CENTRAL BANK OF
THE REPUBLIC OF TURKEY

inflation report

2008-IV

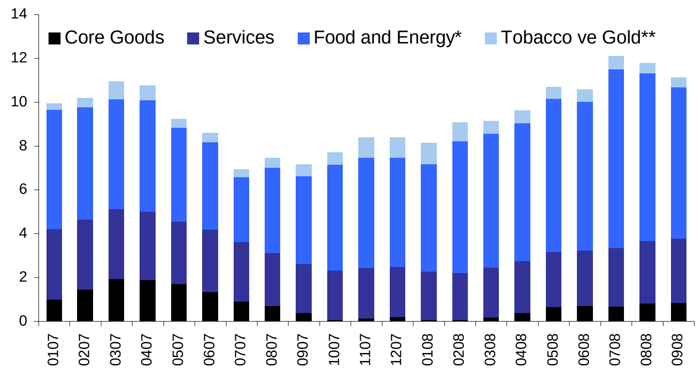
CONTENTS

1. Overview

1.1. Inflation Developments

Food and energy prices continued to be the main drivers of inflation in the third quarter. Although food, energy and other commodity prices have started to ease in September due to deepening problems in global financial markets, their past increases have continued to keep annual headline inflation at relatively high levels. As of September, around 7 percentage points of the 11.1 percent annual CPI inflation resulted from the direct impact of the rise in food and energy prices (Graph 1.1).

Graph 1.1. Contribution to Annual CPI Inflation



* Food and Energy: Food, non-alcoholic beverages and energy.
** Tobacco and Gold: Alcoholic beverages, tobacco products and gold.
Source: TURKSTAT, CBT.

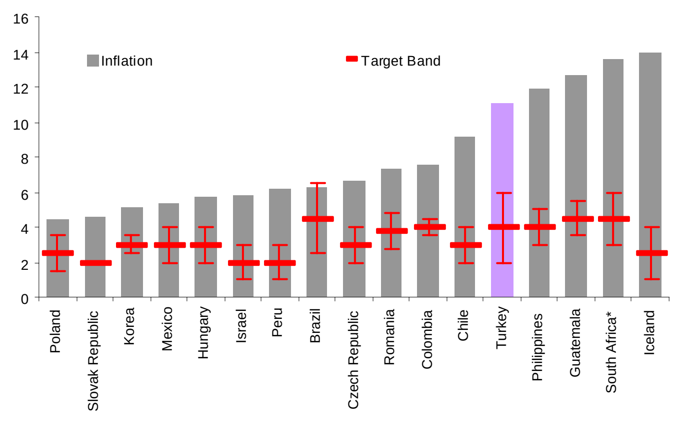
Rising energy prices was the main factor impeding the disinflation process in the third quarter. Despite the sharp downward correction in oil prices, lagged impact of the past increases continued to put pressure on other energy items such as electricity, natural gas and coal. As a consequence, the contribution of energy prices to annual inflation has reached 3.8 percent by the end of the third quarter.

Food inflation showed significant moderation in the third quarter. Favorable domestic weather conditions and easing commodity prices have helped food inflation to come down from 14 percent at the end of second quarter to 11.1 percent in the third quarter. Particularly, unprocessed food inflation, which displayed a marked correction in the past two quarters, followed a more favorable course than expected.

Core inflation indicators continued to rise in the third quarter. Annual rate of increase in CPI excluding food, energy, tobacco and gold (I) items rose to 7.3 percent from 6.4 of the previous quarter. This can mostly be attributed to last year's low base, rather than deterioration in the general price setting behavior. In fact, seasonally adjusted figures suggest that core inflation has moderated in the third quarter. Yet, we expect core inflation indicators to pick up in the last quarter due to recent depreciation in the New Turkish lira.

Elevated commodity prices have continued to exert inflationary pressures all over the world. As depicted in Graph 1.1.2, almost all emerging economies under inflation targeting have faced significant breaches in their inflation targets.

Graph.1.1.2. Inflation and Target Bands in Emerging Economies
(as of September 2008)



* As of August 2008.
Source: Web sites of central banks, IFS, TURKSTAT, CBRT.

1.2. Inflation Outlook and Monetary Policy

In order to contain the deterioration in inflation expectations and to prevent the materialization of the second round effects of supply-side shocks, the Monetary Policy Committee (MPC) implemented a monetary tightening during May-July period, increasing the policy rates by a cumulative of 150 basis points. The tightening in monetary policy, which was implemented jointly with the change in inflation targets, was effective in controlling expectations. Consequently, inflation expectations displayed signs of easing in the third quarter.

Despite the weakening domestic demand, uncertainties in the global financial markets require monetary policy to remain cautious. The MPC has therefore decided to leave policy rates unchanged in the last three meetings. In its latest statement, the MPC assessed that inflationary impact of the recent exchange rate movements would be offset by the favorable outlook in food prices and the sharp decline in oil prices. However, it was also noted that the intensification of the financial market turmoil required caution in terms of both the monetary policy and the inflation outlook.

Recent readings on domestic sales, production and confidence indicators suggest that the weakening in domestic economic activity has become even more significant since July. As the world will feel the adverse effects of the intensified and prolonged financial market turmoil, both private consumption and investment growth is likely to remain weak in the forthcoming period.

Data on consumer credits suggest that financial conditions continue to be restrictive. Consumer loans in the past year have been growing at a moderate pace compared to the episodes of vigorous domestic demand. Recently, the slowdown in consumer loans has become more evident. Increased risk aversion and the tightening in credit conditions will continue to restrain credit growth in the forthcoming period.

The expected weakening in the domestic demand and the recent depreciation in exchange rates will lead to a higher contribution from net exports on aggregate demand. However, this effect will be partly offset by the slowdown in external demand due to the economic downturn in our major trading partners.

Overall, we are likely to face a protracted period of weak domestic activity in the forthcoming period. Hence, our revised forecasts incorporate a larger contribution from aggregate demand conditions to disinflation, compared to the previous Report.

High level of uncertainty stemming from recent intensification of global financial market turmoil has led to an unusually high demand for USD liquidity, leading to significant depreciation of currencies in emerging markets, including Turkey. The significant slowdown in domestic demand growth should limit the second round effects of the exchange rate pass-through. Therefore, we expect the pass-through from exchange rates to the domestic inflation to be relatively limited compared to previous episodes. Still, first round effects of the recent depreciation is likely to add around 1.2 percentage points to 2008 end-year inflation and a further 1.5 percentage points to 2009 inflation.

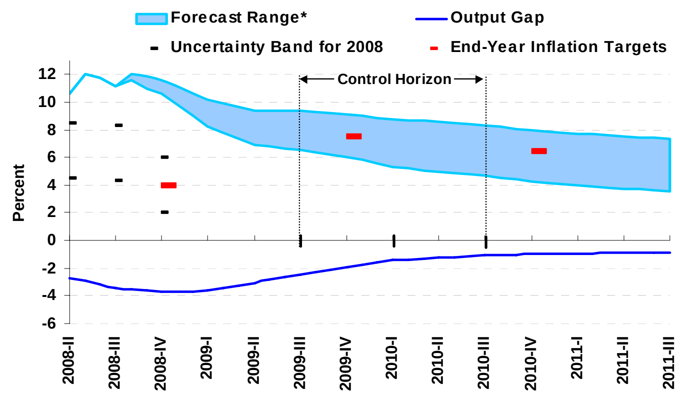
Baseline assumptions in the July Inflation Report envisaged a constant path for oil prices around USD 140 per barrel over the forecast horizon. However, oil prices displayed a sharp fall in the meantime, suggesting a downward revision in our assumptions. Taking the average future prices in the first three weeks of October as a benchmark, we have revised our baseline scenario for oil prices down to USD 80 per barrel. On the other hand, domestic prices of other energy items such as electricity and natural gas have increased at a faster pace than we expected, partly limiting the favorable impact of the fall in oil prices. Overall, the developments in energy prices has led to a downward revision in our end-2008 inflation forecast by 0.5 percentage points, and in our end-2009 forecast by 1.1 percentage points.

Food prices also followed a more favorable course than implied by our baseline scenario in the July Inflation Report. Taking into account better than expected realizations in unprocessed food prices and easing agricultural commodity prices, we have lowered the assumptions for food inflation from 14 percent to 11 percent for the year 2008, and from 9 percent to 7.5 percent for the year 2009. These changes have led to a downward revision of about 0.8 points for 2008 and 0.4 percentage points for 2009. Moreover, we have revised our assumptions for 2010 food inflation down from 7 percent to 6 percent.

Services inflation turned out to be higher than expected in the third quarter, owing to the impact of the accumulated supply shocks on catering and transport services. This development has led to an upward revision of our end-2008 forecast by 0.6 percentage points. We expect services inflation to decelerate significantly in 2009 with the expected moderation in aggregate demand.

Accordingly, we have revised up our end-2008 inflation forecast to 11.1 percent. Our medium term forecasts suggest that, with 70 percent probability, inflation will be between 6.1 and 9.1 percent (mid-point 7.6) at the end of 2009, and between 4.3 percent and 7.9 per cent (mid-point 6.1) at the end of 2010. We forecast inflation to come down to 5.4 percent by the end of the third quarter of 2011 (Graph 1.2.1).

Graph.1.2.1. Inflation Forecasts*



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

To sum up, there has been no major revision in our medium term inflation forecasts, as the impact of the favorable food and energy prices and the weakening demand on inflation will be largely offset by the pass-through from recent exchange rate depreciation.

It should be emphasized that any new data or information regarding the inflation outlook may lead to a change in our policy stance. Given the exceptionally high level of uncertainties in global financial markets, monetary policy needs to remain flexible.

1.3. Risks

Recent problems in global credit markets have led to a loss of confidence in the global financial system. These developments have adversely affected the global liquidity flows and triggered an extraordinary demand for liquidity, especially in USD. Acting promptly and in a coordinated manner, central banks are taking decisions in an effort to overcome the liquidity squeeze in money markets. In line with these efforts, we have taken several measures to maintain the smooth functioning of domestic foreign exchange markets. First, the Central Bank of the Republic of Turkey (CBRT) resumed its intermediary role in the Foreign Exchange Deposit Market. Second, foreign exchange purchase auctions were suspended in order to further enhance the liquidity conditions of Turkish banks. Third, we have started to inject foreign exchange liquidity into the market through foreign exchange selling auctions to avoid undesired volatility in foreign exchange markets. We will continue to implement necessary measures to ensure the well functioning of financial markets in Turkey.

Looking ahead, credit conditions are expected to continue to tighten in the forthcoming period. Regarding the inflation outlook, these developments create upside risks through potential portfolio movements in the short term, but downside risks through weaker aggregate demand in the medium term. Given the uncertainty surrounding the global economic outlook, monetary policy needs to be flexible on either side. In fact, in this report we do not provide any explicit signal for the future course of the policy rates. Future monetary policy decisions will depend on the impact of the ongoing financial turmoil on the domestic economy.

Commodity prices continue to be volatile, creating risks to the inflation outlook. Despite the downward revision in projections for food and energy prices, our main scenario is still based on quite conservative assumptions, implying that the risks are on both sides. In order to address these risks, last chapter of the Report presents inflation projections under alternative scenarios for food and energy prices.

In our first scenario, we assume that food price inflation materializes at 12.5, 10, and 9 percent throughout 2008-2010 period, whereas oil prices rise to 110 USD at the end of 2008, staying constant thereafter. Assuming an appropriate monetary policy response, our forecasts under this scenario suggest that inflation will be 8.9 percent at the end of 2009 and around 7.1 percent at the end of 2010.

In the second scenario, we assume that food price inflation materializes at 9.5, 5, and 3 percent throughout 2008-2010 period, whereas oil prices ease to 50 USD at the end of 2008, staying constant thereafter. Assuming an appropriate policy response, our forecasts under this scenario suggest that inflation will be 6.3 percent at the end of 2009 and around 5.2 percent at the end of 2010.

Finally, a critical underlying assumption for the inflation and monetary policy outlook outlined above is that government expenditures and incomes policy will evolve in line with the official projections, and that there will be no further increases in indirect taxes or administered price adjustments, except those required by the automatic pricing mechanisms in place. In particular, this means any needed tightening in the fiscal balance would occur largely through expenditure cuts rather than higher excise taxes. Any deviation from this framework may lead to a revision of the outlook for inflation and monetary policy.

1.4. Conclusion

International markets have witnessed extraordinarily high level of volatility since the publication of the July Inflation Report. This process has led to several significant changes in factors affecting inflation: First, recent depreciation in the New Turkish lira will create upward pressure on inflation, especially in the short term. Second, domestic demand conditions have been weaker than expected, implying larger contribution from aggregate demand conditions to disinflation compared to the previous letter. Third, with the sharp decline in commodity prices, we have revised down our assumptions for food and oil prices.

We expect that the pass-through from recent exchange rate depreciation will be largely offset by the disinflationary impact of the favorable food and energy prices and the weakening demand. Accordingly, our inflation forecasts suggest that inflation targets at 7.5 percent, 6.5 percent, and 5.5 percent set for the next three years are attainable, even under quite conservative assumptions for food and energy prices. However, the intensification of the financial market turmoil requires caution with regard to both the monetary policy and the inflation outlook.

CBRT has been closely monitoring the liquidity conditions in the domestic markets. Several measures have been already implemented in order to facilitate the smooth functioning of our financial markets. We will continue to take the necessary measures to contain the adverse effects of the global financial turmoil on the domestic economy. Future policy decisions will largely depend on the developments in global markets and their reflections on the local financial markets.

Prudent monetary policy is necessary but not sufficient to maintain the resilience of the economy against the global financial turmoil. Preserving the fiscal discipline and strengthening the structural reform agenda would also help to mitigate the adverse effects of the ongoing shocks on the domestic economy. In this respect, the European Union accession process and the implementation of structural reforms envisaged in the economic program remain to be of utmost importance. In particular, advances in structural reforms, which would improve the quality of fiscal discipline and enhance productivity gains, are monitored closely by the CBRT with regard to their implications on macroeconomic and price stability.

2. International Economic Developments

2.1. Macroeconomic Developments

In the summer of 2008, uncertainties about the financial condition of FannieMae and FreddieMac, two government-supported mortgage companies, propelled the financial distress driven by the sub-prime crisis that emerged in August 2007. The turmoil in global financial markets, fueled by heightened concerns, spilled over into non-financial corporations and emerging economies that were relatively unharmed by previous turbulences. In August and September 2008, advanced economies sought to ease pressures in financial markets by means of massive coordinated liquidity injections.

However, these measures failed to stem the rising panic, and on September 7, 2008, the Federal Housing Finance Agency (FHFA) announced that FannieMae and FreddieMac had been placed into conservatorship, representing a new phase in the current financial crisis. After the US investment bank Lehman Brothers filed for bankruptcy on September 15, 2008 and shares in American International Group (AIG), the world's largest insurance company, plunged more than 60 percent on September 16, 2008, the US Federal Reserve (Fed) offered a cash lifeline to the troubled financial sector. Yet, the demand from other big investment banks to access the short-term liquidity assistance that the Fed offered to deposit-taking banks increased the perceived risks of investors, led to a freeze in the interbank money markets worldwide, and raised funding costs.

Overall, the impact of the US financial collapse is devastating, not only to the US economy but also to the global economy. The alleged need for a US-style bailout plan for the European financial sector elevated the systemic risk in global financial markets. The failure in the global financial system, driven by increased systemic risk, has spilled over into the real sector with higher funding costs and tighter borrowing conditions. Further tightening in credit supply suggests that the crisis may have an even more adverse impact on non-financial sectors and emerging market economies. Although the financial fragility in emerging market countries varies from region to region, the impact of the global crisis will be more severe in economies that lack a sound banking system and budget structure, attract mostly short-term capital inflows, and are more responsive to exchange rate changes.

With the global macroeconomic slowdown, major financial institutions either defaulted or went bankrupt, resulting in increased credit risk, damaged balance sheets and a plunge in share prices. These developments prompted governments to take a more proactive stance towards fostering global financial stability. Accordingly, the European and US governments announced new rescue plans in early October 2008 amid heightened fears of a global credit crunch. On October 3, 2008, the US Senate passed the Emergency Economic Stabilization Act, authorizing the US Secretary of Treasury to establish a Troubled Asset Relief Program (TARP) to purchase distressed assets, especially mortgage-backed securities. The TARP's purchases of illiquid assets aims to offset losses from the subprime crisis, provide transparency in pricing mortgage-backed securities and create liquidity. In addition, the US and European governments raised deposit insurance coverage limits, while G-7 nations agreed on an action plan to pump public funds into troubled financial institutions, when necessary.

2.1.1. Economic Performance and Monetary Policy

After having expanded by 2.2 percent in the second quarter of 2008, the US economy is expected to grow by a mere 1.2 percent in the third quarter. Growth forecasts for 2008 remained unchanged, whereas those for 2009 were dramatically trimmed to 0 percent from 1.4 percent (Table 2.1.1).

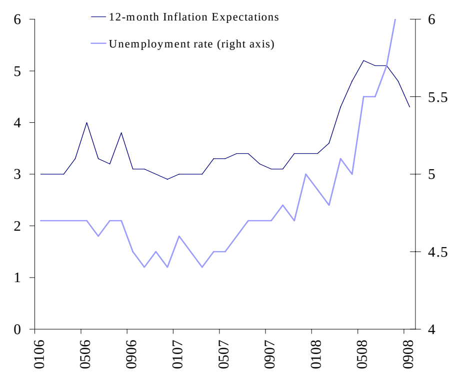
Table 2.1.1. Growth Rates
(Annual Percentage Change)

				2008				2009			
	2007	2008*	2009*	I	II	III*	IV*	I*	II*	III*	IV*
*World***	5.0	3.9	3.0	-	-	-	-	-	-		
*USA****	2.0	1.8	0.0	2.5	2.2	1.2	1.3	1.3	1.0	1.4	2.1
*EU****	2.6	1.2	0.5	2.1	1.4	0.8	0.7	0.2	0.7	1.1	1.3
*UK****	3.0	1.1	-0.2	2.3	1.4	0.8	0.1	-0.1	0.2	0.8	1.4
*Japan****	2.0	0.7	0.5	1.2	1.0	0.9	0.5	0.0	0.8	1.0	1.3
*China*****	11.9	9.7	9.3	10.6	10.4	-	-	-	-	-	-
*Germany****	2.5	1.7	0.3	2.6	1.7	1.2	0.9	-0.1	0.7	1.0	1.3
*France****	2.1	0.9	0.5	2.0	1.1	0.5	0.4	0.2	0.8	1.2	1.4
*Italy****	1.4	0.0	0.0	0.3	-0.1	-0.2	0.3	-0.1	0.4	0.6	0.7

*Forecast.
Source: ** IMF World Economic Outlook, *** Consensus Forecasts, ****Economic Intelligence Unit.

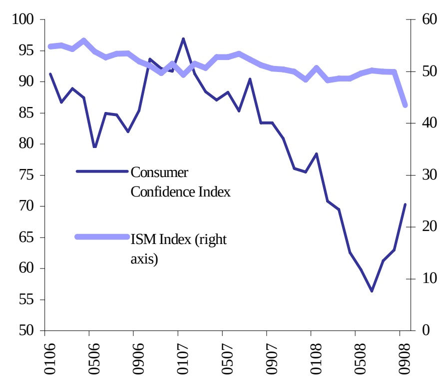
Moreover, the US unemployment rate increased, leading to lower inflation expectations amid reduced economic activity. The manufacturing ISM Index continued to fall, while the University of Michigan Consumer Confidence Index posted a slight gain during the past few months (Graph 2.1.1 and Graph 2.1.2).

Graph 2.1.1. US Unemployment Rates and Inflation Expectations
(Percent)



Source: Bloomberg, Institute for Supply Management.

