-on-year to 441.4 billion Turkish liras in 2009. The increase in central government debt stock has mainly been on account of net domestic debt growth and slightly due to net external debt growth. Meanwhile, the ratios of total net public debt stock and EU-defined general government nominal debt stock to GDP climbed to 32.4 and 45.3 percent, respectively, as of the third quarter of 2009 (Graph 6.2.1). The high debt rollover ratios in the fourth quarter indicate that the uptrend in public debt ratios during the first three quarters of the year continued into the final quarter of 2009.

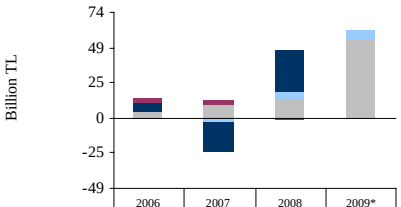
Graph 6.2.1. Public Debt Stock Indicators

Public Debt Stock Indicators



Source: Treasury, CBRT.

Decomposition of the Change in Central Govt. Debt Stock



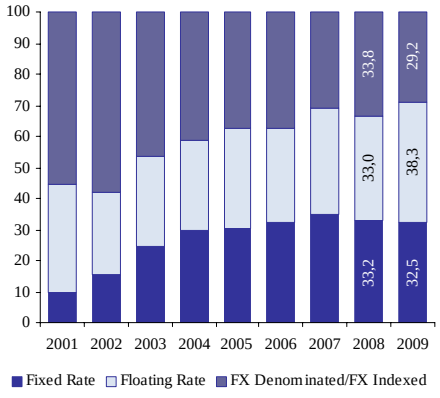
	2006	2007	2008	2009*
Parity Effect	3,2	3,4	-1,0	0,6
Tot. Exc. Rate Effect	6,4	-21,2	29,9	-0,1
Net Ext. Borrowing	-0,5	-2,6	4,0	5,9
Net Dom. Borrowing	4,5	8,9	13,9	54,8

* Changes compared to end-2008.
** Changes arising from movements in USD/EUR and USD/SDR parities.
*** Changes arising from movements in the TL/USD parity.
Note: Changes in net debt denotes the change adjusted for the exchange rate and parity effect.
Source: Treasury, CBRT.

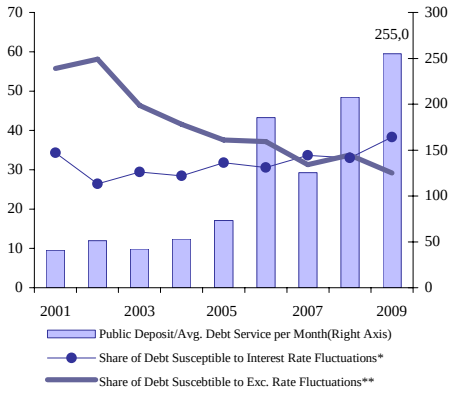
With the debt and risk management policies in place since 2003 as part of the strategic criteria and the macroeconomic stability maintained so far, the vulnerability of the public debt portfolio to liquidity, interest rate and exchange rate risk has decreased considerably. Recently, the share of fixed-rate instruments and exchange-rate-sensitive (FX-denominated and FX-indexed) instruments in central government debt stock has declined, while the share of floating-rate instruments has increased (Graph 6.2.2). The increase in the share of floating-rate instruments has largely been owed to the issue of CPI-indexed bonds with a relatively longer maturity.

Graph 6.2.2. Structure of Central Government Debt Stock

Composition of Central Government Debt Stock
(Percent)



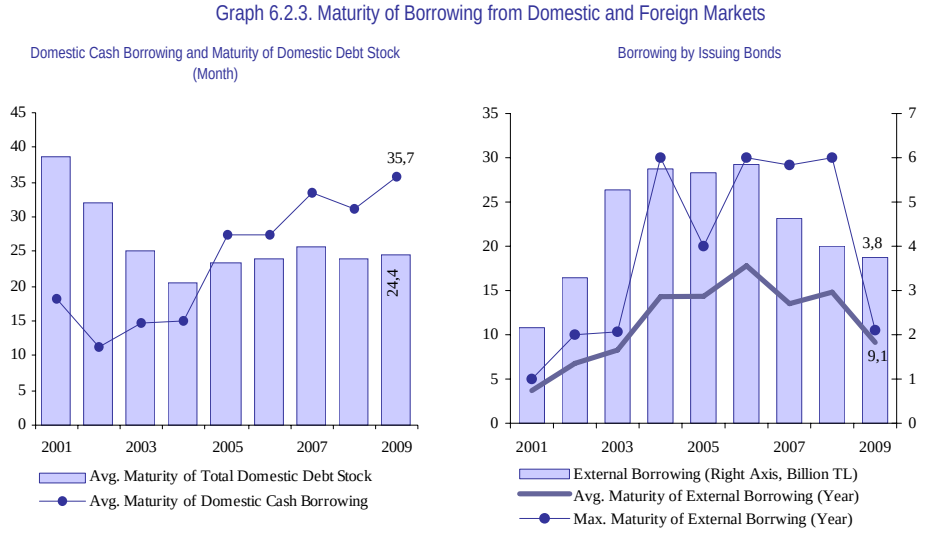
Vulnerability Indicators for Central Government Debt Stock
(Percent)



* Debt stock sensitive to interest rates contains discounted securities with a maturity less than 1 year and government securities with flexible interest rates.
** Debt stock sensitive to exchange rates contains foreign debt stock and FX-denominated and FX-indexed domestic debt stock.
Source: Treasury, CBRT.

Following the financing strategy intended to reduce the liquidity risk, the ratio of public deposits to average monthly debt service ended 2009 at 255 percent (Graph 6.2.2). The average maturity of domestic cash borrowing was longer from the 2008 average, causing the average maturity of total domestic debt stock to climb to 24.4 months in 2009. Furthermore, bond issues yielded a USD 3.8 billion worth of long-term external debt in 2009 with an average maturity of 9.1 years (Graph 6.2.3).

Graph 6.2.3. Maturity of Borrowing from Domestic and Foreign Markets



Source: Treasury, CBRT.

In sum, the worsening budget performance and the limited net external debt in 2009 led to a significant rise in the government's domestic borrowing requirement. To help ensure that the increasing level of government borrowing requirement does not crowd-out private-sector resources and limit the effectiveness of the monetary policy decisions, it is important to solidify commitments of fiscal discipline and bring debt rollover ratios down to reasonable levels in the upcoming periods, as projected in the MTP.

7. Medium-Term Projections

This Chapter summarizes the underlying forecast assumptions, and presents medium-term inflation and output gap forecasts and the monetary policy outlook over a three-year horizon.

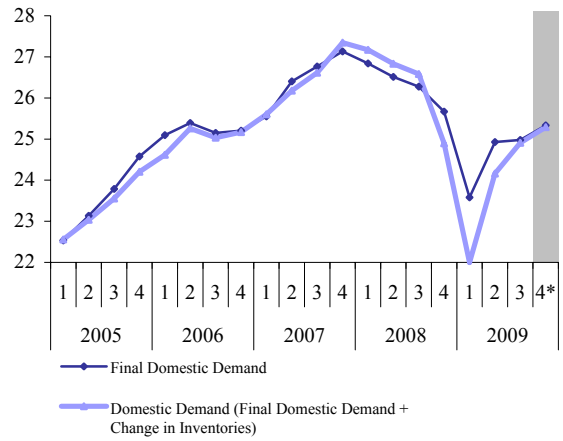
7.1. Current State of the Economy, Short-Term Outlook and Assumptions

Economic activity data during the fourth quarter were consistent with the outlook presented in the 2009 October Inflation Report, while year-end inflation was up by 1 percentage point from the October forecast due to unforeseen fluctuations in unprocessed food prices (Table 7.1.1). The extreme volatility in unprocessed food prices complicates the estimation of unprocessed food inflation (Box 3.1). In fact, after unprocessed food inflation remained well below seasonal averages in the third quarter of 2009, the food inflation forecast for 2009 was revised down to 5.8 percent. However, unprocessed food prices registered the highest inflation in six years during the final quarter of 2009, driving food inflation up to 9.26 percent at the end of the year (Table 7.1.1).

Core inflation indicators coincided with medium-term targets in the fourth quarter of 2009. Adjusted for tax changes and seasonal variations, none of the special CPI aggregates points to a deterioration in underlying inflation. In other words, the fourth-quarter rise in inflation was largely driven by factors relatively outside of the range of monetary policy influence as well as by transitory factors, rather than main components of the CPI.