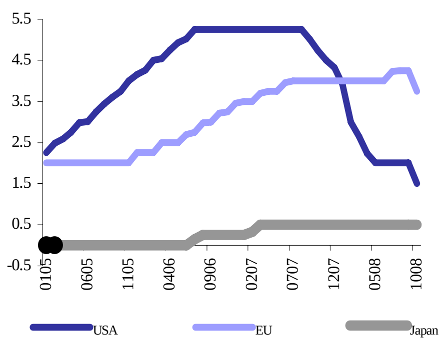
Graph 2.1.2. University of Michigan Consumer Confidence Index and ISM Index



Source: Bureau of Labor Statistics, University of Michigan.

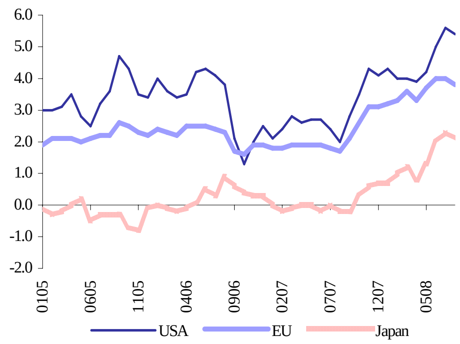
Latest readings on US inflation indicate that headline inflation remained elevated. Yet, the recent drop in energy and commodity prices is expected to put some downward pressure on consumer prices in coming months, a belief that is fostered by the impending softening in consumer spending. Accordingly, in view of the worsening growth outlook, the Fed cut rates twice by 50 basis points, first on October 8 and then on October 29, and lowered the short-term interest rate to 1 percent (Graph 2.1.3 and Graph 2.1.4).

Graph 2.1.3. Federal Funds Rate
(Percent, Monthly Average)



Source: Bloomberg.

Graph 2.1.4. Inflation Rate
(CPI, Annual Percentage Change)



Source: Bloomberg.

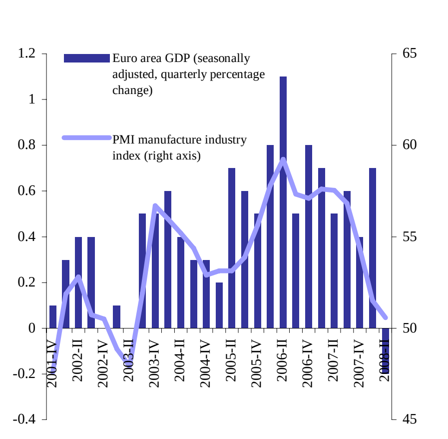
US exports continue to perform strongly. The recent slump in world oil prices is expected to reduce the current account deficit, though not significantly, as global economic activity dramatically slows.

The Fed continues to take actions to address liquidity pressures in financial markets. In this respect, the Term Auction Facility (TAF) program is still in effect. In addition, the Fed increased swap authorization limits with the European Central Bank (ECB), the Bank of England (BoE), the Bank of Japan (BoJ) and the Swiss National Bank (SNB) by 330 billion US dollars to a total 620 billion US dollars, and, later, lifted limits on swap lines. The Fed also announced the creation of a Commercial Paper Funding Facility (CPFF), which is designed to provide much-needed liquidity to the Term Funding Market.

After having grown by 2.1 percent in the first quarter of 2008, Euro area GDP expanded by 1.4 percent in the second quarter from a year earlier. The upswing in construction activities, aided by favorable weather conditions, played a key role in boosting GDP growth in the first quarter, but the softening in domestic demand, largely driven by reduced investment spending, caused GDP to shrink in the second quarter from a quarter ago. Meanwhile, the share of imports and exports in national income decreased.

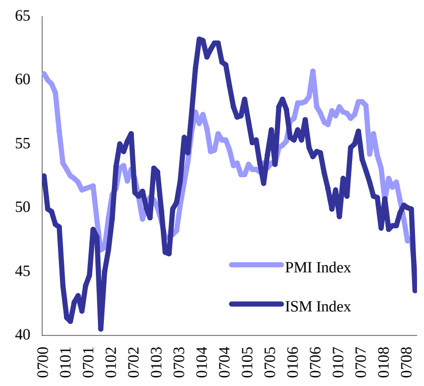
Many expect that euro area growth will suffer from weaker domestic demand and tighter credit conditions in the upcoming period. As a leading indicator, the euro area manufacturing industry confidence index (PMI) slipped below 50 in June, indicating that growth prospects changed from positive to negative. Activity in the manufacturing PMI decelerated further and dropped to 45 in September (Graph 2.1.5 and Graph 2.1.6).

Graph 2.1.5. EU GDP and PMI Index



Source: Bloomberg, Eurostat.

Graph 2.1.6. ISM and PMI Index



Source: Bloomberg.

The euro area Harmonized Index of Consumer Prices (HICP) inflation eased to 3.6 percent in September from 3.8 percent in August, surpassing the ECB's 2 percent price stability target (Graph 2.1.4). After having soared to an annual 4 percent in June and July, the HICP inflation started to decline on the back of falling energy prices. The drop in energy price inflation was largely driven by the plunge in world oil prices and the resulting decline in prices of petroleum-based energy products. Moreover, processed and unprocessed food inflation helped HICP inflation to moderate. Many expect HICP inflation to edge down in 2009,but to remain above the level consistent with price stability (Graph 2.1.4).

The ECB has modified its monetary policy strategy, as the global financial crisis deepened. At its meeting on July 3, the ECB Governing Council raised key interest rates by 25 basis points to 4.25 percent to offset the second-round effects from higher HICP inflation and to counteract the increasing upside risks to price stability over the medium term. Although HICP inflation was well above the level consistent with price stability, the ECB lowered its benchmark rate by 50 basis points to 3.75 percent on October 8, as part of a global coordinated easing by major central banks including the Fed, the BoE, the Bank of Canada (BoC), the SNB and Sveriges Riksbank.

The US subprime mortgage-led global downturn also hit the Japanese economy and financial market. Global investors and financial institutions have moved to fixed-yield, low-risk, long and medium-term bonds, particularly Japanese government bonds. The increased demand for these bonds caused prices to fluctuate since March 2008 and created a liquidity squeeze in the Japanese financial market. Moreover, concerns over higher global inflation put pressure on Japanese markets and, coupled with the credit crunch, led to a rapid rise in long-term interest rates.

However, stock prices have been less volatile in Japan than in the US and Europe. The overnight call rate remained at around the BoJ’s 0.5 percent target. Thus, impact of the turmoil in the US and Europe financial markets on Japanese money markets is much smoother than expected. Relatively less volatile Japanese markets lead foreign investors to supply their required liquidity from Japanese banks. Thus, unwinding of leveraged JPY positions boosted the demand for Japanese yen and the yen appreciated against the US dollar.

The Japanese economy entered a period of recession due to volatile energy and commodity prices, slowing exports and the global financial turmoil (Table 2.1.1). Contraction was evident in all GDP components. Japan’s GDP fell 0.6 percent from the second quarter of 2008, on slowing private consumption (down 0.6 percent), business fixed investments (down 0.2 percent) and housing investments (down 3.4 percent). Despite the slowdown in overall exports during the first half of 2008, exports to China increased in July, raising expectations for stronger exports in the remainder of the year. Higher international food and energy prices continued to have an adverse impact on production and Japanese CPI inflation (Graph 2.1.2). In July, Japan's annual CPI inflation climbed to 2.5 percent, far above the BoJ's 0 to 2 percent target range.

The BoJ stated that higher international commodity prices and global uncertainties will continue to dampen the Japanese economy, albeit slightly, indicated that there is no need to alter its monetary stance and decided to leave the uncollateralized overnight call rate at around 0.5 percent (Graph 2.1.1).

The Chinese economy was struck by the global financial crisis and natural disasters in the first half of 2008. Yet, despite heightened inflationary pressures and a widening balance of payments deficit, China continued to grow dramatically (by 10.4 percent) in the second half. The solid rise in investment, consumption and exports was the key driver of Chinese GDP growth. Chinese government is expected to offer tax rebates and increase infrastructure spending to support GDP growth in the upcoming period. In addition, the slowdown in growth of food prices helped to ease overall CPI inflation. After having increased by 7.9 and 7.7 percent in June and July, respectively, China's annual CPI inflation decelerated to 7.3 percent in August.

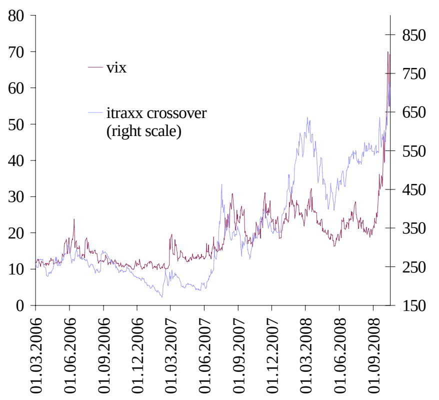
Although, in view of the steep rise in CPI inflation, the People's Bank of China had decided to tighten its monetary stance in 2008, it followed an expansionary monetary policy on concerns about the impact of natural disasters, by using monetary policy tools such as open market operations and reserve ratios. Accordingly, both the policy rate and the required reserve ratio were cut. Meanwhile, the Bank provided emergency loans for disaster-stricken areas. Despite the developments in US markets, the People's Bank of China indicated that the Chinese economy remained safe and sound and offered financial assistance to US markets in order to maintain global financial stability.

2.2. International Markets

2.2.1. Financial Markets

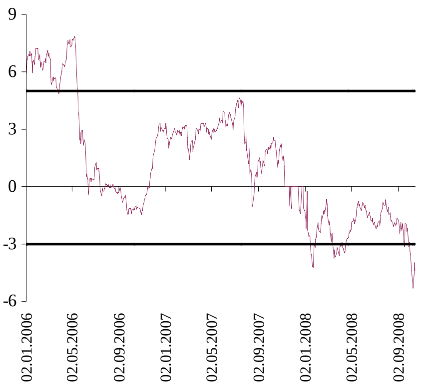
With the financial crisis that started in the US money and credit markets and spread to the whole world, commercial banks and investment firms announced, one after another, losses of vast proportions, while others either declared bankruptcy or were bailed out. Mounting worries about the severity of the impending US recession made investors more susceptible to panic, which, in turn, induced higher volatility in emerging financial markets due to the steep decline in investors' risk appetite. Indicating a sharp dip in risk appetite, the Credit Suisse Global Risk Appetite Index (CSRA) has been hovering around the panic zone in the recent period.[1] On the other hand, after having been on the decline over the second quarter of 2008, the VIX and iTraxx Crossover indexes[2] have climbed to an all-time high recently as the global crisis deepened (Graph 2.2.1, Graph 2.2.2).

Graph 2.2.1. VIX and iTraxx Crossover Indexes*



*The VIX volatility index is based on S&P500 options, whereas the iTraxx Crossover index is composed of 45 sub-investment grade credits.
Source: Bloomberg.

Graph 2.2.2. Credit Suisse Global Risk Appetite Index

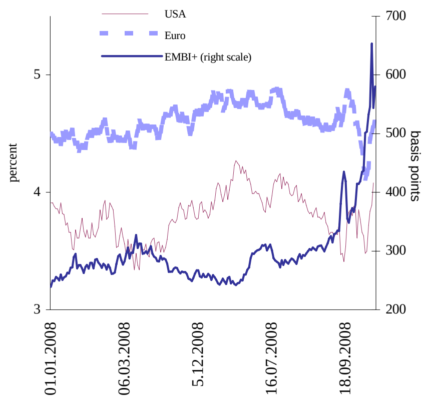


Source: Credit Suisse.

[1] Values below "-3" correspond to the panic zone while values above "5" correspond to the euphoria zone.
[2] The iTraxx Crossover index is a key indicator of investor risk sentiment towards emerging markets as the companies involved havesimilar investment-grade ratings with those from emerging economies, including Turkey.

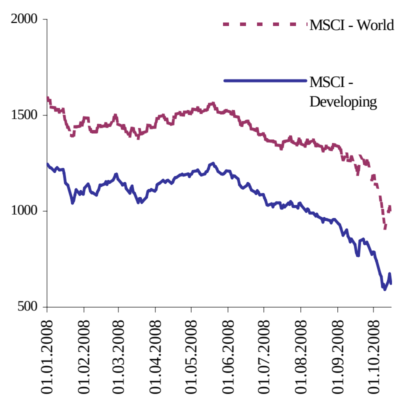
As regards bond markets in developed economies, the long-term US and euro area bond yields have been falling since the end of June after a strong second quarter. Heightened fears over a global recession and expectations that the purchase of illiquid assets by the EU and US governments would increase the supply of bonds prompted investors to rush into safer instruments. On the emerging markets front, the EMBI+ index rebounded sharply on the back of a reduced global risk appetite and mounting uncertainties (Graph 2.2.3).

Graph 2.2.3. Government Bond Markets



Source: Bloomberg.

Graph 2.2.4. Equity Markets



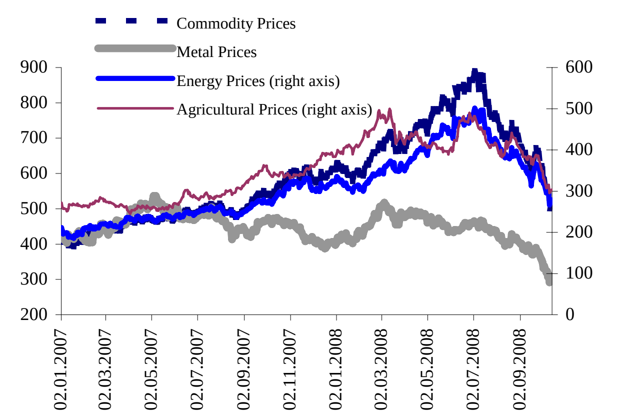
Source: Bloomberg.

The downward trend in stock markets over 2008 has intensified in the recent period. On September 15, 2008, the Morgan Stanley (MSCI) G7 index was down 40.2 percent from end-2007. Similarly, the MSCI Emerging Markets Index (EMI) was down 50 percent in dollar terms. The plunge in G7 stock markets was triggered, in large part, by the sizable drop in shares of financial companies (Graph 2.2.4).

2.2.2. Commodity Markets

The S&P Goldman Sachs (GS) Commodity Index entered a sharp downtrend in the third quarter of 2008. The index was up 13.9 percent from a year earlier, but down 27.9 percent from a quarter ago. Likewise, the GS Energy, Metals and Agriculture indexes dropped by 29.8, 22.7 and 25.5 percent, respectively, from a quarter earlier (Graph 2.2.5).

Graph 2.2.5. S&P Goldman Sachs Commodity Indexes

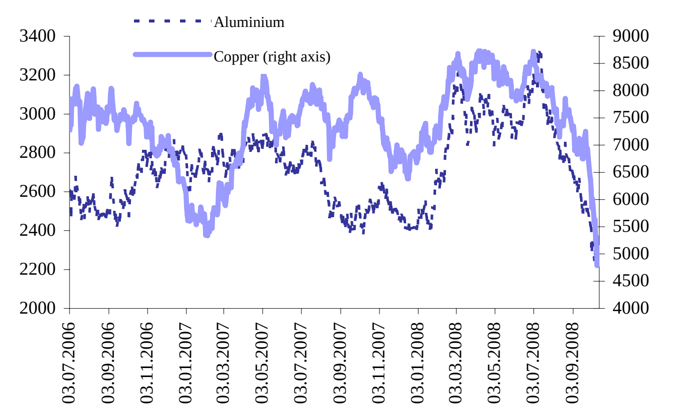


Source: Goldman Sachs.

As the global financial crisis broadens and deepens, concerns about a recession in developed economies escalate, leading to a decline in the demand for aluminum and copper, two backbone commodities in industrial production and construction activities. On balance, aluminum and copper prices dropped dramatically in the third quarter of 2008. Another factor behind the price fall was the reduced cost of energy-intensive aluminum production.

In the third quarter of 2008, aluminum prices fell by 3.8 percent from a year ago, while copper prices were down 20.7 percent. The prices for both base metals dropped by 22.1 and 25.3 percent, respectively, from a quarter earlier (Graph 2.2.6). Despite a strike at the world's largest copper mine in Chile and further cuts in aluminum production in China, the oversupply of copper and aluminum strengthens the belief that prices will remain low in coming months.

Graph 2.2.6. Copper and Aluminum Prices

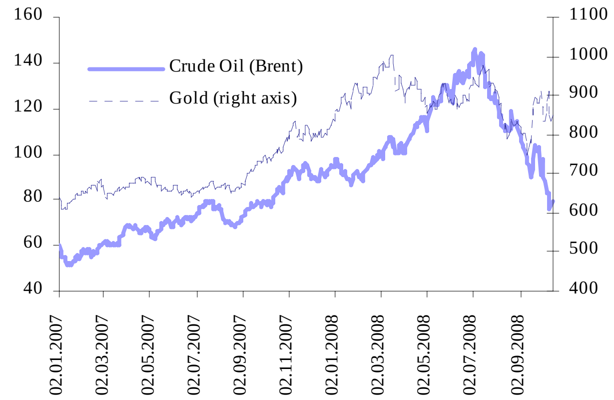


Source: Bloomberg.

After climbing to a record-high of 145.7 US dollar per barrel in July 2008, international crude oil prices began to tumble, closing at 79.5 US dollar per barrel on September 14, 2008 (Graph 2.2.7), down 4.6 percent from the same day in 2007 and 45.4 percent from its peak in July. OPEC's production boost and the resulting surplus of crude oil, the recession-related decline in demand from OECD countries, the weaker-than-expected impact of Hurricanes Gustav and Ike on oil supply, the strengthening of the US dollar, and falling prices of biofuels all account for the slump in oil prices. On the other hand, the war in the Caucasus and the political tensions in Nigeria and Iran curbed the downtrend in oil prices.

With growing fears of economic recession, especially in industrialized nations, the demand for transportation and industrial fuels has weakened. OPEC expects oil consumption to decelerate further in 2009 and world oil demand to grow by 0.9 mbbl/d, the lowest since 2002. Despite the softening in demand, OPEC expects that non-OPEC supply will continue to increase in the remainder of 2008 and in 2009, boosting crude oil inventories, which will inevitably put downward pressure on oil prices. At its scheduled meeting in September, OPEC agreed to abide by their September 2007 production allocations totaling 28.8 mbbl/d, but announced a production cut of 1.5 mbbl/d at an emergency meeting in October. Oil prices are more likely to move lower in the upcoming period. Yet, rising oil drilling costs, ongoing geopolitical tensions and the approaching winter will prevent oil prices from falling any further.

Graph 2.2.7. Crude Oil (Brent) and Gold Prices
(US dollar/bbl, US dollar/oz)

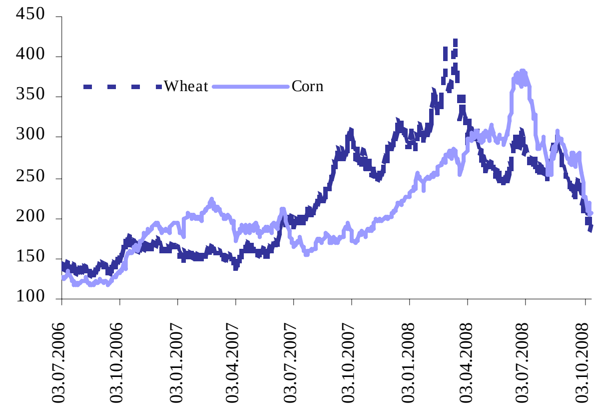


Source: Bloomberg.

The increased risk perception in developed markets, the upward trend in global inflation expectations and the uncertainty about the direction of the US dollar against major currencies raised the demand for gold over the last month and drove gold prices higher to USD 851.2 per troy ounce on October 14, 2008, up 12.1 percent from the same day in 2007 (Graph 2.2.7).

The steep increase in international food prices played a major role in boosting inflation around the world over the past one year. In the third quarter of 2008, however, international food prices started to fall sharply. The S&P Goldman Sachs wheat and corn indexes were down 20.8 and 33.9 percent, respectively, from a quarter earlier. The decline in wheat and corn prices was largely driven by expectations of a better harvest for the remainder of 2008 and in 2009. In addition, the expected fall in the use of corn for ethanol production in the US also put some downward pressure on corn prices (Graph 2.2.8).

Graph 2.2.8. S&P Goldman Sachs Wheat and Corn Indexes
(January 2005 =100)



Source: Bloomberg.

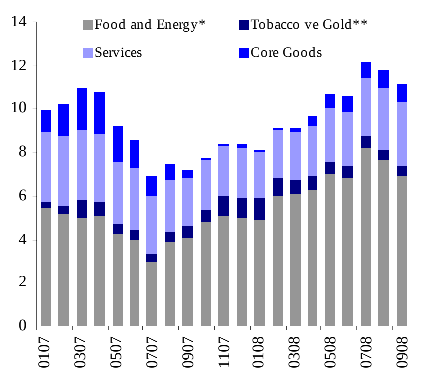
3. Inflation Developments

3.1. Inflation

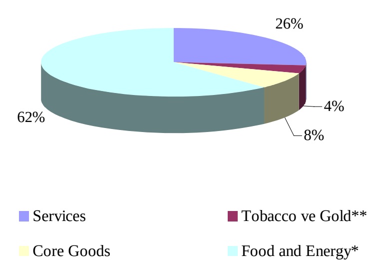
Inflation climbed to an annual rate of 11.13 percent in the third quarter of 2008. Consumer prices were up 0.78 percent in the third quarter, rising at a slower pace than in previous years. Yet, due to the sizable increase in the first half, the cumulative rise in the first nine months hit a 5-year high of 6.83 percent. Food prices decelerated significantly, while energy prices continued to soar. The cumulative rise in food and energy prices put some indirect upward pressure on services prices.

After the peak in July, the contribution of food, energy, tobacco and gold prices to annual inflation gradually fell over the past two months. Prices for services and core goods, on the other hand, made an increased contribution to annual inflation, largely due to the base effect and the lagged impact of supply shocks (Graph 3.1.1).

Graph 3.1.1. Contribution to Annual CPI Inflation



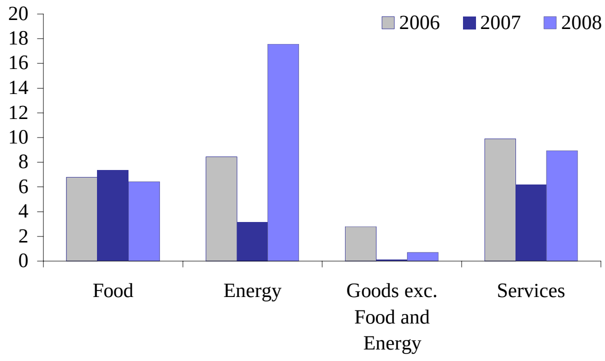
Graph 3.1.2. Contribution to Annual CPI Inflation
(Percent, September 2008)



* Food and Energy: Food, non-alcoholic beverages and energy.
** Tobacco and Gold: Non-alcoholic beverages, tobacco products and gold.
Source: TURKSTAT, CBRT.

The surge in food prices over the first nine months was as high as in recent years (Graph 3.1.3). Yet, the first-half jump in annual food price inflation tapered off in the third quarter on increased domestic production and lower international food prices. Although world oil prices have sunk recently, the steep rise in prices of items other than fuel drove energy prices higher, up 17.6 percent in the first nine months (Graph 3.1.3).

Graph 3.1.3. CPI Sub-Groups
(Percentage Change, First Nine Months)



Source: TURKSTAT, CBRT.

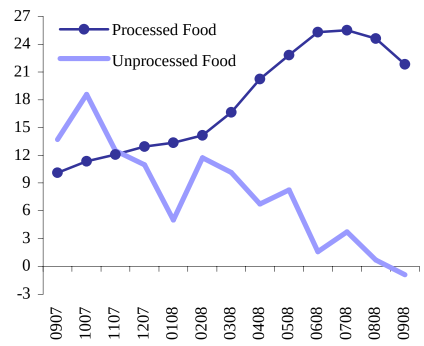
Prices of goods excluding food and energy rose by 0.69 percent in the first nine months, albeit at a slower pace than in previous years. Meanwhile, services prices advanced at a more rapid pace than in 2007 due to base effect and the lagged impact of the higher food and energy prices (Graph 3.1.3). Overall, food and energy prices were the main drivers of the sharp increase in annual inflation over the first nine months. In fact, soaring food and energy prices together added 6.9 percentage points to annual CPI inflation in the third quarter.

The slowdown in food prices intensified in the third quarter. Unprocessed food prices decreased by 0.29 percent, bringing the group's annual inflation down to –0.90 percent (Graph 3.1.4), mainly on falling fresh fruit and vegetable prices that were down 8.14 percent in the third quarter after a sharp dip in the first half. Fresh fruit and vegetable prices decreased by an annual rate of 18.95 percent in September.

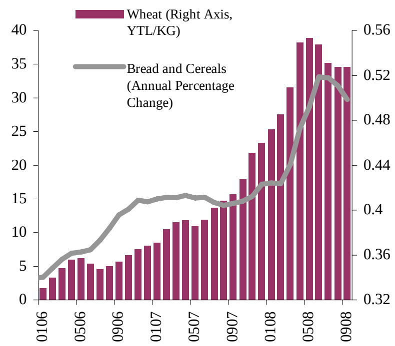
Improved supply conditions were the main driver of the reduction in fruit and vegetable prices. As suggested by the Turkish Statistical Institute (TURKSTAT)'s initial crop production forecasts, vegetable and fruit production is expected to grow by 5.6 and 9.8 percent, respectively, in 2008 (Box 3.1). In addition to higher production, reduced exports of fruits and vegetables and falling fuel prices also help to reduce prices. However, the upward pressure on pulse prices over the past one year, driven by crop losses, continued into the third quarter, albeit to a lesser extent. Pulse price increases are expected to decelerate further in the final quarter.

The run-up in processed food prices that started after 2006 lost momentum in the third quarter. Accordingly, the annual processed food price inflation decreased by 3.48 percentage points from end-second quarter to 21.83 percent in the third quarter (Graph 3.1.4).

Graph 3.1.4. Food Prices
(Annual Percentage Change)



Graph 3.1.5. Wheat and Cereal Prices



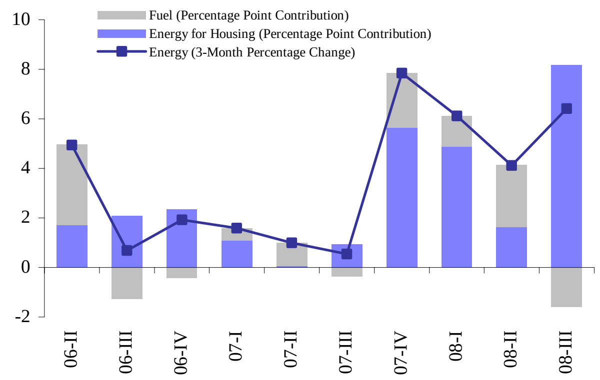
Source: TURKSTAT, CBRT.

In the previous inflation report, it is stated that, with less pressure from crop losses, processed food prices would increase at a more moderate rate in the second half of the year, thanks to improved weather conditions. Developments in the third quarter were generally in line with the expectations. The increase in prices for bread and cereals, which made the largest contribution to processed food inflation, was markedly down on falling wheat prices. The initial crop production forecasts indicate that wheat production will grow by 3.4 percent from a year ago (Box 3.1). In fact, with the start of the 2008/2009 harvest season, wheat prices went down 4.62 percent over the past four months (Graph 3.1.5). Similarly, after a dramatic 15.25 percent rise in the previous quarter, prices for bread and cereals grew by a mere 1.22 percent in the third quarter. The annual inflation in prices for bread and cereals is expected to slow further in the upcoming period.

International food commodity prices trend downward, a benefit to the domestic food market via lower processed food prices. Changes in international food prices also affect the vegetable oil industry, another key driver of processed food price inflation, as its domestic supply deficit is largely met by imports. Accordingly, vegetable oil prices dropped by 8.23 percent in the third quarter, mainly on account of the growing domestic production of oil seeds and the downtrend in international food prices. With less pressure from crop losses, coupled with lower international food commodity prices and tumbling world oil prices, processed food prices are expected to edge lower in coming months. However, the recent depreciation of YTL will have an adverse impact on processed food prices in the short-run.

Energy prices rose by 6.41 percent in the third quarter, pushing the group's inflation up to 26.79 percent year-on-year. Although domestic fuel prices dropped by 6 percent amid plunging world oil prices, prices for energy items other than fuel surged by 11.13 percent, driving energy prices markedly higher (Graph 3.1.6).

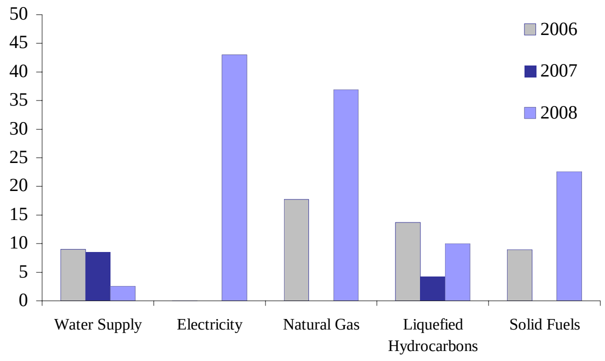
Graph 3.1.6. Energy Prices
(Quarterly Percentage Change, Percentage Point Contribution)



Source: TURKSTAT, CBRT.

The run-up in prices for residential electricity, natural gas and solid fuels continued into the third quarter, climbing to 43, 37 and 23 percent, respectively, during January-September (Graph 3.1.7). Both the cumulative upward revision in electricity tariffs and implementation of cost-based automatic pricing adjustment mechanism caused energy prices to skyrocket. Given the automatic pricing adjustment, changes in oil prices are reflected gradually first in natural gas prices and later in electricity tariffs. Accordingly, despite the slump in world oil prices, the cumulative increase from the past spurred further hikes in electricity and natural gas prices, which rose by 9 and 4.5 percent, respectively, in October.

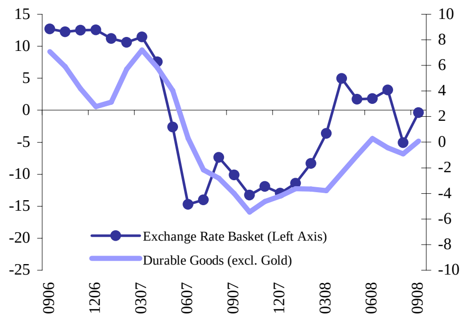
Graph 3.1.7. Residential Energy Prices
(Percentage Change, First Nine Months)



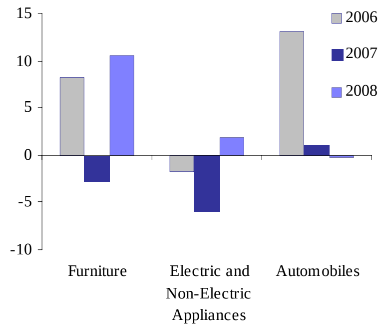
Source: TURKSTAT, CBRT.

Prices of goods excluding energy and food fell by 3.5 percent in the third quarter of 2008, while the group's annual inflation remained almost stable at 4.2 percent.

Graph 3.1.8. Durable Goods and Exchange Rate Basket*
(Annual Percentage Change)



Graph 3.1.9. Selected Durable Goods Prices
(Percentage Change, First Nine Months)



*Arithmetic average of the euro/dollar exchange rate.
Source: TURKSTAT, CBRT.

Prices of durable goods (excluding gold) went down by 1.80 percent, ending the third quarter at 0.09 percent year-on-year (Graph 3.1.8). Meanwhile, automobile prices dropped by 3.63 percent due to the strengthening of the YTL and the softening in domestic demand, while prices of white goods, a sub-category in electric and non-electric appliances, surged by 2.22 percent. Furniture prices declined in the third quarter (Table 3.1.1). Yet, the annual inflation in durable goods picked up over the year, largely owing to the base effect from electric and non-electric appliances and furniture (Graph 3.1.9).

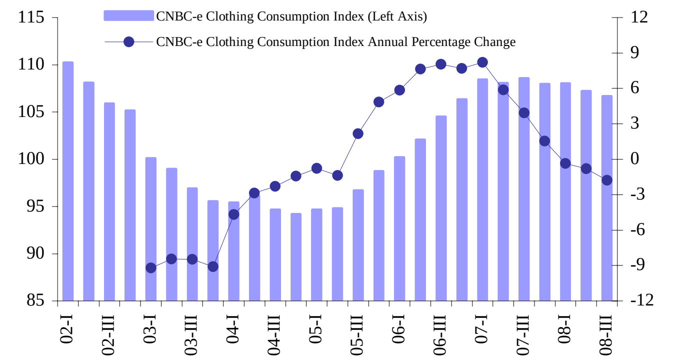
Given the recent depreciation of the YTL, the annual inflation in durable goods will continue to increase in the forthcoming period.

Table 3.1.1. Prices of Durable Goods
(Annual and Quarterly Percentage Change)

	2007			2008		
	III	IV	Annual	I	II	III
Durable Goods (excl. gold)	**-1.60**	**-2.41**	**-4.21**	**1.58**	**2.81**	**-1.80**
Furniture	-6.34	0.94	-1.80	4.13	7.60	-1.27
Electric and non-electric appliances	-1.80	-2.35	-8.18	1.16	0.68	0.12
Automobiles	0.71	-4.42	-3.37	1.04	2.44	-3.63
Other	-0.52	0.32	1.71	0.04	0.89	1.02

Source: TURKSTAT, CBRT.

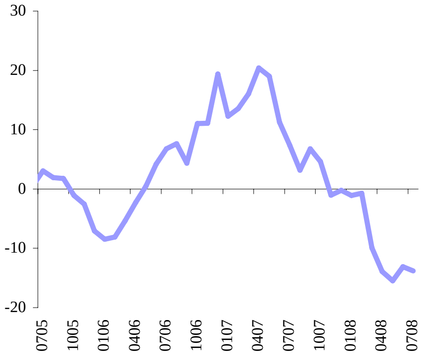
Graph 3.1.10. CNBC-e Clothing Consumption Index
(Seasonally Adjusted, 3-Month Average, Annual Percentage Change)



Source: CNBC-e.

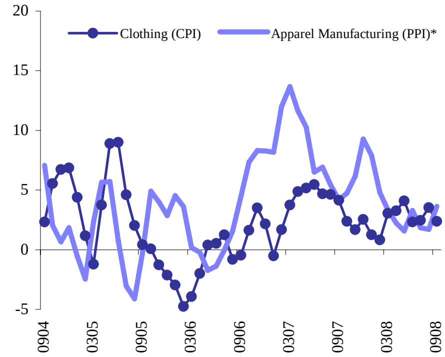
Annual inflation in clothing and footwear prices fell to 2.6 percent in the third quarter. The clothing component of the CNBC-e Consumption Index saw further decline in domestic sales in seasonally adjusted terms (Graph 3.1.10). In addition, clothing exports dropped markedly over the past one year, while apparel manufacturing prices continued to ease (Graph 3.1.11, Graph 3.1.12). On balance, aggregate demand and cost factors appear to have added to the downward trend in clothing price inflation.

Graph 3.1.11. Apparel Exports
(Annual Percentage Change, 3-Month Moving Average*)



* Annual growth in apparel exports, 3-month moving average.
Source: TURKSTAT.

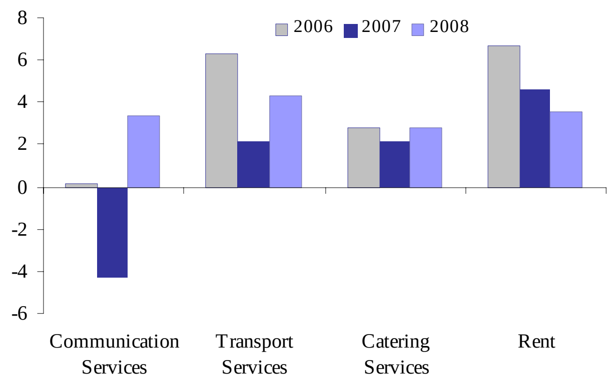
Graph 3.1.12. Clothing and Apparel Manufacturing Prices
(Annual Percentage Change)



* Annual inflation in apparel manufacturing, 2-month moving average.
Source: TURKSTAT.

Services prices increased by 2.94 percent in the third quarter, bringing the group's annual inflation up to 11.47 percent (Table 3.1.2). The lagged effects of supply shocks driven by food and energy prices continue to put pressure on services prices, albeit to a lesser extent. Cumulative increases in food prices pushed catering price inflation up by 0.8 percentage points year-on-year from a quarter ago. Besides, due to the cumulative increase in oil prices, prices for transport services continued to rise sharply, driving the group's annual inflation up to 17.31 percent (Graph 3.1.13). The rate of increase in communication services rose by 8.1 percentage points from the second quarter to 9.1 percent year-on-year, mainly on account of the base effect.

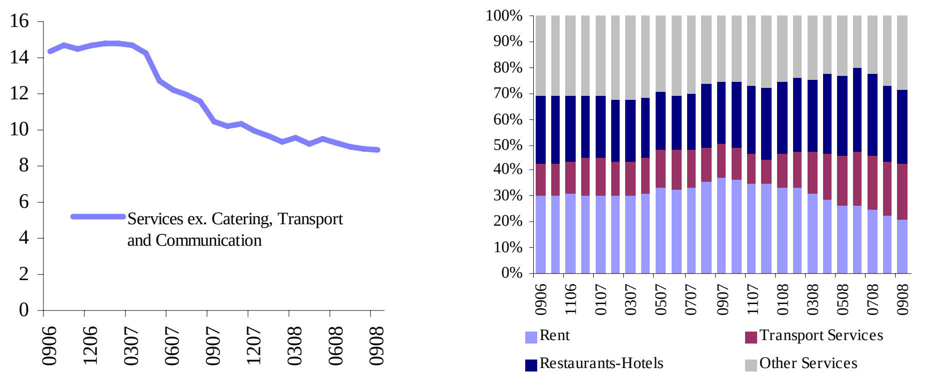
Graph 3.1.13. Prices for Selected Services
(Third Quarter Percentage Change)



Source: TURKSTAT, CBRT.

In services other than catering, transport and communication, annual inflation has edged lower since the beginning of 2008 (Graph 3.1.14). Annual inflation in rents, in particular, continued to ease gradually in the third quarter. Overall, contribution of rents to annual services inflation significantly reduced over the past one year, while transport services had an added contribution (Graph 3.1.14). With less pressure from supply shocks and continued weakening in domestic demand, services inflation is expected to moderate in coming months.

Graph 3.1.14. Services Prices
(Annual Percentage Change, Percentage Point Contribution)



Source: TURKSTAT, CBRT.