Having picked up rapidly on tax incentives during the second quarter, economic activity continued to expand in the third quarter, albeit slowly. With the gradual withdrawal of tax cuts, private consumption demand slowed down from the second quarter, while the demand for goods that were not subject to tax cuts continued its weak course. Meanwhile, foreign demand continued to weigh on economic activity and employment in general by suppressing industrial activity. Destocking slowed remarkably in the third quarter, while aggregate demand conditions continued to support disinflation (Graph 7.1.1).

Graph 7.1.1. Domestic Demand
(Seasonally Adjusted, at 1998 Prices, Billion TL)



* Forecast
Source: TURKSTAT, CBRT.

Leading indicators for the fourth quarter of 2009 suggest that the economy continued to grow moderately in the last quarter. Aggregate demand is still expected to recover gradually, while unemployment may remain elevated for a long time. Thus, fourth-quarter indicators are consistent with the outlook presented in the October Inflation Report. Therefore, the outlook for aggregate demand is barely revised from the previous report. In other words, no considerable change has been made regarding the third-quarter output gap forecast- the starting point of our medium-term forecasts (Table 7.1.1).

The currently weak demand conditions help limit the pass-through of the upward cost pressure into domestic prices. Accordingly, although import prices increased slightly during the fourth quarter, the general pricing behavior has not been deteriorated. Brent crude oil prices were above our assumption of 70 USD/bbl for the fourth quarter. In view of the recent changes in international crude oil prices, Brent crude oil is expected to float around 80 USD/bbl in 2010 (Table 7.1.1).

Table 7.1.1. Sources of Revisions to Inflation Forecasts

	October 2009 IR						January 2010 IR					
CPI Inflation	-						end-2009, 1 point above forecast					
Output Gap	2009 Q3:-8.1 2009 Q4:-7.4						2009 Q3:-8.1 2009 Q4:-7.3					
Food Prices	2009: %5.8 2010: %6 2011: %6						2009: %9.3[1] 2010: %7 2011: %6.5					
Administered Prices and Taxes	Adding 0.5 percentage points to 2010 inflation						Adding 1.5 percentage points to 2010 inflation					
Oil Prices	2010: 75 USD 80 USD in and after 2011						2010: 80 USD 85 USD in and after 2011					
Euro Area Growth Forecasts[2]	2010			2011			2010			2011		
	CF	*WEO*	*OECD*	*CF*	*WEO*	*OECD*	*CF*	*WEO*[3]	*OECD*	*CF*	*WEO*	*OECD*
	1.1	0.3	0.0	-	1.3	-	1.3	0.3	0.9	1.6	1.3	1.7

[1] Food inflation at end-2009.
[2] Consensus Forecasts (CF), October 2009 and January 2010; World Economic Outlook (WEO), October 2009; OECD Bulletins, June 2009 and November 2009.
[3] Left unrevised as the WEO January 2010 Update has not been released as of 26 January 2010.

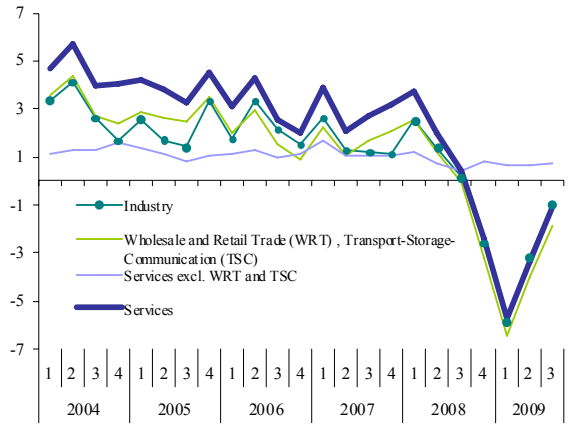
In sum, the starting point of our medium-term forecasts has been accordingly revised up. The details regarding the assumptions about domestic economic activity, global growth, commodity prices, financial markets and fiscal policy, which help build medium-term forecasts are presented below.