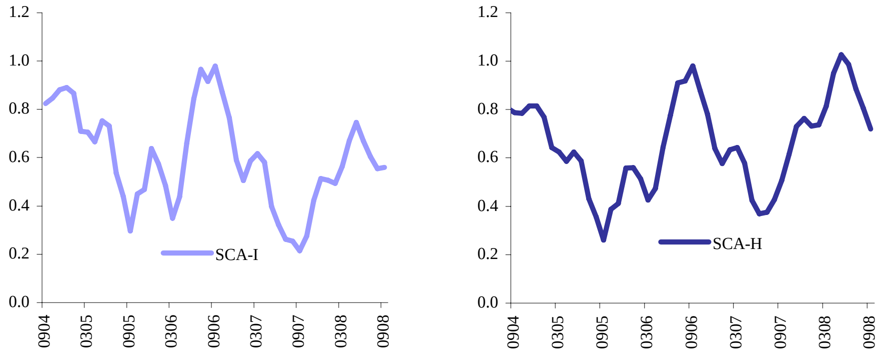
Table 3.1.2. Prices of Goods and Services
(Quarterly and Annual Percentage Change)

	2007			2008		
	III	IV	Annual	I	II	III
CPI	**0.31**	**4.02**	**8.39**	**3.09**	**2.82**	**0.78**
1. Goods	**-0.11**	**4.65**	**8.29**	**3.27**	**2.69**	**0.05**
Energy	0.55	7.85	11.25	6.11	4.12	6.41
Unprocessed food	2.23	3.30	10.99	10.90	-13.25	-0.29
Processed food	4.26	5.31	12.95	5.61	8.06	1.37
Goods excl. food and energy	-3.51	3.46	3.56	-2.35	6.87	-3.52
Durable goods	-1.15	-1.71	-3.34	3.45	1.97	-2.34
(excl. gold)	-1.60	-2.41	-4.21	1.58	2.81	-1.80
Semi-durable goods	-3.50	7.67	7.86	-1.23	9.20	0.01
Non-durable goods	2.52	4.21	11.69	6.44	-1.43	0.74
2. Services	**1.50**	**2.32**	**8.64**	**2.55**	**3.20**	**2.94**
Rents	4.56	3.30	16.01	2.79	2.74	3.58
Restaurants and hotels	2.27	3.64	10.87	3.13	4.58	2.77
Transport services	2.10	1.91	5.93	4.10	5.98	4.35
Other	-0.36	1.27	5.29	1.68	1.80	2.29

Source: TURKSTAT, CBRT.

Core inflation indicators failed to moderate due to the base effect and the ongoing lagged impact of supply shocks. SCA-H remained unchanged from a quarter ago, while SCA-I increased by around 1 percentage point year-on-year. However, the seasonally adjusted monthly rise in both special CPI aggregates slowed from a quarter earlier, suggesting that inflation is set on a downward path (Graph 3.1.15).

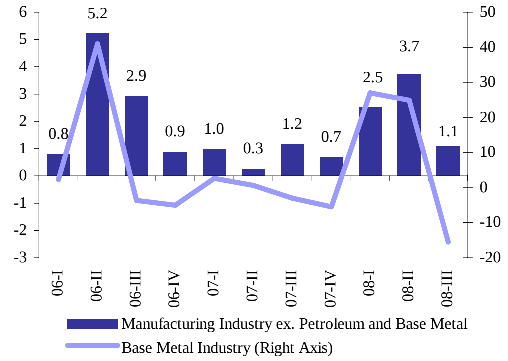
Graph 3.1.15. Special CPI Aggregates
(Seasonally Adjusted Monthly Increases, 3-Month Average)



Source: TURKSTAT, CBRT.

Changes in producer prices have been of great importance as to the cost pressures on CPI inflation. A boom in world metal prices sent prices for base metals to very high levels in the first half of 2008, but as the uptrend reversed, they dropped by 15.53 percent in the third quarter. Lower metal prices put some downward pressure on prices of intermediate and capital goods (Table 3.1.3). Moreover, energy prices posted a decline amid falling oil prices. The upward pressure on producer prices of durable consumer goods continued into the third quarter. Manufacturing industry prices excluding oil and base metals increased at a slower pace than in the first half of the year (Graph 3.1.16).

Graph 3.1.16. Manufacturing Industry Prices excl. Oil and Base Metals
(Quarterly Percentage Change)



Source: TURKSTAT, CBRT.

Table 3.1.3. PPI Developments based on MIGS Classification
(Annual and Quarterly Change)

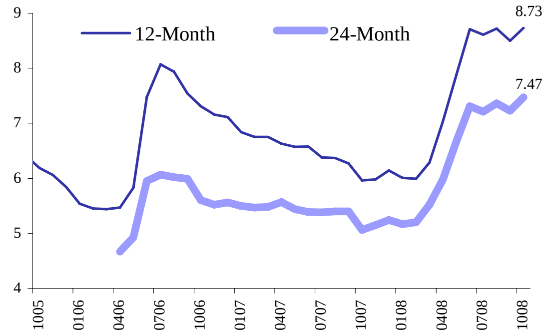
	2007					2008		
	I	II	III	IV	Annual	I	II	III
Manufacturing industry excl. oil and base metals	**0.99**	**0.95**	**0.09**	**0.26**	**3.15**	**2.53**	**3.73**	**1.11**
Intermediate goods	1.29	0.58	0.15	-1.25	0.75	7.28	8.84	-2.39
Capital goods	0.03	-1.8	-0.06	-0.48	-2.32	4.56	6.60	-1.69
Durable goods	0.96	-0.51	-0.8	-3.06	-3.41	1.59	3.05	3.29
Non-durable goods	1.54	1.1	2.4	2.88	8.15	1.33	1.77	1.46
Energy	2.64	0.19	4.22	2.65	10.02	16.89	16.65	-5.22

Source: TURKSTAT, CBRT.

3.2. Expectations

Having increased between March and June, medium-term inflation expectations have become better anchored in the following periods amid falling food and oil prices and monetary tightening. As of October, 12-month and 24-month ahead inflation expectations are at 8.7 and 7.5 percent, respectively, slightly above medium-term targets (Table 3.2.1).

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



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

The coefficient variation[1] that measures inflation uncertainty has recently come down in 12 and 24-month ahead inflation expectations for August, September and October (Table 3.2.1).

Table 3.2.1. CPI Inflation Expectations

Current Period	Year-end Expectations*	12-Month Ahead		24-Month Ahead	
		Average Expectations*	Coefficient of Variation	Average Expectations*	Coefficient of Variation
October-07	6.94	5.96	0.12	5.06	0.11
November-07	7.90	5.98	0.09	5.15	0.09
December-07	8.64	6.14	0.13	5.24	0.15
January-08	6.47	6.01	0.13	5.17	0.14
February-08	6.54	5.99	0.10	5.20	0.13
March-08	7.27	6.29	0.15	5.52	0.17
April-08	8.44	7.04	0.14	5.98	0.16
May-08	9.64	7.88	0.14	6.67	0.19
June-08	10.63	8.71	0.13	7.31	0.16
July-08	10.76	8.61	0.12	7.21	0.16
August-08	11.04	8.72	0.09	7.36	0.11
September-08	10.70	8.50	0.10	7.23	0.14
October-08	10.45	8.73	0.11	7.47	0.15

* Average expectation figures presented in the table are appropriate means designated by comparing the arithmetic mean, median, mode, alpha-trimmed mean and extreme value analysis.
Source: CBRT.

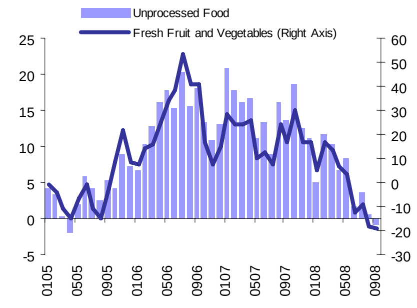
[1] The coefficient of variation, which indicates the deviation of participants' expectations, is the ratio of standard deviation to the mean in a data set with the appropriate mean.

BOX 3.1. Crop Production Forecasts and Price Developments

TURKSTAT released its initial crop production forecasts for 2008 in the third quarter. Here, we will discuss those production forecasts and their implications for food prices. According to TURKSTAT, fruit, vegetable and field crop production increased from a year ago (Table 1). These production gains suggest that the value added in agriculture will rise again in the second half of 2008 after having decreased by 1.5 percent in the first half. However, the yearlong, volatile production costs (such as energy) hinder a precise calculation of the value added in agriculture by output figures.

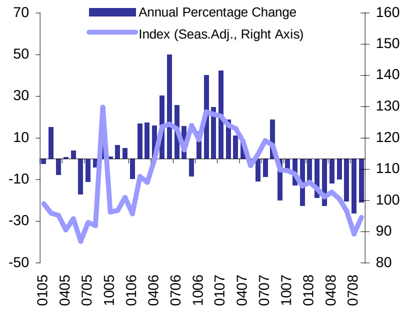
As suggested by forecasts, fruit and vegetable production will grow by 9.8 and 5.6 percent in 2008, respectively, from a year earlier (Table 1). These gains are consistent with the rate of increase in fruit and vegetable prices that has been falling since the first quarter (Graph 1). Moreover, being on the decline since 2007, fruit and vegetable exports dropped by 21 percent in August from a year ago, which contributes to the downward shift in prices through the channel of aggregate demand (Graph 2).

Graph 1. Unprocessed Food Prices
(Annual Percentage Change)



Source: TURKSTAT, CBRT.

Graph 2. Exports of Fruits and Vegetables
(Annual Percentage Change, Seasonally Adjusted Index)



Source: TURKSTAT.

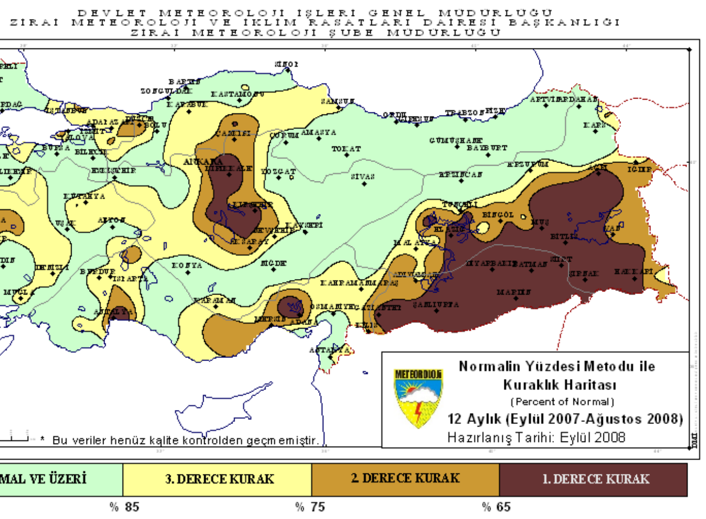
In field crops, cereal production remained unchanged from 2007, largely due to the 18.4 percent decrease in barley production. Yet, wheat, corn and rice production is expected to grow by 3.4, 18.4 and 18.2 percent, respectively from 2007 (Table 1). Wheat production, the most significant item for prices, appears to have grown only slightly, considering the 13.9 percent drop in 2007. The slow pace of growth in wheat production stems largely from drought in Southern Anatolia and in the Konya Plain (Graph 3). After the dramatic rise in the first five months, domestic wheat prices eased during June-September as the harvest season started. Accordingly, the monthly rate of increase in bread and cereal prices continue to slow down. Similarly, with gains in world wheat production and stocks, international prices have edged lower. Current forecasts suggest that world wheat production will grow by 11 percent from a year earlier, with stocks up 30 million tons from 2007 (Table 2).

Table 1. Initial Crop Production Forecasts for 2008 (Selected Products, Tons)

	Production 2007	2008	Change (%)
1. Field Crops (Total)	**50 816 134**	**53 336 608**	**5.0**
Cereals	**29 256 990**	**29 311 555**	**0.2**
Wheat	17 234 000	17 821 000	3.4
Corn	3 535 000	4 185 000	18.4
Rice	648 000	765 724	18.2
Barley	7 306 800	5 959 000	-18.4
Potato, dry pulses, edible roots and tubers	**5 511 082**	**5 100 864**	**-7.4**
Potato	4 227 726	4 198 863	-0.7
Peas	3 503	3 924	12.0
Chick peas	505 366	536 292	6.1
Dry beans	154 243	154 643	0.3
Lentil (red)	508 378	110 170	-78.3
Lentil (green)	26 803	26 409	-1.5
Starchy roots and tubers	18 547	26 689	43.9
Oil seeds	**1 031 552**	**1 255 349**	**21.7**
Sunflower	854 407	1 025 280	20.0
Sugar beets	**12 414 715**	**15 234 700**	**22.7**
Fiber crops used in textiles	**2 275 044**	**2 073 024**	**-8.9**
Cotton (seed)	2 275 000	2 073 000	-8.9
2. Vegetables (Total)	**25 675 748**	**27 107 445**	**5.6**
Root and tuberous vegetables	3 222 478	3 383 546	5.0
Fruit-bearing vegetables	20 854 683	22 083 257	5.9
Vegetables otherwise unclassified	1 598 587	1 640 642	2.6
3. Fruits (Total)	**14 409 672**	**15 820 536**	**9.8**
Grapes	3 612 781	3 923 147	8.6
Banana, fig, avocado, kiwi (total)	415 432	425 120	2.3
Citrus fruits (total)	2 988 664	3 018 890	1.0
Stone fruits (peach, apricot, plum, etc, total)	1 979 777	2 110 087	6.6
Other fresh fruits (strawberry, pomegranate, quince, etc, total)	551 469	574 500	4.2
Olives and other drupes (total)	1 957 695	2 758 245	40.9
Herbs and spices	89 728	94 184	5.0
Tea*	1 145 321	1 100 000	-4.0

*Only dried tea leaves.
Source: TURKSTAT.

Graph 3. 12-Month Drought Map*
(Percent of Normal – September 2008)



Source: State Meteorological Service.
* Degree of severity is depicted by color chart ranging from green to brown, where dark brown shows the worst situation.

Table 2. World Wheat Forecasts (Million Tons)

	04/05	05/06	06/07	07/08	08/09 Forecast
Production	628	621	598	609	676
Trade	110	110	110	109	116
Consumption	615	624	611	611	646
Stocks	142	138	125	123	153
Stock variation	14	-4	-13	-2	30

Source: International Grains Council (IGC, Grain Market Report of September 25, 2008).

Other marked changes in prices of field crops are as follows:

- Red lentil production dropped by a stunning 78.3 percent (due to drought in Southeastern Anatolia, the main area of lentil production). The sharp monthly increases in red lentil prices that started in July 2007 continued into September 2008 without cutting pace, leading to an annual rate of increase of around 170 percent in August. In July, the Turkish Grain Board was given the authority to import a hundred thousand tons of red lentils, with zero customs duty, until May 31, 2009. Accordingly, the Board imported 45 thousand tons of red lentils from Canada, and have recently supplied them to the domestic market. Thus, prices remained unchanged in September from a month ago.

- Oil seed production grew by a satisfying 21.7 percent -20 percent in sunflowers- (a year earlier, oil seed production had dropped by 21.4 percent). As of July, prices for sunflower and corn oil were up about 80 to 90 percent over a year, resulting in a steep rise in processed food prices. With the start of the 2008/09 harvest season and the reduction in import prices, oil seed prices slowed markedly and went down by 9.4 percent in two months.

- Losses in raw crops used in textiles such as cotton and flax continue. Cotton (seed) production had fallen by 10.8 percent in 2007. Forecasts suggest a further decline of 8.9 percent in 2008.

In sum, according to the initial forecasts for 2008, crop production will improve somewhat compared with a year ago and prices or price growth rates of some product groups will decelerate. However, the fact that wheat production will grow at a subdued pace (by 0.2 percent) clouds the positive outlook for production. Forecasts also suggest that the value added in agriculture will increase in the second half. Yet, it should be born in mind that the above evaluations are based on initial forecasts, which may be changed as necessary.

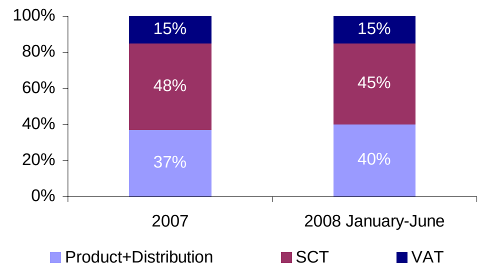
BOX 3.2. An Empirical Analysis of Oil Prices

Here, the relationship between exchange rates, crude oil and fuel prices and consumer prices is summarized. The three-viable VAR analysis had the following findings:

Finding 1: A 10-percent increase in world oil prices (Brent, in USD) causes a 3.2-point gain in domestic fuel prices at the end of 24 months (Graph 2). In other words, one-third of the increase in international oil prices is reflected on domestic fuel prices. This low pass-through is largely attributable to the heavy burden of fuel taxes on final consumer prices. The share of excise duties in pump prices varies, according to the type of product, from 50 to 65 percent.[1]

For example, the average pump price of unleaded gasoline with 95 RON involved an excise duty of 60 percent in January-June 2008 (SCT of 45 percent, VAT of 15 percent). The value of the product and the distribution share only accounted for about 40 percent of the pump price, which was 37 percent in 2007 (Graph 1).

Graph 1. The rate of excise duties on pump prices*

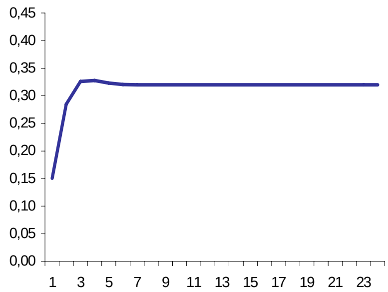


* Unleaded gasoline, 95 RON
Source: Oil Industry Association Report, 2008 January-June.

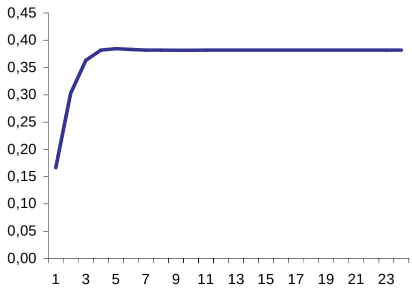
Realized prices confirm this finding. According to the PPI without taxes, oil prices increased by 24.29 percent in the first nine months of 2008, which can be assumed as the YTL hike in world crude oil prices. In this period, the increase in end-user fuel prices (incl. taxes) equaled 7.7 percent. In other words, the 24.29 percent increase in crude oil prices drove end-user fuel prices up by only 7.7 percent (incl. taxes). Therefore, a 10-percent increase in world oil prices is an equivalent of a 3.2 percent gain in domestic fuel prices.

Hikes in international crude oil prices passes through to domestic fuel prices in as short as two months at large (Graph 2).

Graph 2. Cumulative response of domestic fuel prices to a 1-percent rise in crude oil prices



Graph 3. Cumulative response of domestic fuel prices to a 1-percent rise in the USD/TRY parity



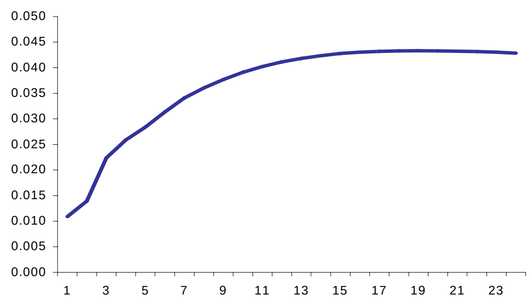
1) Order of variables: USD/ YTL parity, price of Brent crude oil in USD/bbl, domestic fuel price index.
2) Monthly percentage changes involved. Sample: 2002:05-2008:07.
3) Lag = 1.

[1] Source: Oil Industry Association Report, 2008 January-June.

Finding 2: A 10-percent increase in the USD/YTL parity causes a 3.8 point gain in domestic fuel prices, providing a greater boost than crude oil prices. The pass-through is largely complete in about two months, as in crude oil prices (Graph 3). Why the exchange rate pass-through is higher is because fuel distribution shares are adjusted by exchange rate changes for each product.

Finding 3: A 10-percent increase in international oil prices causes a 0.43 point gain in consumer prices at the end of 24 months (Graph 4). An increase in crude oil prices passes through to consumer inflation in a year, half in three months and 75 percent in six months.

Graph 4. Cumulative response of consumer prices to a 1-percent rise in crude oil prices



1)Order of variables: Output gap (Monthly, Fernandez (1988)), price of Brent crude oil in USD/bbl, seasonally adjusted consumer prices.
2) Monthly percentage changes involved, excl. output gap. Sample: 2002:05-2008:06.
3) Lag = 2.