The tax adjustments, effective January 2010, on fuel, alcohol and tobacco to restore fiscal balance will add around 1.5 percentage points to 2010 CPI inflation. In October 2009, we assumed that prices of these products would be increased in line with the inflation target and projected a total contribution of 0.5 percentage points to CPI inflation (Table 7.1.1). Accordingly, tax adjustments in January have shifted the inflation forecast path by around 1 percentage point upwards throughout 2010. Moreover, it should also be noted that the base effects of 2009's tax adjustments to restore fiscal balance might cause inflation to fluctuate in 2010.

Fourth-quarter indicators point to a slow yet stable recovery in economic activity. The medium-term outlook for demand conditions would largely depend on the global economic recovery. In fact, amid the weak foreign demand, the absence of a strong and permanent turnaround in industrial production continues to restrain services sectors with strong industrial linkages, such as trade and transport/communication as well as the economic activity and employment prospects in general. In terms of contribution to GDP by sub-items

of services sectors, foreign demand conditions have an apparent adverse impact on trade-related services sectors (Graph 7.1.2). Thus, unless the foreign demand outlook improves markedly on the back of global growth or new export market opportunities, employment and domestic demand are unlikely to recover robustly. The current outlook regarding the level of economic activity and the pace of recovery constitutes the basis of concerns that it would take a long time for output gap to close. Within this outlook, we assume that aggregate demand conditions will continue further to support disinflation in the upcoming period.

Graph 7.1.2. Contribution to Annual GDP Growth from Production
(Percentage Point)

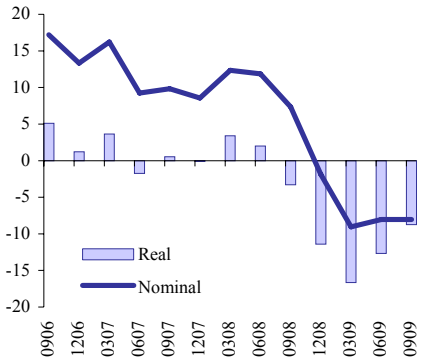


Source: TURKSTAT.

Food price forecasts for 2010 are based on the assumption that fruit and vegetable production would remain near 2009 levels. Meanwhile, supply and demand conditions are unlikely to improve markedly in the short run, therefore we assume that higher meat prices would contribute more to the annual food inflation than expected in the previous period. Hence, we revised our food inflation assumptions up from 6 percent to 7 and 6.5 percent for end-2010 and end-2011, respectively (Table 7.1.1). Food inflation is assumed to stay around 6 percent in 2012.

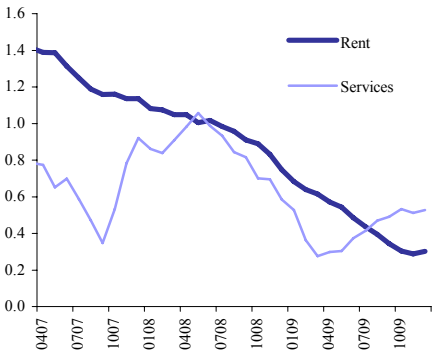
In seasonally adjusted terms, underlying services inflation remains subdued. The demand indicators for services sector do not indicate a remarkable recovery (Graph 7.1.3), while the rate of increase in prices of services is in line with the weak economic outlook (Graph 7.1.4).

Graph 7.1.3. Turnover Index for Services*
(Annual Percentage Change, Nominal and Real)



* TURKSTAT Short-Term Business Statistics, Trade and Services Indicators.
Source: TURKSTAT, CBRT.

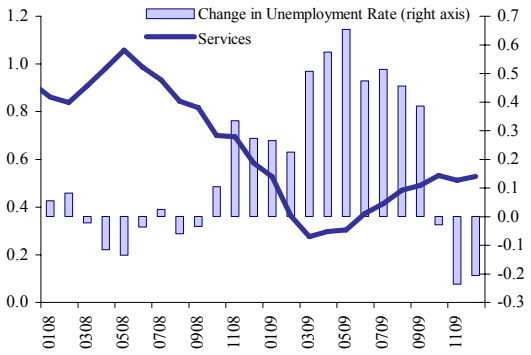
Graph 7.1.4. Services Inflation
(Seasonally Adjusted, 3-Month Averages)



Source: TURKSTAT, CBRT.