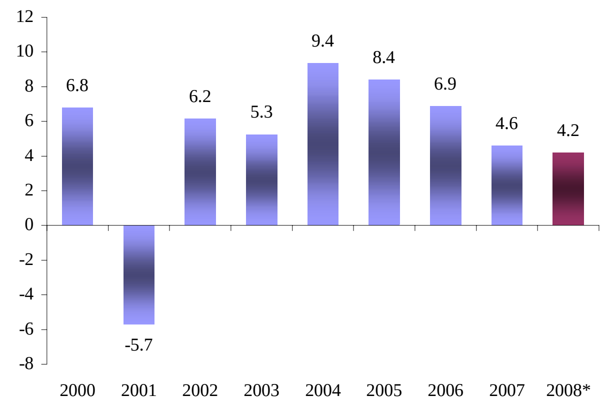
Yet, there are other factors that may raise the total pass-through effect calculated above. Firstly, in a sample that involved action-reaction results, although rising oil prices had a lagged impact, electricity tariffs generally remained stable, except for the recent jump. Therefore, pass-through estimations might have relatively understated the electricity price effect. Secondly, second-round effects might prevail in case changes to oil prices become of a permanent nature. It is important to consider these factors when interpreting the findings in this box.

4. Supply and Demand Developments

4.1. Gross Domestic Product Developments and Domestic Demand

According to the national income data released by TURKSTAT, Gross Domestic Product (GDP) expanded by 4.2 percent in January-June 2008 from a year earlier (Graph 4.1.1). After having grown by a robust 6.7 percent in the first quarter thanks to the low base from a year ago, GDP grew by a mere 1.9 percent in the second quarter. In seasonally adjusted terms, GDP contracted in the second quarter.

Graph 4.1.1. GDP Growth by Periods
(Percent)



* January-June.
Source: TURKSTAT.

On the production side, the value added of agriculture decreased from a year earlier due to ongoing drought problems in some regions. As opposed to previous quarters, net tax revenues added -0.6 percent to GDP growth in the second quarter, despite the increased tax revenues in the central government budget. Meanwhile, the value added of services increased at a more rapid pace than other major sectors, whereas the value added of industrial production and construction made a limited contribution to GDP growth (Graph 4.1.2).

On the spending side, private consumption rose by 2.8 percent in the second quarter from a year earlier, while public consumption declined by 3.7 percent. Total investment spending narrowed by 1.5 percent due to the reduction in public investment spending and the marked slowdown in private investment spending. The high base from a year ago drove public investment spending lower, while private machinery-equipment investments contracted on the softening in domestic demand and the falling confidence of consumers and investors (Table 4.1.1).

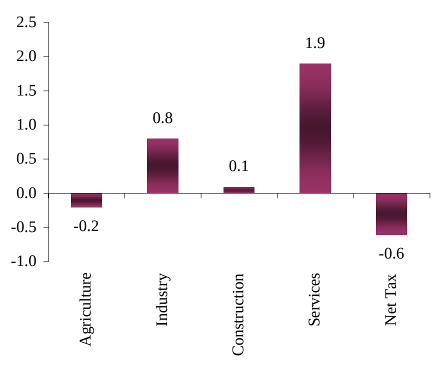
Table 4.1.1. GDP Developments by Expenditures
(Annual Percentage Change)

	2007					2008		
	I	II	III	IV	Annual	I	II	January-June
1-Consumption expenditures	3.8	3.2	6.2	4.3	4.4	7.4	1.9	4.6
Public	7.0	13.5	4.2	2.7	6.5	5.6	-3.7	0.5
Residential household expenditures	3.4	1.8	6.5	4.6	4.1	7.6	2.8	5.1
Domestic expenditures	3.5	1.4	4.8	3.6	3.4	7.4	2.2	4.7
Food, beverages and tobacco	3.7	2.8	2.1	-1.8	1.6	5.3	3.8	4.5
Clothing and footwear	-3.5	-8.4	-3.4	3.0	-3.4	7.7	0.0	4.2
Furniture, household appliances	8.8	-1.9	0.7	-0.1	1.6	4.7	-4.0	0.1
Transport-communication	-2.4	-5.0	8.2	8.5	2.3	15.9	6.0	10.7
Restaurants and hotels	8.8	0.6	0.5	1.8	2.1	1.3	0.6	1.0
2-Fixed capital investments	4.5	3.9	4.7	8.7	5.5	11.9	-1.5	4.7
Public	3.7	8.2	16.1	1.5	7.3	-9.1	-16.8	-13.7
Private	4.6	3.4	3.0	10.1	5.2	14.1	0.6	7.0
Machinery-equipment	-0.1	0.9	3.2	15.1	4.7	18.1	-2.7	6.8
Construction	12.9	8.2	2.8	2.2	6.3	7.7	7.0	7.4
3-Stock changes*	3.0	-0.3	0.1	1.4	1.0	-1.5	0.4	-0.5
4-Exports of goods and services	13.3	9.8	4.6	3.3	7.3	12.2	2.3	7.0
5-Imports of goods and services	8.2	5.1	14.0	15.5	10.7	12.8	0.7	6.4
Net exports*	0.7	0.8	-2.4	-3.5	-1.2	-0.8	0.4	-0.2
6-Total domestic demand	7.0	3.1	5.6	6.9	5.6	7.1	1.5	4.2
7-Total final domestic demand	4.0	3.3	5.8	5.4	4.7	8.5	1.1	4.6
8-GDP	8.1	4.1	3.3	3.6	4.6	6.7	1.9	4.2

*Contribution to GDP growth, percentage points.
Source: TURKSTAT.

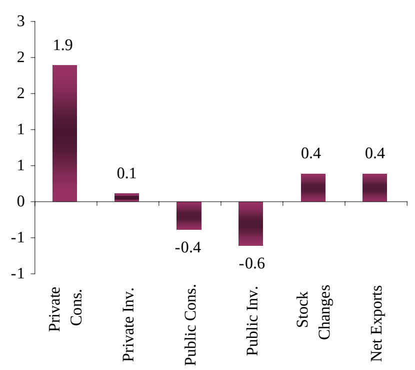
In sum, marked slowdown is observed in private consumption and investment spending in the second quarter. Moreover, the contribution of total public spending to growth was negative in this quarter. With the weakening of domestic demand, imports of goods and services slowed; foreign demand remained robust; and tourism revenues increased, which altogether helped net exports to make a positive contribution to growth (Graph 4.1.3).

Graph 4.1.2. Contribution to GDP Growth from Production
(Percentage Points)



Source: TURKSTAT.

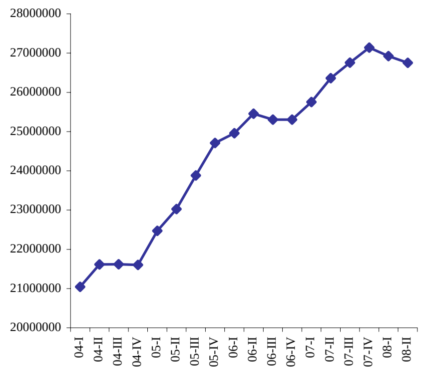
Graph 4.1.3. Contribution to GDP Growth from Spending
(Percentage Points)



Source: TURKSTAT.

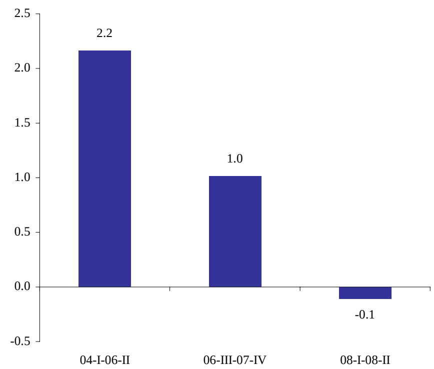
Seasonally adjusted data on domestic demand indicate that the slowdown in economic activity became more pronounced in the second quarter (Graph 4.1.4). Having expanded by a quarterly 2.2 percent on average before 2006, when GDP growth was high, GDP has grown by around 1 percent quarter-on-quarter on average following the monetary tightening. With the global financial turmoil and the prevailing domestic uncertainty surrounding the first half of 2008, average quarterly GDP growth slowed to about 0 percent (Graph 4.1.5).

Graph 4.1.4. Total Final Domestic Demand
(At 1998 Prices, Thousand YTL, Seasonally Adjusted)



Source: TURKSTAT, CBRT.

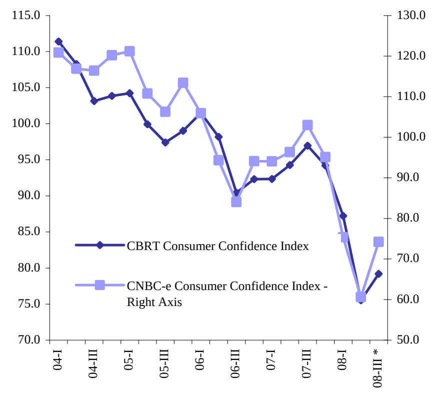
Graph 4.1.5. Average Quarterly GDP Growth by Periods, Seasonally Adjusted
(Percent)



Source: TURKSTAT, CBRT.

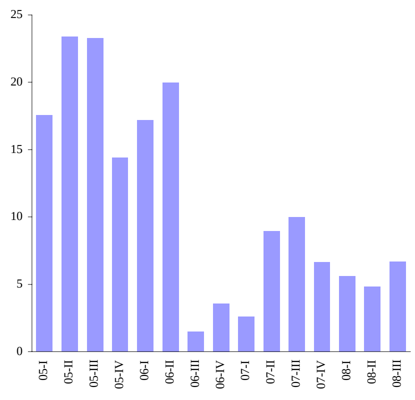
Recent indicators suggest that private consumption demand remained flat in the third quarter, following the marked slowdown in the second quarter. Despite some rebound in the third quarter, the TURKSTAT-CBRT and CNBC-e consumer confidence indices were still at low levels (Graph 4.1.6). Accordingly, real consumer loans picked up from a quarter ago as borrowing increased in the third quarter, especially in September (Graph 4.1.7). Other leading indicators for consumption confirm this outlook. In seasonally adjusted terms, domestic sales of automobiles were basically flat in the third quarter, after a steep decline in the first half (Graph 4.1.8). Similarly, the import quantity index of consumer goods remained virtually unchanged in the third quarter (Graph 4.1.9).

Graph 4.1.6. CBRT and CNBC-e Consumer Confidence Indexes



* The CNBC-e index covers the July-August period.
Source: CNBC-e, CBRT.

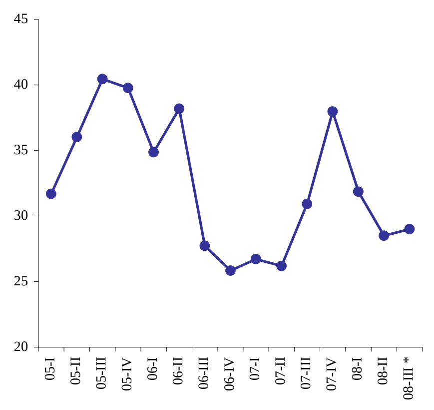
Graph 4.1.7. Consumer Loans
(Real, Quarterly Percentage Change)



Source: CBRT.

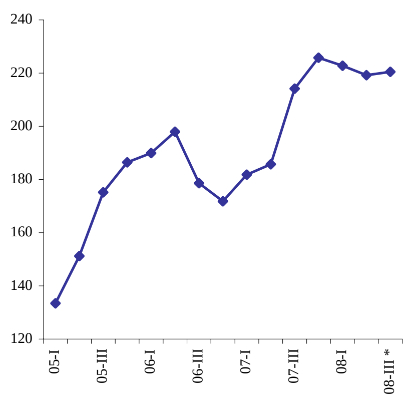
However, as problems in global financial markets climaxed and turned into a crisis, consumer confidence, in particular, loan supply and loan demand are very likely to decline further in the final quarter. In fact, information on the first half of October indicates that consumer loans have dropped in all categories (housing, vehicle and other) in real terms. Accordingly, private consumption spending is expected to decelerate further over the remainder of the year. On the other hand, public investment spending is likely to gain pace in the final quarter, driven by budget targets. Central government budget results for September point to a run-up in public consumption spending.

Graph 4.1.8. Domestic Sales of Automobiles
(Seasonally Adjusted, Thousand)



* Latest data cover the July-August period.
Source: AMA, CBRT.

Graph 4.1.9. Imports of Consumer Goods
(Seasonally Adjusted)

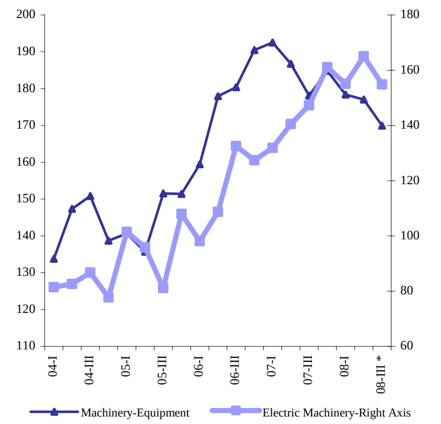


* Latest data cover the July-August period.
Source: TURKSTAT, CBRT.

Leading indicators suggest that private investment spending continued to slow down in the third quarter. In seasonally adjusted terms, machinery-equipment and electric machinery production dropped from a quarter ago

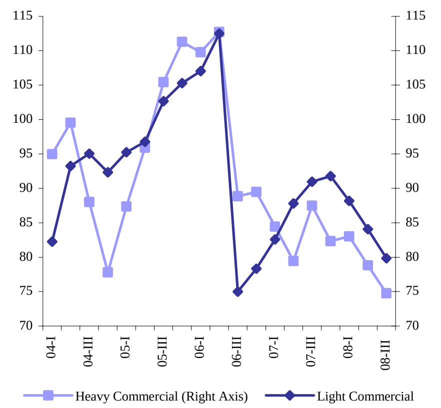
(Graph 4.1.10). Likewise, sales of light and heavy commercial vehicles continued to fall (Graph 4.1.11).

Graph 4.1.10. Production of Machinery-Equipment and Electric Machinery
(Seasonally Adjusted)



* Latest data cover the July-August period.
** Right axis.
Source: TURKSTAT, CBRT.

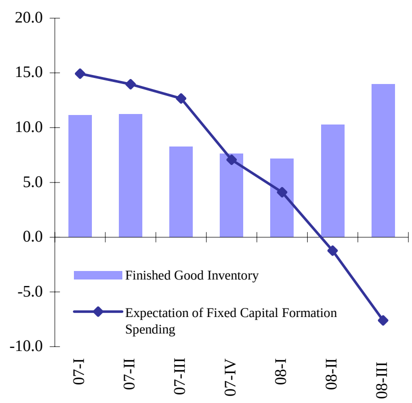
Graph 4.1.11. Sales of Light and Heavy Commercial Vehicles
(Seasonally Adjusted)



Source: AMA, CBRT.

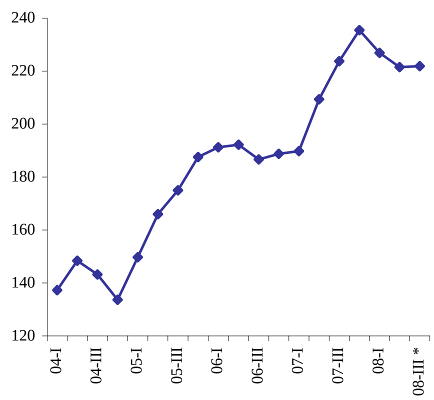
Moreover, expectations of private fixed capital investment, an indicator of the CBRT Business Tendency Survey (BTS), which turned negative in the second quarter, contracted further in the third quarter. Finished good inventories of private companies involved in CBRT's BTS rose sharply from the previous quarter (Graph 4.1.12). Although the first-half dramatic decline in the import quantity index of capital goods came to a halt in the third quarter, private spending on machinery-equipment investments appears to have decelerated further in the third quarter (Graph 4.1.13).

Graph 4.1.12. CBRT Business Tendency Survey Results



Source: CBRT.

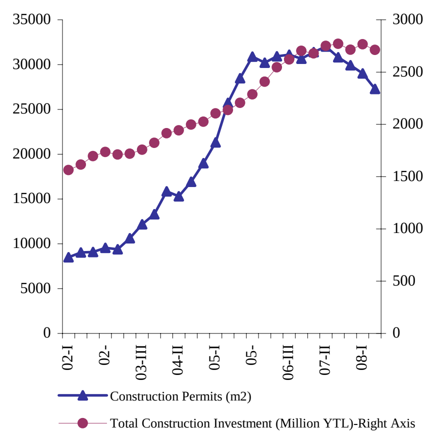
Graph 4.1.13. Imports of Capital Goods
(Seasonally Adjusted)



* Latest data cover the July-August period.
Source: TURKSTAT, CBRT.

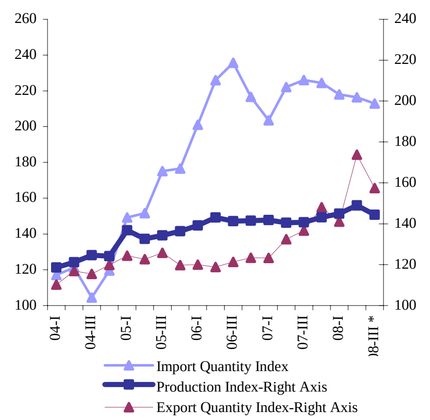
As a leading indicator for construction investments, construction permits decreased by 20.1 percent in the second quarter of 2008, driven by the gloom in the private sector. In seasonally adjusted terms, construction permits have been on a steady downward slide since the second quarter of 2007 (Graph 4.1.14). As suggested by the average values from July and August, in the nonmetallic minerals industry, the production and export quantity indexes slowed down in the third quarter from a quarter earlier in seasonally adjusted terms. Besides, the industry's import performance has been sluggish since April (Graph 4.1.15). As the global financial crisis curtailed domestic loan supply, the sharp decline in private construction spending is expected to speed up in the final quarter. Yet, in view of the investment spending target of the central government budget for 2008, public investment spending, especially construction investments, are expected to accelerate in the second half of the year, which will partially offset the decline in private investment spending.

Graph 4.1.14. Construction Permits and Investments
(Seasonally Adjusted)



Source: TURKSTAT, CBRT.

Graph 4.1.15. Exports and Imports of Nonmetallic Minerals
(Seasonally Adjusted)



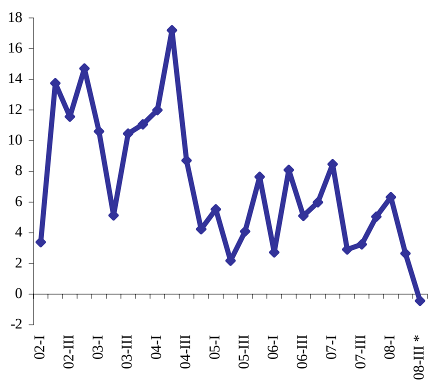
* Latest data cover the July-August period.
Source: TURKSTAT, CBRT.

On the industrial side, production in total industry and manufacturing industry dropped by 4 and 5.7 percent, respectively, in August from a year ago. The production fall was spilled over into all sub-sectors of the manufacturing industry excluding plastics, coke, refined petroleum products and paper products. The results of TURKSTAT's tendency survey for manufacturing industries in September indicate that manufacturing industry production will rebound somewhat following the drop-off in August, but will continue to grow at a moderate pace.

On balance, in view of the changes in industrial production in July and August and the results of the tendency survey in September, manufacturing industry production is expected to contract slightly year-on-year in the third quarter and experience its first negative growth since 2002 (Graph 4.1.16). Besides, seasonally adjusted data also suggest a marked slowdown in manufacturing industry production (Graph 4.1.17).