Despite being slightly up from the first quarter of 2009 when the inflationary effects of the economic contraction peaked, the monthly rate of increase in prices of services remains well below its pre-crisis averages. The unfavorable outlook for the labor market puts a drag on services inflation (Graph 7.1.5). High unemployment rates are expected to continue to keep prices of services from rising in coming months.

Graph 7.1.5. Changes in Services Inflation and Unemployment
(Seasonally Adjusted, 3-Month Moving Averages)*



* The change in unemployment is moved 4 months forward for each quarter.
Source: TURKSTAT, CBRT.

Assumptions on global economic activity remain critically important for building medium-term forecasts, given the growing consensus that the medium-term outlook for aggregate demand would largely depend on foreign demand as well as the effects of the global recovery on international commodity prices.

The global economic growth forecasts for 2010 have been revised slightly upwards since the October Inflation Report. Consensus Economics

revised its global growth forecast for 2010 up by 0.3 percentage points from October to 3 percent in its January 2010 issue of Consensus Forecasts Bulletin. Even though the rise in forecasts has been mainly driven by upward revisions to East European and Latin American economies, the US and Euro Area economies have also grown, yet slightly. According to the forecasts, the recovery in the Euro Area is expected to be slower and more protracted than in the US (Table 7.1.1).

In sum, the outlook for global growth remained unchanged in the final quarter of 2009. Thus, our assumptions for the medium-term outlook of foreign demand are left unrevised from the October Inflation Report. In other words, we built our inflation forecasts on the assumption that the uncertainty about the pace of global recovery remains and foreign demand maintains its weak course.

The expectations about global recovery summarized above and easier global liquidity conditions have been the main factors behind changes in international commodity prices since the fourth quarter of 2009. The growing optimism and the resulting rise in risk appetite resulted in more speculative positioning in commodity markets when also added with the supporting global liquidity conditions and the weak US dollar. As a result, crude oil prices rose in the fourth quarter, while the rate of increase in forward prices remained virtually unchanged. Therefore, we have incorporated the run-up in spot prices into our assumptions for future crude oil prices. Accordingly, in building our medium-term forecasts, we revised our oil price assumptions up by 5 US dollars to 80 USD per barrel for 2010 and to 85 USD per barrel for 2011 and onwards (Table 7.1.1).

The pass-through of crude oil prices into domestic energy prices and of import prices for other commodities, such as industrial metals, grains and gold, into domestic prices has also been fed into our forecasts. Thus, our medium-term forecasts are based on the assumption that imported input prices, like oil prices, would increase gradually with the moderate global recovery.

The Medium Term Program expects the ratio of non-interest government spending to GDP to fall gradually. Accordingly, our framework is based on the assumption that government spending would not exert an inflationary pressure on the demand side.

The improved global liquidity conditions and risk perceptions reveal that the tightness in credit conditions has been moderating since the release of the July Inflation Report. The continuing easing in financial conditions and declining loan rates have reinforced the expansionary impact of monetary policy. Nonetheless, the effectiveness of the credit channel in supporting the economic activity is still partly restrained owing to the ongoing tightness in lending standards for SME. Accordingly, our medium-term forecasts are built on the projection that the improved credit risk sentiment and the current monetary policy ease the financial tightening gradually.

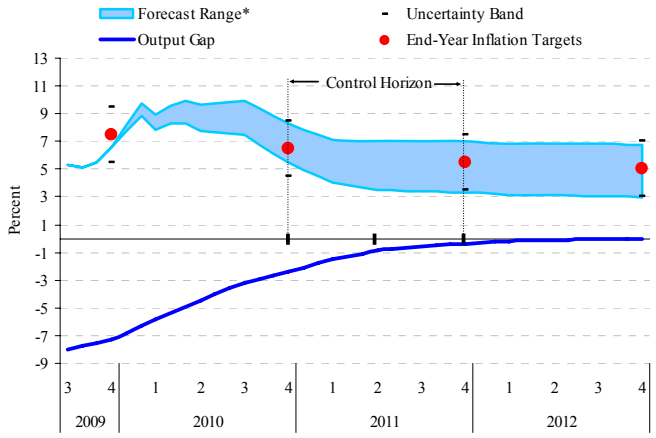
It is expected that credit market developments will continue to support domestic activity, and the impact of monetary policy would become more prevalent over the medium term. On the other hand, the rising domestic borrowing requirement of the government, ongoing problems in the global economy, and elevated levels of unemployment would continue to restrain credit expansion. On balance, the economy is expected to recover slowly, given the current outlook for foreign demand; therefore, the level of economic activity would remain non-inflationary for quite some time.

7.2. Medium-Term Outlook

This part presents our inflation and output gap forecasts and the monetary policy outlook built on the baseline scenario that is developed within the framework of the abovementioned short-term assumptions and projections.

Against this background, assuming policy rates are kept constant for a long period followed by limited rises thereafter, with policy rates staying at single digits throughout the three-year forecast horizon, the medium-term forecasts suggest that, with 70 percent probability, inflation will be between 5.5 and 8.3 percent with a mid-point of 6.9 percent at end-2010, and between 3.4 and 7.0 percent with a mid-point of 5.2 percent by the end of 2011. Furthermore, inflation is expected to decline to 4.9 percent by the end of 2012 (Graph 7.2.1).

Graph 7.2.1. Inflation and Output Gap Forecasts



*Indicates a 70-percent confidence interval for the forecast.

Our output gap forecasts based on the above assumptions are shown in Graph 7.2.1. Accordingly, the output gap is likely to close at a slightly more rapid pace than in the 2009 October Inflation Report, but the recovery is expected to be moderate. Employment and domestic demand are not expected to recover robustly unless there is a marked improvement in the foreign demand outlook. In other words, given the current outlook for the level of economic activity and the pace of recovery, it would take a long time for the output gap to close, hence aggregate demand conditions would continue to support disinflation for some time.

The revised forecasts indicate that there will be no significant upside pressure on inflation, even if policy rates are kept low for a long period of time. However, as depicted in Graph 7.2.1, inflation is likely to display a significant increase over the next two months due to tax adjustments and base effects. Moreover, the base effects would continue to be important in the second quarter of 2010, as the downside impact of the global crisis on consumer prices was significant during the previous year's first half. Therefore, inflation is expected to stay above the target for some time. However, as the impact of the tax and price adjustments gradually dissipates, inflation is expected to trend downward, stabilizing at around 5 percent over the medium term.

It should be emphasized that any new data or information regarding the inflation outlook may lead to a change in the monetary policy stance. Therefore, assumptions regarding the future policy rates underlying the inflation forecast should not be perceived as a commitment on behalf of the CBRT.

7.3. Risks and Monetary Policy

The outlook for domestic economy and its related risks has largely been shaped by global developments since the deepening of the global crisis during the last quarter of 2008. Given the significance of the trade and global financial channels in the contraction of domestic economic activity during 2009, it is expected that the global developments would continue to be the main determinant of the domestic economic activity and inflation outlook in the forthcoming period. Accordingly, in this part of the Chapter, the likely course of global and domestic economic activity, as well as their impact on domestic inflation will be considered jointly.

Rising budget deficits and ongoing problems in credit and real estate markets continue to pose downside risks on recovery, especially in developed economies. Although the probability of another disruption in global economic activity has been decreasing, it is still important as a source of downside risk factor on domestic economic activity and inflation. Should the global conditions deteriorate again, and consequently delay the domestic recovery, the CBRT would consider further monetary easing.

Despite the prevailing downside risks on global and domestic economic activity, upside risks have also been emerging since the second half of 2009, given the pace of the global recovery over this period. Moreover, it should be noted that the impact of the unconventional monetary and fiscal measures taken since the last quarter of 2008 would be observed with a lag. Similarly, it should not ignored that the effects of 1025 basis points cumulative easing in the CBRT policy between November 2008 and November 2009 would also be transmitted with a lag. In this respect, should the recovery in domestic economic activity turn out to be faster than expected, the limited monetary policy tightening implied in the baseline scenario could be implemented earlier than envisaged.

The fact that inflation will rise in the forthcoming period due to base effects and public price adjustments constitutes an important risk factor through its potential impact on inflation expectations. Several adverse factors (such as unprocessed food and oil price increases, base effects and administered/directed price hikes) have been leading to upward movements in inflation since the last quarter of 2009. Although these factors are temporary, they will likely cause headline inflation to stay at elevated levels for sometime. It is crucial that the economic agents fully understand the temporary nature of these developments and do not deteriorate their medium- and longer-term expectations (Box 7.1). Under the assumption that the low levels of resource utilization will prevail for some time, labor market conditions will continue to disable expansion in consumption, and fiscal policy will gradually be contractionary, these temporary factors as well as price hikes due to one-time shocks will have very limited effects on general pricing behavior. Currently, both services price inflation as well as core inflation figures are consistent with medium-term inflation targets, and therefore, it is foreseen that the policy rates would be maintained at low levels for a long period. Nevertheless, it should also be underscored that the CBRT will not hesitate to tighten monetary policy earlier than envisioned under the baseline scenario, should any unforeseen developments lead to a deterioration in general price setting behavior.