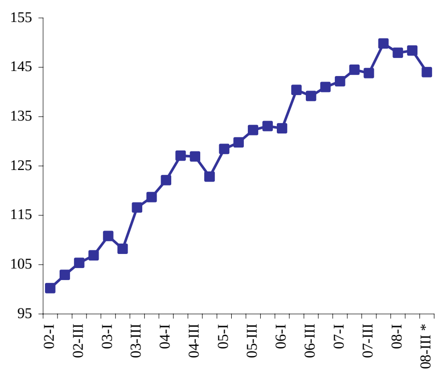
In the final quarter, the expected weakening of foreign demand will put some downward pressure on total industrial production, particularly on exporting industries. In addition, value added of the agriculture, which declined in the first half of the year, is expected to rise in the second half as suggested by TURKSTAT's crop production forecasts.

Graph 4.1.16. Changes in Industrial Production by Periods
(Annual Percentage Change)



* Production growth forecast for September.
Source: TURKSTAT.

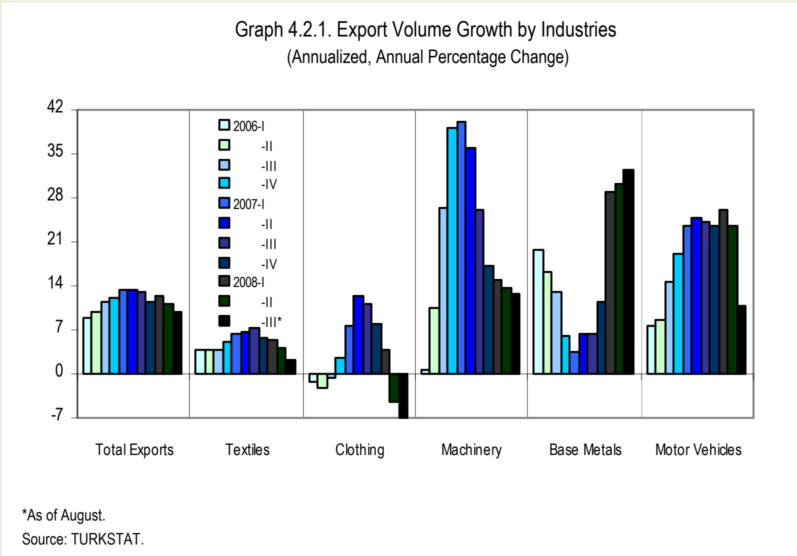
Graph 4.1.17. Industrial Production Index
(Seasonally Adjusted)



* Production growth forecast for September.
Source: TURKSTAT, CBRT.

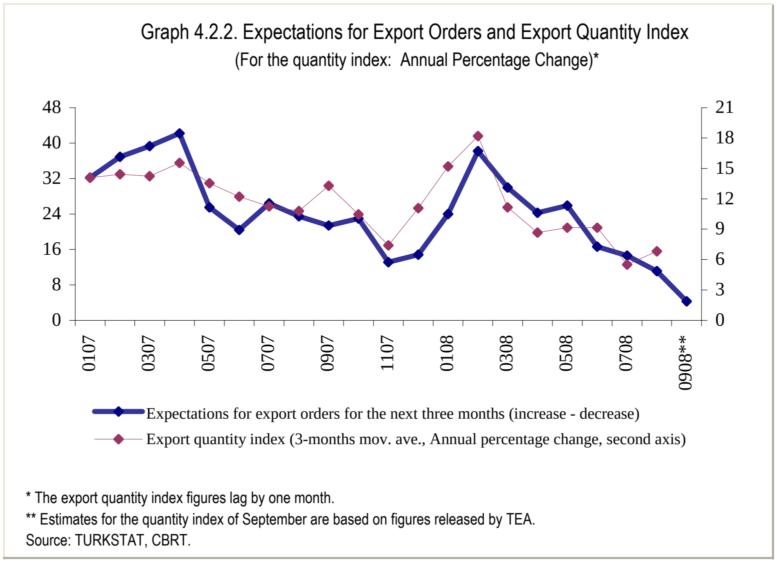
4.2. Foreign Demand

In the second quarter of 2008, real exports of goods grew stronger than real imports of goods and, also backed by improved tourism revenues, the contribution from net exports to GDP growth turned positive. Export growth was basically fueled by industries such as motor vehicles, basic metals and chemicals. Machinery-equipment exports advanced at a solid pace, but saw some deceleration in 2007 and in the first half of 2008. Exports of textiles grew at a steady pace, but slowed in recent months, lagging behind the overall export performance. Exports of clothing, on the other hand, were significantly down (Graph 4.2.1).



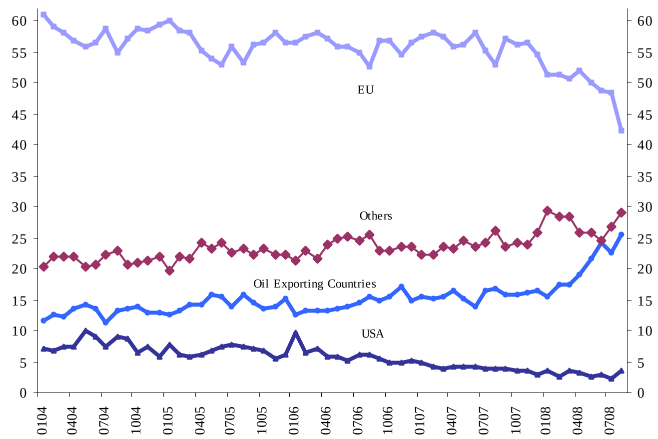
Main drivers of import volume growth were industries such as refined petroleum products, chemicals and chemical products, motor vehicles and "waste and scrap" that provides input to base metals. The increase in nominal imports, however, stemmed mainly from energy imports that account for the largest share of total imports and from imports of base metals, both due to price hikes.

Recent data indicate that exports have slowed in recent months, while imports have been on the decline since early 2008. In fact, the "expectations for export orders for the next three months" from CBRT's Business Tendency Survey continued to worsen in September (Graph 4.2.2).



The impending recession in the global economic activity will taper off import demand from developed economies, posing a major threat to Turkey's export performance. In fact, having accounted for 58 percent of total exports in early 2007, the share of exports to EU member states has fallen to 42 percent in recent months. In contrast, the share of exports to oil-exporters and to non-EU and non-US countries picked up sharply (Graph 4.2.3). The continued increase in exports to non-EU and non-US countries is viewed as favorable as it paves the way for alternative export market opportunities.

Graph 4.2.3. Export Developments by Country Groups
(Percent, Share in Total Exports)*



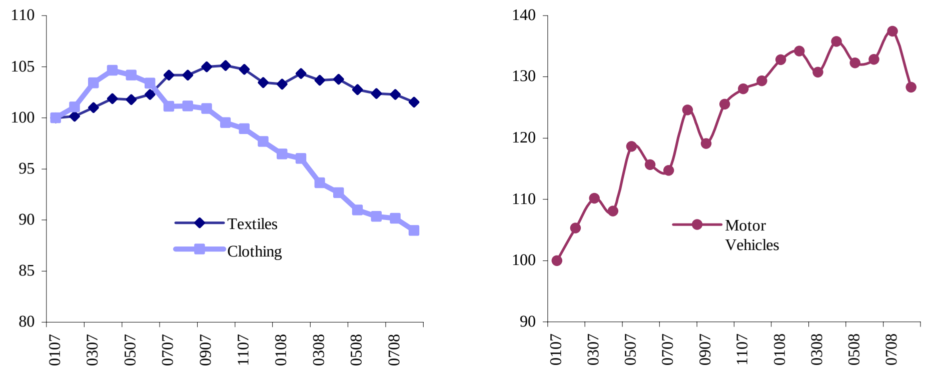
*Oil exporters involve OPEC, Russia and Mexico.

Source: TURKSTAT.

Production of new models in motor vehicles suggests that the robust export growth in the industry, which started in mid-2006, may relatively continue into the upcoming period. Besides, in a period of mounting transport costs, Turkey's higher quality products and proximity to EU provides competitive advantage in exports of textiles and clothing. Yet, the seasonally adjusted downtrend in exports of textiles and clothing and the slower pace of growth in exports of motor vehicles gives a negative outlook for those industries' exports in the short run (Graph 4.2.4).

Graph 4.2.4. Export Developments by Selected Sectors

(Seasonally Adjusted, January 2007=100)

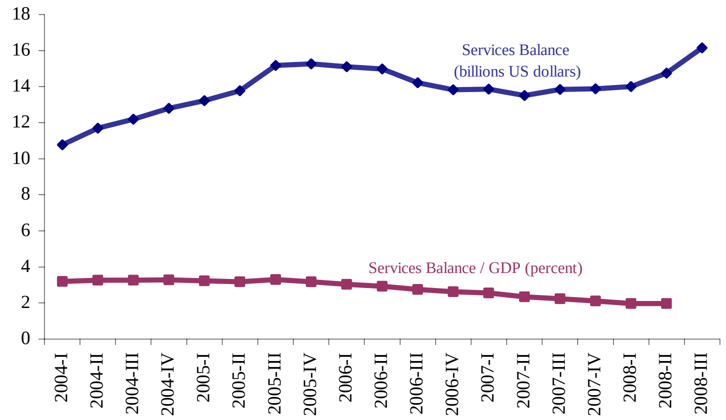


Source: TURKSTAT, CBRT.

Both the weakening of the New Turkish lira and the reduction in domestic demand caused import volume growth to slow since March. Accordingly, net exports contributed positively to GDP growth in the second quarter, which is expected to continue into the third quarter and accelerate on increased tourism revenues. In the remainder of the year, the foreign trade deficit is likely to expand at a relatively slower rate, and the cooling of the run-up in prices of oil and other commodities might significantly curb the foreign trade and current account deficits in 2009.

The surplus in the services account, a major component to narrow down the current account deficit, has barely increased since 2006, and lost its weight in GDP despite the rise in services revenues. This was mainly attributable to the growth in services expenditures, particularly in residents' spending on foreign travel and insurance. Developments in the balance of payments during January-August indicate that this outlook improved, thanks to the rapid increase in tourism revenues in 2008. Yet, the share of net services revenues in GDP is still very low.

Graph 4.2.5. Services Account of the Balance of Payments* and GDP

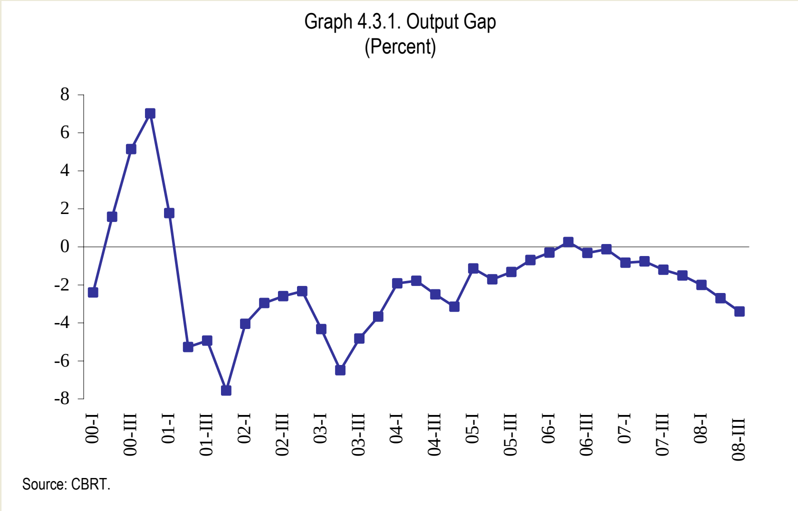


* Based on our estimate for the services balance in September.
Source: CBRT, TURKSTAT.

4.3. Output Gap

On balance, indicators for both consumption and investment demand suggest that domestic demand weakened further in the third quarter of 2008. Meanwhile, despite the expected rise in public spending, total domestic demand may continue to slow on account of the decline in private spending. Yet, the contribution of net exports to GDP growth is expected to turn positive in the second quarter, driven by slower imports. However, the more pronounced softening in exports in recent months is likely to limit the positive contribution of net exports.

In sum, available data indicate that the economic activity continued to decelerate in the third quarter. With the effect of global financial crisis, total domestic demand, especially private investment spending, will slow further in the final quarter. Therefore, aggregate demand conditions are expected to have an added support for disinflation in the third and fourth quarters (Graph 4.3.1).



4.4. Unit Labor Costs

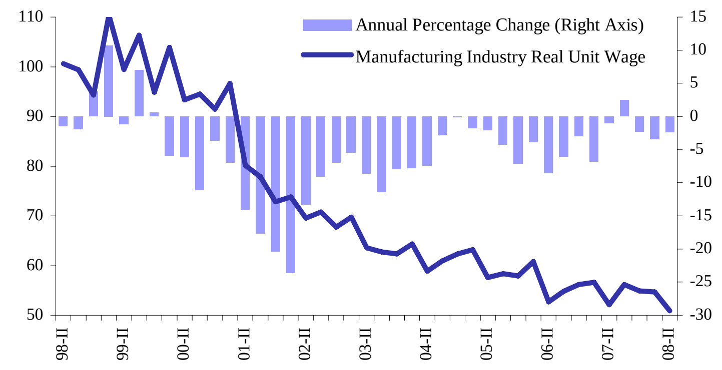
According to the "Index of Production Workers and Hours Worked in Production in Manufacturing Industry" compiled by TURKSTAT, employment in the manufacturing industry rose by 0.6 percent in the second quarter of 2008 from a year earlier (Table 4.4.1). In the same period, production grew by 2.6 percent, pushing labor productivity up by 2.4 percent. The index of real unit wages fell by 2.3 percent on increased productivity (Graph 4.4.1). Accordingly, real unit wages continued to fall in the second quarter of 2008, providing further support for disinflation.

Table 4.4.1. Employment, Real Wages and Productivity Developments in Manufacturing Industry
(Annual Percentage Change)

	2006	2007					2008	
	YoY	I	II	III	IV	YoY	I	II
Employment(1)	-0.7	2.4	2.0	2.2	1.8	2.1	1.7	0.6
Public	-4.0	-3.2	-3.8	0.6	0.0	-1.5	2.4	5.3
Private	-0.4	2.7	2.5	2.3	1.9	2.3	1.6	0.3
Real Wages(2)	0.9	-2.1	-0.5	3.5	1.6	0.6	0.0	0.0
Public	-3.0	0.4	-2.1	3.8	-0.1	0.5	2.2	2.3
Private	1.9	-2.0	0.1	3.5	1.9	0.9	-0.5	-0.6
Earnings(3)	0.9	-1.3	-0.1	3.7	0.6	0.7	2.1	-0.1
Public	-1.5	1.1	0.3	3.0	0.8	1.3	6.8	-2.3
Private	1.8	-1.0	0.5	3.9	0.8	1.0	1.1	-0.3
Productivity(4)	6.7	5.1	0.5	1.1	3.9	2.6	3.6	2.4
Real Unit Wages(5)	-5.3	-6.9	-1.0	2.5	-2.3	-2.1	-3.4	-2.3

(1) Manufacturing Industry Employment Index, 1997=100.
(2) Index of Real Wages per Working Hour, 1997=100.
(3) Index of Real Earnings per Worker, 1997=100.
(4) Index of Partial Productivity per Working Hour, 1997=100.
(5) Index of Real Unit Wages, 1997=100.
Source: TURKSTAT, CBRT.

Graph 4.4.1. Index of Real Unit Wages per Working Hour
(1997=100)



Source: TURKSTAT, CBRT.

In the second quarter of 2008, employment grew in private manufacturing industries such as motor vehicles, machinery-equipment, base metals and food, but shrunk in textiles, clothing and minerals. Having trended downward during 2007, employment in public manufacturing industry picked up in the second quarter of 2008.

Partial (per hour) productivity increased in manufacturing industries such as motor vehicles and minerals, but decreased in textiles and machinery-equipment. Labor productivity losses in industries such as textiles and machinery-equipment, which hold a large share in exports, indicate a negative outlook in terms of competition in these sectors. Real wages per hour increased in minerals, clothing and base metals, but dropped sharply in motor vehicles, chemicals and textiles.

In coming months, the slowing economic activity will curb employment growth and raise the unemployment rate, which is expected to put downward pressure on real unit wages.

BOX 4.1. Sources of Growth in the Turkish Economy[1]

After 1950, Turkey had scored the highest continuous growth pace during 2002-2007. The economy had grown by an average 6.8 percent annually and a cumulative 50 percent in this period. In quarterly terms, the economy had expanded uninterruptedly for 24 subsequent quarters, which represents the longest period of uninterrupted growth since 1987 when quarterly growth rates were first announced. However, Turkey's long-run growth rate has been on a steady downward track. Although the average growth rate was 5 percent during 1950-2007, it dropped to 4.7 percent between 1960 and 2007, to 4.4 percent between 1970 and 2007, and to 4.3 percent between 1980 and 2007. Following the rapid growth after 2001, the average growth rate during 1990-2007 rebounded slightly to 4.5 percent. Considering the moderation of the growth rate and the relatively high population growth, the long-term increase in welfare in Turkey appears to be quite modest. Therefore, it is important to identify the major sources of growth in previous period and discuss its sustainability.

In this box, sources of growth are decomposed into production factors by using the Cobb-Douglas production function. Accordingly, we employed three different models to estimate sources of growth. The first model uses a standard production function. In other words, the dependent variable is production quantity or value added, the constant is the level of knowledge (technology) in the initial year, and explanatory variables are traditional production factors (capital stock and employment) and the increase in the level of knowledge/technology represented by a linear time trend (Model 1). In the second model, to control cyclical movements in capital stock and employment, we estimated the production function by multiplying these production factors by capacity utilization rates and average working hours in manufacturing industry, respectively (Model 2). In the third model, we added the age of capital stock, which is believed to be crucial for growth performance, to the variables of the second model (Model 3).

The age of capital stock, which is believed to represent renewal rate of capital stock, that is employed in Model 3 is used in estimations to control for possible changes in the quality of capital stock. This variable shows the share of new investments in capital stock, and is constructed by calculating the percentage share of investments of the past 3 years in total capital stock. With this variable we aimed to produce a more precise estimate of the contribution from machinery-equipment, most of which is imported, to production. As it will contain new technologies that are embodied in machinery-equipment, the analysis of that contribution might reduce the technological progress coefficient that is measured exogenously. Therefore, the estimate of the new technological progress coefficient will show the progress of productivity capacity of firms more precisely (organizational structure of firms, human capital, R&D, competitive pressure, entrepreneurship, etc). Since it is a qualitative variable and represents externalities mostly emanated from abroad, the renewal rate of capital stock is added to the model independently from the level of capital stock. Thus, we assumed that the renewal-driven technological progress stems largely from developed countries, and its effects on domestic economy would be in the form of externalities. Taking the renewal rate of capital stock into account in the production function is expected to raise the contribution of capital stock to growth (embodied technological change), but to lower the growth of technological capability in the domestic economy.

On the other hand, coefficients in the analyzed period may change or show some breaks in this time period. Accordingly, estimation results showed that the coefficients of capital stock and employment variables were stable, whereas the technological progress coefficient had an upward break between 1988-2000 and 2001-2007. In order to capture the break in the technological progress coefficient in the production function, separate technological progress variables were identified and added to the estimate for each period.

[1] This box summarizes some results from the study "Dynamics of Economic Growth in Turkey: Sources of Growth During 1987-2007, Key Issues and Potential Growth Rate", TÜSİAD (Turkish Industrialists' and Businessmen's Association)-CBRT Series on Growth in the Process of Integration to Global Economy No: 3", Saygılı, Ş. and C. Cihan (2008).

Table 1 decomposes Turkey's growth rate during 1988-2007 into supply side sources. The decomposition uses the Growth Accounting method developed by Solow (1957). Accordingly, we calculated the related factor's contribution to growth by using the coefficients from the production function (excluding technological progress) and the growth rates of production factors; and called the residual as the rate of growth of total factor productivity (TFP).

Table 1. Sources of Growth in the Turkish Economy
(Percent)

	1988-2001	2002-2007	1988-2007
Average GDP Growth	3.2	6.8	4.3
Model 1			
Labor contribution	24.3	6.1	15.3
Capital contribution	73.4	35.2	54.5
TFP contribution	2.3	58.7	30.2
Model 2			
Labor contribution	17.8	7.1	12.5
Capital contribution	78.7	61.2	70.0
TFP contribution	3.6	31.7	17.4
Model 3			
Labor contribution	13.6	5.4	9.6
Capital contribution	88.5	84.7	86.6
TFP contribution	-2.1	9.9	3.8

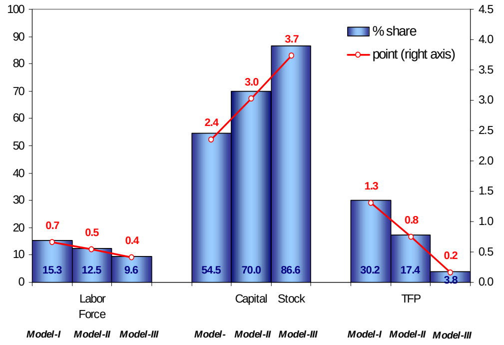
According to estimation results that omitted the impacts of short-term (cyclical) fluctuations in the economy, endogenous-exogenous shocks and the age of capital stock (Model 1), labor (employment) growth, capital accumulation and productivity gains accounted for 15.3, 54.5 and 30.2 percent, respectively, of the annual average growth rate of 4.3 percent during 1988-2007. If such a low GDP growth rate is disregarded, the structure of growth appears to be well-balanced, as the 30 percent share of productivity increase is quite satisfactory for sustainable growth. The major driver of the annual average growth rate of 6.8 percent during 2002-2007 was productivity increase, with 58.7 percent, and the only problem seems to be labor markets or to create employment.

When we employ the average working hours index and the capacity utilization rate variables that represent cyclical changes in the economy, results vary dramatically (Model 2). During 1988-2007, the contribution of capital stock to economic growth increased from 54.5 percent to around 70 percent, while the TFP contribution dropped from 30.2 percent to 17.4 percent. During 2002-2007, the contribution of capital stock to economic growth increased from 35.2 percent to 61.2 percent, whereas the TFP contribution dropped from 58.7 percent to 32 percent. As indicated by this conclusion, both cyclical changes and endogenous-exogenous shocks had caused the growth rate to fluctuate significantly; the high growth rate of recent years was largely driven by the effective use of the available (idle) production capacity; and it would be insufficient to evaluate the sources and sustainability of growth performance without taking into consideration these temporary fluctuations in the capacity utilization rate.

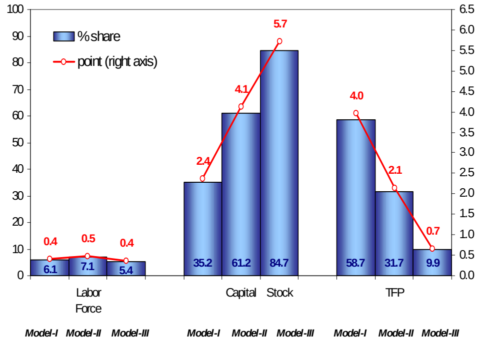
In addition to the capacity utilization rate, the renewal rate of capital stock also provided a significant contribution to the growth rate of Turkish economy (Model 3), which, in one part, directly reflects on the coefficient of the variable that represents the renewal rate of capital stock, and, in another, indirectly reflects on the coefficient of the variable that represents the level of capital stock. Over the entire period, capital stock as a whole, including the renewal rate of capital stock, contributed by 86 percent to economic growth, which suggests that the major driver of the production capacity enlargement in Turkish economy.

By taking the renewal rate of capital into account, the increased contribution of capital stock to economic growth had its largest impact on the TFP contribution. In fact, over 1988-2007 period, the TFP contribution rate was initially 30.2 percent, but with including capacity utilization and average working hours, it declined to 17.4 percent and with a further inclusion of the renewal rate of capital stock, it dropped to 3.8 percent. For 2002-2007 period, the TFP contribution rate was initially estimated to be 58.7 percent, but it first decreased to 31.7 percent and after including the renewal rate of capital stock, it declined to about 10 percent. Employment made only a minor contribution to growth and this contribution is lesser in models which use control variables (Graph 1 and Graph 2).

Graph 1: Sources of Growth by Different Models
(1988-2007)



Graph 2: Sources of Growth by Different Models
(2002-2007)



Source: TURKSTAT, CBRT.

The relatively high growth rate during 2002-2007 was fueled by both permanent (employment, capital stock, renewal rate of capital stock and productivity gains) and temporary (cyclical) factors (average working hours and capacity utilization rate). In that period, permanent and temporary factors accounted for 5 and 1.8 points, respectively, of the average annual growth rate of 6.8 percent. In terms of contributions to economic growth rate, permanent and temporary factors contributed by 74 and 26 percent, respectively. These figures suggest that growth rate of production capacity of the Turkish economy has improved in recent years and the corresponding growth rate was around 5 percent.

According to the "Endogenous Growth Theory", a widely accepted approach of economic growth, physical investments are not sufficient alone to capture the long-term dynamic-sustainable growth performance. The increases in the economic growth rate by using physical investments, especially in low income countries, can be possible in the short-medium term, while it would be quite unlikely to reach a high growth rate that will lead to convergence to advanced economies in the long run. According to this theory, economic policies should first adopt productivity improvement measures that will offset or even reverse the falling productivity in physical investments. In other words, a long-term sustainable growth will inevitably require the adoption of TFP improvement measures and these measures that introduce "behavior changes" of individuals, firms and the government towards focusing on increasing productivity will be crucial. Therefore, one of the main policy targets should be to raise the quality of labor force which is the basic source of countries. Besides, in addition to the quality of labor, permanent maintenance of macroeconomic stability by broader micro and macro policies, a reduced unregistered economy, an efficient environment for competition, quality improvement in physical infrastructure, easier access to financial resources, the development of techno parks and industrial park exercises, increased institutionalization and strengthening technological innovation activities are very important to achieve a long-term high growth path.

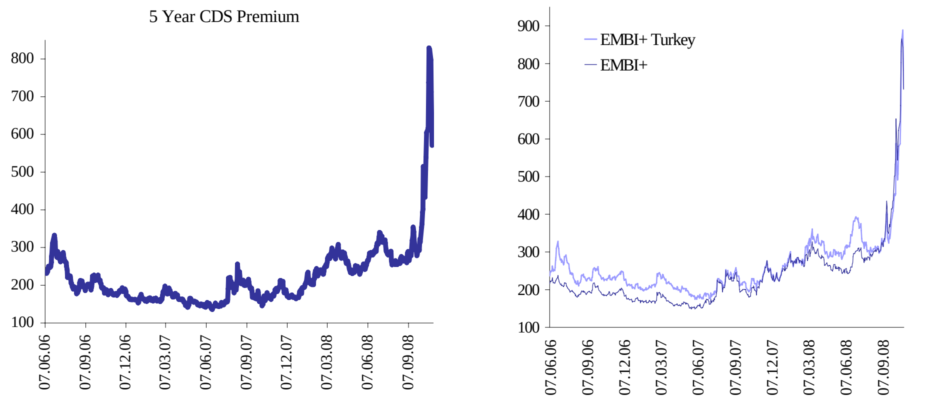
5. Financial Markets and Financial Intermediation

5.1. Financial Markets

The weakness in global financial markets continued to broaden and intensify in the third quarter of 2008. Given the credit crisis that started in the US sub-prime mortgage market and then spilled over into money and capital markets, the uncertainty about the extent to which financial institutions are exposed to market risks added to the mounting distrust in global financial markets. The increased number of alarming headlines about major financial firms and the collapse or bailout of some institutions exacerbated the confidence problem, which eventually underpinned the liquidity squeeze between banks. As the financial uncertainty continued to loom over the global economy, developed country governments and central banks introduced rescue packages to bring trust back into markets and to reduce the systemic risk in the financial system by means of massive coordinated liquidity injections that have been made for a while, new liquidity-boosting measures, capital raising and deposit insurance. Yet, whether these plans will put stability back in the financial system remains to be seen.

Heightened concerns over global financial problems and their spillovers to the world economy caused a further increase in risk aversion, resulting in a reduction in capital inflows to emerging market economies, whose risk premiums continued to increase in the third quarter. Accordingly, Turkey's risk premium on the 5-year Credit Default Swap (CDS) and the JP Morgan EMBI+ Turkey index has widened dramatically (Graph 5.1.1). However, with the removal of domestic uncertainties, Turkey's risk premium rose at a slower pace than in other developing countries. Given the continued uncertainty over global economic prospects, the volatility in risk premiums and other financial indicators cannot be expected to diminish for good.

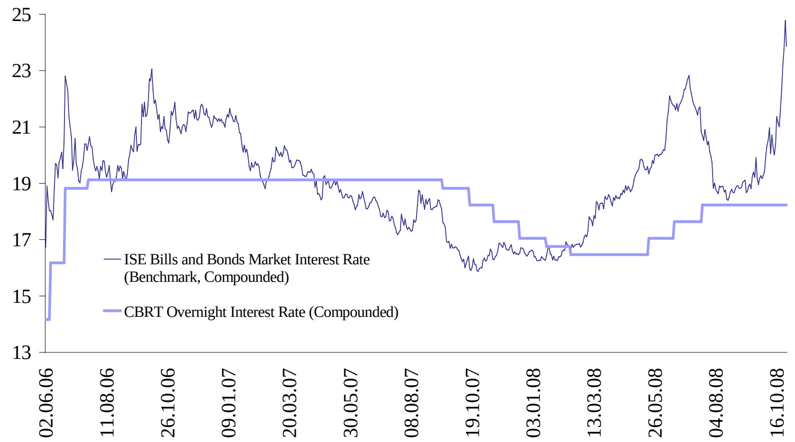
Graph 5.1.1. Risk Premium Indicators



Source: Bloomberg.

In the third quarter of 2008, policy rates were raised sharply due to the increased uncertainty surrounding the world economy and domestic political disquiet. In August, the political uncertainty had faded, leading to a slump in market rates, but the heightened volatility in September caused market rates to reaccelerate. Against this background, after a drop in early third quarter, the interest rate on the benchmark government security climbed back amid heightened risk aversion in September. As uncertainties continued to mount, the benchmark rate rose at a faster pace than CBRT's overnight rate (Graph 5.1.2).

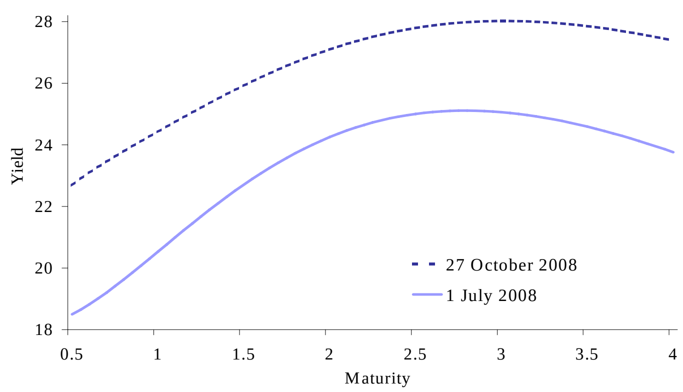
Graph 5.1.2. Changes in Interest Rates
(Percent)



Source: ISE, CBRT.

Market rates were significantly elevated in late third quarter, compared to earlier levels in the third quarter. In each maturity range, yields on October 27, 2008 were much higher than those on July 1, 2008 (Graph 5.1.3). Yet, the long end of the yield curve continued to have a negative slope, which indicates that medium-term inflation expectations remained on a downward path .

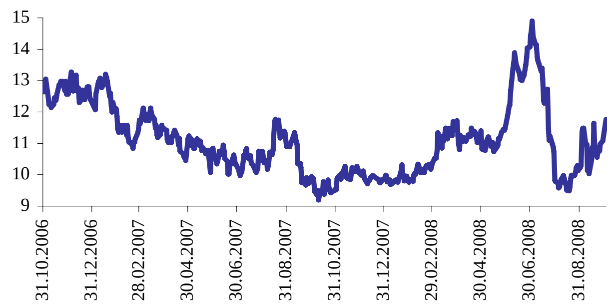
Graph 5.1.3. Yield Curves
(Percent)



Source: CBRT.

After rising temporarily due to domestic uncertainty and falling back on reduced uncertainties, medium-term real interest rates jumped again in September due to increased global uncertainty (Graph 5.1.4). Lately, real interest rates have been around the average for the past one year and continued to put pressure on domestic demand and help inflation ease.

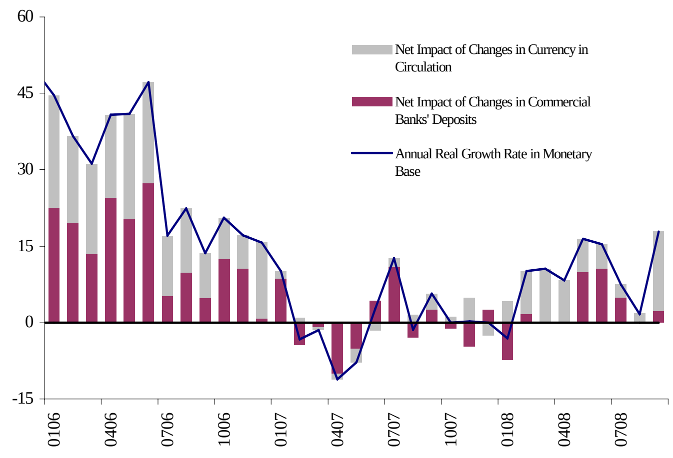
Graph 5.1.4. Changes in Real Interest Rates*
(Percent)



* Two-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 monetary base grew slightly year-on-year in the third quarter of 2008, mainly on account of the amount of currency in circulation that has grown year-on-year in real terms since early 2008. The increase in monetary base, especially in September, was largely due to a shift from less liquid assets towards more liquid and risk free assets, triggered by increased uncertainty, and therefore bears no evidence of inflationary pressures (Graph 5.1.5).

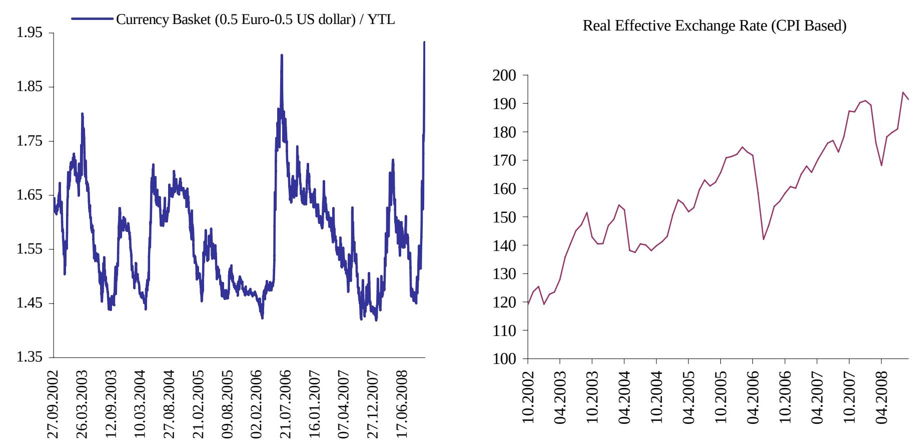
Graph 5.1.5. Annual Real Growth in Monetary Base
(Percent)



Source: CBRT.

After having gained some strength against major currencies in early third quarter thanks to reduced global and domestic uncertainties, the new Turkish lira dropped sharply again in September as the uncertainty surrounding the world economy intensified. The recent depreciation led to a higher YTL volatility (Graph 5.1.6).

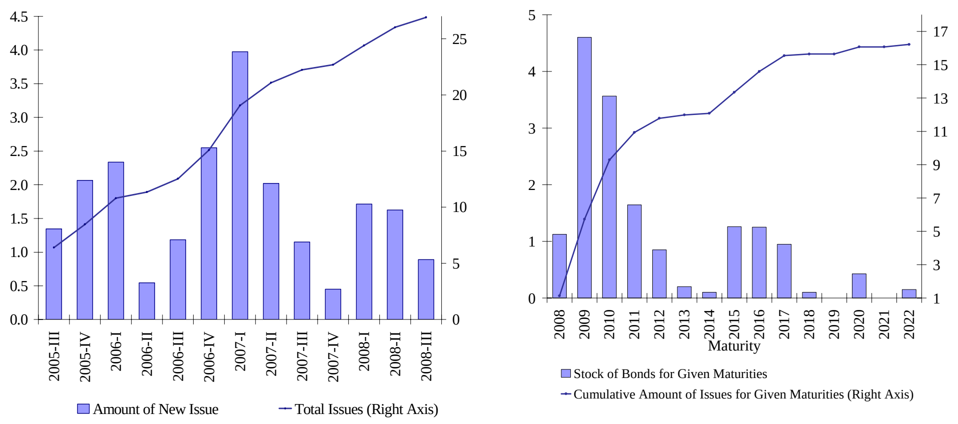
Graph 5.1.6. Exchange Rate Changes



Source: CBRT.

The ongoing international liquidity crisis and global risk aversion continued to tighten financing conditions. The amount of YTL-denominated global bonds issued by foreign financial institutions, an indicator of foreign demand for YTL-denominated assets, dropped in the third quarter of 2008 from a quarter ago (Graph 5.1.7). Total bond stock also decreased from the previous quarter as redemptions were higher than issues of bonds. Despite higher interest rates, the demand for these instruments is expected to remain moderate until global financial markets stabilize.

Graph 5.1.7. YTL Denominated Bonds Issued by Foreign Financial Institutions
(Billion YTL)

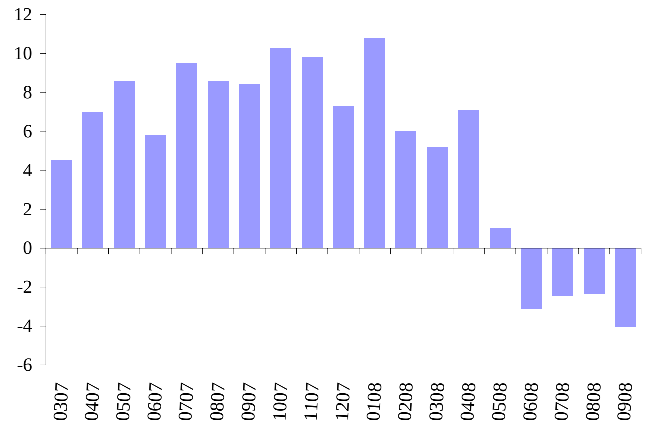


Source: Reuters.

CBRT's net foreign exchange purchase through several auctions amounted to around 2 billion US dollars in the third quarter of 2008. CBRT's foreign exchange reserves were 70.0 billion US dollars on October 24, 2008. The turmoil in credit markets and the resulting distrust constricted the flow of global liquidity, which prompted the CBRT to adopt a series of measures to improve the functioning of exchange markets. Firstly, the CBRT resumed its intermediation role in the FX Deposit Market and doubled the transaction limits in FX and Banknotes Markets. In addition, to strengthen the liquidity position of Turkish commercial banks, the Bank has suspended its FX purchase auctions by September 16, 2008. Lastly, to avoid noncompetitive pricing in the foreign exchange market, the Bank pumped liquidity into the market by selling foreign exchange between September 24-28 through auctions that ended on October 30 on account of improved liquidity conditions and better pricing practices.

Excess liquidity sterilized through the overnight market has diminished by mid-2008 (Graph 5.1.8), driven particularly by Treasury's increased cash balance that exceeded YTL 20 billion in August. In view of these developments, the Central Bank has provided markets with ample liquidity whenever needed by conducting repo auctions that keep overnight interest rates at levels close to CBRT's borrowing rate and refer to the CBRT's overnight borrowing rate as the monetary policy reference rate.