Increasing budget deficits worldwide, especially in developed economies, continue to pose risks on inflation expectations and thus on longer-term global interest rates. Countries with relatively sound banking systems and prudent fiscal policies will decouple from the others, and would be more resilient against these risks. In this respect, the CBRT will continue to monitor fiscal policy developments closely while forming its monetary policy strategy. Should the goals set out in the MTP be implemented through institutional and structural measures, rather than tax and administered price hikes, it would be possible to keep policy rates at single digits throughout the forecast horizon.

The possible course of oil and other commodity prices continues to be another important risk factor. The loosening short-term liquidity as a result of countercyclical policies on a global scale may expose commodity prices to speculative movements. Fast growth trends in countries like China and India, and the rising share of these economies in global commodity demand, feeds these speculative motives. Therefore, oil and other commodity price developments may continue to rise, even under a scenario that the global

economic recovery would be slow and gradual. Under current circumstances, the presently weak domestic demand conditions limit the pass-through of cost-push shocks to domestic prices. Therefore, the CBRT will not react to the first round effects of volatility in commodity prices, especially when the resource utilization remains at low levels in the short term. However, if an uptrend in commodity prices coincides with a strong and permanent rebound in global economic activity that would in turn have adverse effects on inflation expectations, then the CBRT will tighten monetary policy in line with medium-term inflation targets.

Since the last quarter of 2008, the CBRT, without conflicting with its main objective of price stability, has focused on containing the adverse effects of the global crisis on the domestic economy, and this task has been achieved to a large extent. Monetary policy will continue to focus on the permanent establishment of the price stability in the period ahead. Strengthening the commitment to fiscal discipline and the structural reform agenda would contribute to relative improvement of Turkey's credit risk, and thus support macroeconomic and price stability. In this respect, timely implementation of the structural reforms envisaged by the Medium Term Program and the European Union accession process remains to be of utmost importance.

Box 7.1 INFLATION EXPECTATIONS BEFORE AND AFTER THE TARGET REVISION IN 2008

The success of inflation targeting regime relies basically on the ability of the central bank to shape the decisions of the economic agents in line with the monetary policy targets by gaining credibility. In this framework, inflation targets as anchor play an important role for shaping market expectations. Yet, the power of inflation targets to guide inflation expectations is directly related to credibility of central banks, and hence the credibility of their announced inflation targets. [1]

As one of the key principles of inflation targeting, target revision might be brought up only if targets become unrealistic for economic agents thereby leading to a loss of credibility and higher costs of fighting inflation. Having implemented inflation targeting regime since early 2006, the Central Bank of the Republic of Turkey has acted in conformity with this principle. Despite having been mainly driven by factors beyond the realm of monetary policy, the significant overshoots of year-end inflation targets during the first two years of the regime and the late prediction of the 2008 inflation target overshoot have, over time, weakened the role of inflation targets as an anchor for expectations. In fact, CBRT studies found that before target revisions economic agents largely anchored their expectations to inflation targets during the rapid decline in inflation between 2002 and 2005, whereas, expectations formation changed because of the deviation of inflation from the year-end targets due to severe supply shocks and the portfolio shock in 2006.[2]

1 For detailed information on the main principles of inflation targeting, see: Kara, H. and M. Orak, 2009, "Inflation Targeting", Ercan Kumcu (editor), Krizler, Para ve İktisatçılar (Crises, Money and Economists), pp. 80-140, Istanbul: Remzi Pub.

2 See: Başkaya, Y. S., Kara, H., and D. Mutluer-Kurul, 2008, "Inflation Expectations and Monetary Policy in Turkey", CBRT Working Paper, No: 08/01.

Envisaging that the cost of fighting inflation would rise further if the deterioration in expectations formation turns permanent, the CBRT and the government decided in June 2008 to revise up inflation targets for 2009 and onwards, in order to re-control inflation expectations and restore credibility in the regime. The grounds and potential effects of the decision were announced publicly within an effective communication policy, and the target revision coincided with the monetary tightening in June 2008 to avoid any damage from target revisions on inflation expectations in the short run. The aim of the target revision has been to set inflation targets so that they will act as an anchor for economic agents and thus inflation expectations can be controlled. Inflation target for 2012 is determined under the light of the experiences from the first years of inflation targeting, and considering the target to be credible and attainable in terms of the above principles.[3]

Following the inflation target revision in June 2008, the deterioration in inflation expectations came to a halt. The consequent monetary tightening and the effective communication policy with the public reinforced the effect of the revision. However, it is far more important whether the target revision made with a medium-to-long term perspective has a permanent effect on anchoring expectations. Recent CBRT studies indicate that the target revision enabled a stronger relationship between inflation targets and both 12- month and 24-month ahead inflation expectations.[4] In other words, being statistically insignificant before June 2008, the relationship between the inflation target and 24-month ahead expectations has become significant after June 2008 and onwards. Meanwhile, both the size and the statistical significance of the relationship between inflation expectations and past inflation realizations declined following the target revision. Moreover, the results show that the increase in the sensitivity of 24-month ahead expectations to targets has exceeded the increase in the sensitivity of 12-month ahead expectations to targets. This finding suggests that the target revision is more effective in managing medium-term expectations.

In sum, following the target revision in 2008, the relationship between inflation expectations and targets has re-strengthened, while expectations have become less sensitive to inflation realizations. In conclusion, target revision has restored the credibility of CBRT's inflation targets, and hence, the target revision has broadly achieved its purpose.

[3] Factors taken into account in setting the inflation target for 2012 are explained in detail in the "Monetary and Exchange Rate Policy for 2010".

[4] For technical details and precise results of the analysis, see: Başkaya, Y. S., Gülşen, E. and M. Orak (2010), "Inflation Expectations Before and After the Target Revision in 2008", CBRT Economic Notes, No: 2010-01

In sum, following the target revision in 2008, the relationship between inflation expectations and targets has re-strengthened, while expectations have become less sensitive to inflation realizations. In conclusion, target revision has restored the credibility of CBRT's inflation targets, and hence, the target revision has broadly achieved its purpose.

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Abbreviations

BTS	Business Tendency Survey
CBRT	Central Bank of the Republic of Turkey
CPI	Consumer Prices Index
CDS	Credit Default Swap
CF	Consensus Forecasts
ECB	European Central Bank
EMBI	Emerging Markets Bonds Index
Fed	Federal Reserve
GDBS	Government Domestic Borrowing Securities
GDP	Gross Domestic Product
IEA	International Energy Agency
IMF	International Monetary Fund
ISE	Istanbul Stock Exchange
MPC	Monetary Policy Committee
MSCI	Morgan Stanley Capital International
MTP	Medium-Term Program
OECD	Organization for Economic Co-Operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PMI	Purchasing Managers Index
SCT	Special Consumption Tax
SME	Small and Medium-Sized Enterprises
TARP	Troubled Asset Relief Program
TURKSTAT	Turkish Statistical Institution
TL	Turkish Lira
USA	United States of America
WEO	World Economic Outlook
VAT	Value Added Tax

2010 Calendar of MPC Meetings, Inflation Reports and Financial Stability Reports		
Monetary Policy Meeting	Inflation Report (in Turkish)	Financial Stability Report (in Turkish)
January 14, 2010 (Thursday)	January 26, 2010 (Tuesday)	
February 16, 2010 (Tuesday)		
March 18, 2010 (Thursday)		
April 13, 2010 (Tuesday)	April 29, 2010 (Thursday)	
May 18, 2010 (Tuesday)		May 26, 2010 (Wednesday)
June 17, 2010 (Thursday)		
July 15, 2010 (Thursday)	July 27, 2010 (Thursday)	
August 19, 2010 (Thursday)		
September 16, 2010 (Thursday)		
October 14, 2010 (Thursday)	October 26, 2010 (Thursday)	
November 11, 2010 (Thursday)		
December 16, 2010 (Thursday)		December 7, 2010 (Tuesday)