Graph 5.1.8. Excess YTL Liquidity
(Monthly Averages, Billion YTL)

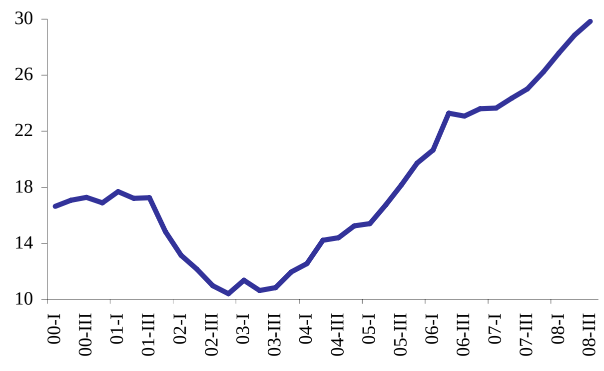


Source: CBRT.

5.2. Financial Intermediation and Loans

In the third quarter of 2008, total loans continued to grow, albeit at a slower pace, while the ratio of real sector loans to GDP expanded further (Graph 5.2.1). The deepening global financial crisis prompted banks to adopt a vigilant stance. Yet, the ongoing demand for household and business loans and the competition in commercial bank lending during the religious holiday season helped loans to grow further.

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

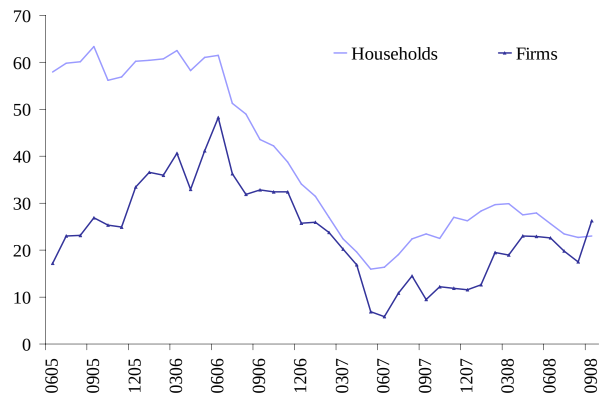


* Real sector loans are composed of household loans and business loans. 2008Q3 GDP shows estimated figures.
Source: CBRT.

In the second quarter, the global turbulence dampened the financial system by reducing foreign borrowing facilities and raising costs. Recently, the accelerated outflow of foreign exchange from money and capital markets has curbed the increase in loanable funds of commercial banks. Therefore, commercial banks shifted their stance from positive, which they had adopted when the political uncertainty ended, to cautious.

With the reduction in borrowing conditions, the rate of increase in household and business loans declined in the third quarter, mainly on decreased expectations and rising costs. However, business loans picked up dramatically in late third quarter. Real sector loans were largely boosted by foreign exchange loans extended to companies by foreign branches of commercial banks and other short-term loans (Graph 5.2.2). The ongoing global credit crunch continues to pose a risk on the real sector's access to foreign financing.

Graph 5.2.2. Household and Business Loans
(Percent, Real Change, YoY)



Source: CBRT, BRSA.

Among the types of consumer loans, housing loans continued to grow in real terms in the third quarter, albeit at a slower pace, while high-cost personal loans remained on the rise with the start of the fall semester and the religious holiday. Automobile loans, on the other hand, registered some rebound during recent campaigns (Table 5.2.1). Claims from credit cards continued to rise in real terms, albeit slowly.

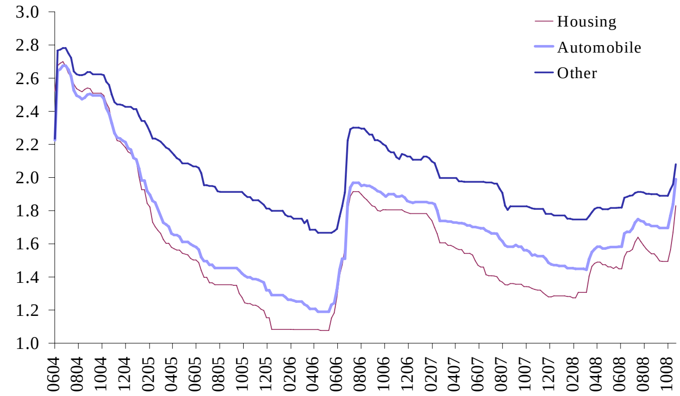
Table 5.2.1. Consumer Loans and Claims from Credit Cards
(Percent, Real Change, QoQ)

	2007			2008		
	II	III	IV	I	II	III
Consumer loans	9.0	10.0	6.6	5.6	4.8	6.7
Housing loans	7.5	10.2	5.4	6.5	4.2	4.1
Automobile loans	-3.4	-2.0	-1.4	-4.5	-1.9	0.2
Other	14.5	12.8	9.9	6.7	6.7	10.4
Credit cards	7.7	2.4	3.2	2.2	5.9	5.4

Source: CBRT.

The global financial uncertainty is expected to further restrain credit expansion. Moreover, the recent slowdown in the expansion of loan syndication and securitization suggests that foreign borrowing facilities have continued to decline. On balance, uncertainties over international markets are likely to further decrease credit supply as they prompt commercial banks to cut direct loans and choose a more liquid portfolio.

Graph 5.2.3. Consumer Loan Rates
(Percent, MoM)



Source: Websites of selected commercial banks.

Along with the run-up in policy rates in the third quarter, driven by the global uncertainty, interest rates on consumer loans climbed back (Graph 5.2.3), which curbed the demand for housing, automobile and personal loans.

To sum up, our national financial system is subject to less instability than those of other major developing countries thanks to sound capital adequacy and a large portfolio involving liquid assets and insurance-linked securities. However, in view of the increased perception of uncertainty and the reduced credit supply, credit expansion is not expected to gain momentum in the upcoming period. CBRT will continue to carefully monitor credit developments as they relate to the total final domestic demand and the soundness of the financial system.

6. Public Finance

The financial turmoil that started in the US sub-prime mortgage market in 2007 evolved into a global crisis, which significantly restrained international borrowing and financing facilities and raised the costs. Therefore, especially those countries with a large current account deficit, like Turkey, have to be determined to maintain fiscal discipline in order to contain spillovers from the global financial crisis. A tight fiscal stance will not only reduce the need for public financing, but also stave off any spillover from the global financial downturn by improving expectations.

In addition to increased global uncertainty, the slowdown in domestic demand that affected the tax performance negatively and created a room for an increase in budget expenditures, is expected to have a dampening effect on public finance targets. Accordingly, to maintain macroeconomic stability, it is needed to create some fiscal space and proceed with the reform process. In addition to maintaining fiscal discipline, the implementation of effective micro-level reforms that would help improve the investment climate and boost productivity and competitiveness, is still vital in this context. The Medium Term Fiscal Framework (MTFF) that was adopted in May 2008 has mobilized some resources for structural reforms and infrastructure investments, which will positively drive economic productivity gains in the medium and long run.

During January-September 2008, central government budget revenues increased at a faster pace than budget expenditures, mainly on falling interest expenditures and stronger-than-expected tax performance. Moreover, the major resource allocation from the Privatization Fund and the Unemployment Fund to Treasury, as per Laws No. 4046 and No. 4447, was recorded as revenue in the central government budget, adding to the high revenue performance. Non-interest expenditures of the central government increased by 11.6 percent, largely due, in order of significance, to increase in current transfers, personnel expenditures, capital expenditures and purchase of goods and services while capital transfers, declined and limited the increase in these expenditures. Consequently, the central government budget balance posted a near-target budget deficit in the first nine months of the year. Although, likely acceleration of budget expenditures and further decline in tax revenues due to weakened domestic demand are expected in the last quarter of the year, the central government budget targets will be largely met.

6.1. Budget Developments

After having registered a surplus of 4.6 billion new Turkish liras during January-August 2008, the central government budget balance posted a deficit of 9.4 billion new Turkish liras in September, running a cumulative deficit of 4.8 billion new Turkish liras in the first three quarters of 2008. Similarly, the primary balance had a surplus of 40.9 billion new Turkish liras from January to August, but ran a deficit of 4.4 billion new Turkish liras in September, hitting a total deficit of 36.5 billion new Turkish liras (Table 6.1.1). Despite the sluggish performance in September, the budget achieved 96.1 percent of the year-end primary surplus target in nine months. During January-September 2008, central government budget revenues increased by 13.3 percent from a year earlier, whereas expenditures rose by a mere 7.5 percent. In the same period, non-interest budget expenditures were up 11.6 percent, while interest expenditures dropped by 3.4 percent.

Table 6.1.1. Central Government Budget Aggregates
(Billion YTL)

	2007 Jan-Sep	2008 Jan-Sep	Rate of increase (%)	Realization/ Budget Target (%)	2008 Budget Target*	2008 Budget Target /GDP**
Central Government Expenditures	**153.96**	**165.48**	**7.5**	**74.4**	**222.6**	**22.8**
A) Interest Expenditures	**42.77**	**41.34**	**-3.4**	**73.8**	**56.0**	**5.7**
B) Non-Interest Expenditures	**111.19**	**124.14**	**11.6**	**74.5**	**166.6**	**17.1**
I. Personnel expenditures	33.04	37.15	12.4	76.3	48.7	5.0
II. Government premiums to social security agencies	4.09	4.53	10.8	70.8	6.4	0.7
III. Purchase of goods and services	13.63	15.07	10.5	65.8	22.9	2.3
IV. Current transfers	47.69	52.51	10.1	75.9	69.2	7.1
V. Capital expenditures	7.55	9.83	30.1	83.4	11.8	1.2
VI. Capital Transfers	2.63	2.05	-21.8	98.5	2.1	0.2
VII. Lending	2.56	3.01	17.5	76.4	3.9	0.4
Central Government Revenues	**141.79**	**160.66**	**13.3**	**78.5**	**204.6**	**21.0**
A) General Budget Revenues	**138.25**	**156.36**	**13.1**	**78.4**	**199.4**	**20.4**
I- Tax Revenues	111.66	127.28	14.0	74.3	171.2	17.5
1. Taxes on income and profits	34.22	40.37	18.0	76.8	52.6	5.4
2. Taxes on property	3.19	3.69	15.6	91.5	4.0	0.4
3. Domestic taxes on goods and services	46.96	50.86	8.3	71.2	71.4	7.3
4. Taxes on international trade and transactions	21.06	25.51	21.1	76.2	33.5	3.4
II- Non-Tax Revenues	26.60	28.80	8.3	102.1	28.2	2.9
B) Revenues of Special Budget Administrations	**2.24**	**2.86**	**28.0**	**83.8**	**3.4**	**0.4**
C) Revenues of Regulatory and Supervisory Agencies	**1.30**	**1.44**	**11.0**	**83.2**	**1.7**	**0.2**
Budget Balance	**-12.17**	**-4.82**			**-18.0**	**-1.8**
Primary Balance	**30.60**	**36.52**	**19.4**	**96.1**	**38.0**	**3.9**

* Revised budget targets in MTTF are yet to be entered in the Table.
** Nominal GDP is assumed to grow by 14 percent in 2008.
Source: Ministry of Finance.

The Ministry of Finance stated that the poor performance in September stemmed from the holiday-driven shift of some revenues from September to October, and of some expenditures from October to September, and emphasized that the performance in September would be better evaluated if results from October were involved.

Current transfers, personnel expenditures, capital expenditures and purchase of goods and services contributed by 4.3, 3.7, 2.0 and 1.3 points, respectively, while capital transfers contributed by –0.5 points to the 11.6 percent rise in central government non-interest budget expenditures.

Current transfers, which make up the largest share in non-interest budget expenditures, grew by 10.1 percent during January-September from a year earlier, mainly on the back of the jump in spending in September. Driven by the insurance premium forgiveness for members of Bağ-Kur (the Social Insurance Organization for the Self-Employed) and SSK (the Social Insurance Institution), transfers made for the open financing of the Social Security Agency had decreased by 8.1 percent in January-August 2008. These transfers increased significantly in September, as monthly and additional pension payments to members of Bağ-Kur shifted from October to September with the religious holiday, and current transfers made for the open financing of social security rose by 3.9 percent during the first nine months of 2008 from a year ago. Shares reserved from revenues, which account for a stunning 28.0 percent in current transfers, grew by 19.5 percent in the first nine months on strong tax performance and increased share of tax revenues for local governments.

Personnel expenditures increased by 12.4 percent during January-September 2008 from a year earlier. The raised monthly salaries of public employees who do not receive an additional payment from their institutions, as imposed by the new adjustment in August, were paid in September, leading to a rise in personnel expenditures.

Capital expenditures grew by a dramatic 30.1 percent in the first nine months of 2008, compared to a year ago, driven by the substantial rise in investment spending by the General Directorates of Highways and State Hydraulic Works in September.

During January-September 2008, purchase of goods and services increased by 10.5 percent mainly on account of defense-security expenditures that rose by a remarkable 15.4 percent and health care expenditures that grew by a slight 3.4 percent. The rate of growth in health care expenditures slowed as the spending on green card health care services remained unchanged from a year earlier.

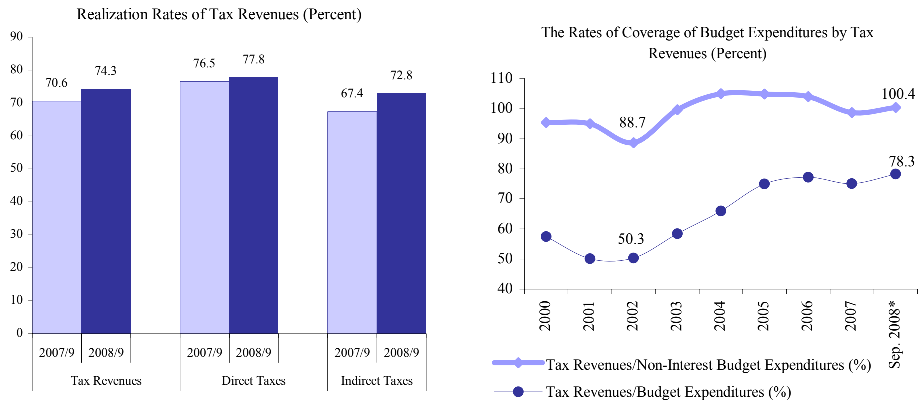
Although capital transfers decreased by 21.8 percent, they reached 98.5 of the year-end target, which suggests that the decline was largely due to a base effect. After 3.5 billion new Turkish liras in 2007, the amount allocated to capital transfers was only 2.1 billion new Turkish liras in 2008.

Tax and non-tax revenues grew by 14.0 and 8.3 percent, respectively, between January and September. Taxes on wages and profits rose by 18.0 percent, making the largest contribution to the growth in tax revenues. The rise in taxes on wages and profits was mainly driven by strong corporate tax revenues that rose by 28.2 percent. Corporate tax revenues grew on the back of the base effect from an unpaid tax amount allowed as a deduction in January 2007 following the corporate tax rate cut in 2006. The solid growth in corporate profits in 2007 and in the first half of 2008, particularly in commercial banks, and the increased efficiency of tax collection were also main factors behind this positive development.

In the first nine months of 2008, domestic value-added taxes and private consumption taxes were up 1.5 and 10.4 percent, respectively, from the comparable period in 2007, which, however, point to a decline in real terms. Value-added taxes on imports, on the other hand, increased by 23.1 percent during January-August 2008 from a year ago amid growing imports.

The realization rate for tax revenues in the first three quarters of 2008 was higher than a year earlier. The rate of coverage of budget expenditures by tax revenues was also up from 2007 (Graph 6.1.1). On balance, the first three quarters’ strong performance of tax revenues is not expected to continue into the fourth quarter due to weak GDP growth and of domestic demand. Yet, the year-end target for tax revenues are likely to be met.

Graph 6.1.1. Tax Revenues



Source: Ministry of Finance.

*Annualized.
Source: Ministry of Finance.

Having declined by 23.8 percent in the first half of 2008, non-tax revenues grew by 8.3 percent during January-September from a year ago, fueled by the strong performance between July and September. As per Laws No. 4046 and No. 4447, the Treasury received transfers from the Privatization Fund and the Unemployment Fund, amounting to YTL 6.0 and 1.3 billion, respectively, which were recorded as revenue in the central government budget. These resources are to be invested in the Southeastern Anatolia Project (SAP) and spent on the employment plan.

The consolidated public-sector primary surplus had amounted to YTL 29.2 billion at end-2007, far below the target of YTL 40.7 billion. Accordingly, the end-2007 target for the public-sector primary surplus was significantly missed and the surplus had equaled about 3.5 percent, partly due to the renewed national account series. In July 2008, the consolidated public-sector primary balance, excluding SEEs, posted a surplus of YTL 20.8 billion (Table 6.1.2).

Table 6.1.2. Program-Defined, Consolidated Public Sector
(Cumulative, Billion YTL)*

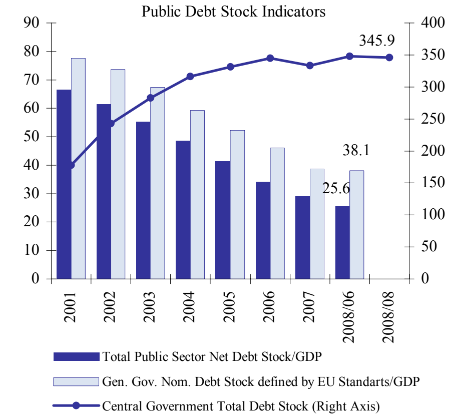
	2005	2006	2007	May-2008	July-2008
Realizations					
Primary Balance	**28.3**	**36.2**	**29.2**	**17.4**	**-**
Primary Balance (excl. SEEs)	**23.6**	**34.6**	**26.7**	**16.5**	**20.8**
Central government budget	24.1	33.5	21.7	14.5	19.2
Overall Balance	**-4.2**	**-1.2**	**-10.0**	**2.8**	**-**
Central government budget	-11.5	-6.9	**-20.7**	**-2.1**	**-4.6**
Targets					
Adjusted Program**					
Primary Balance	30.4	34.5	40.7		
Primary Balance (excl. SEEs)	26.7	31.8	38.2		
Overall Balance	-19,7	-6,5	-5,5		

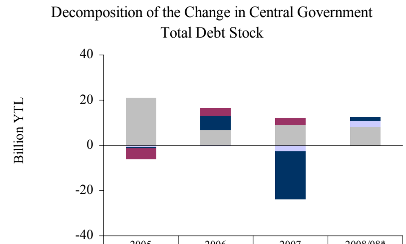
* Figures for 2008 are provisional.
** Budget targets set at the turn of the year are revised by selected adjustment items, which are then defined as adjusted program targets.
Note: Consolidated Public Sector = Central Govt. + 23 SEEs + Extra Budgetary Funds (Defense Industry Support Fund, Privatization Fund and Social Assistance and Solidarity Encouragement Fund) + Social Security Agencies + Unemployment Insurance Fund.
Overall Government = Consolidated Public Sector + Local Administrations + Revolving Funds + Non-CGS SEEs.
Source: Treasury.

6.2. Developments in Debt Stock

The central government debt stock increased by 3.7 percent to YTL 345.9 billion in August 2008, compared to end-2007. Net domestic debt growth, net foreign debt growth and the overall effect of exchange rate movements accounted for YTL 8.2, 2.9 and 1.3 billion, respectively, of the YTL 12.5 billion rise in the central government debt stock, whereas changes in USD/EUR and in USD/SDR had a neutral impact. Meanwhile, the ratio of net total public debt stock to GDP fell to 25.6 percent in the first half of 2008, maintaining the downward trend of the past few years. The ratio of EU-defined central government nominal debt stock to GDP equaled 38.1 percent (Graph 6.2.1). The improvement in public debt stock ratios within the Medium Term Fiscal Framework is expected to continue into 2012, and the ratio of EU-defined central government nominal debt stock to GDP is expected to drop to 30 percent by 2012 once budget targets are met.

Graph 6.2.1. Public Debt Stock Indicators
(Billion YTL)





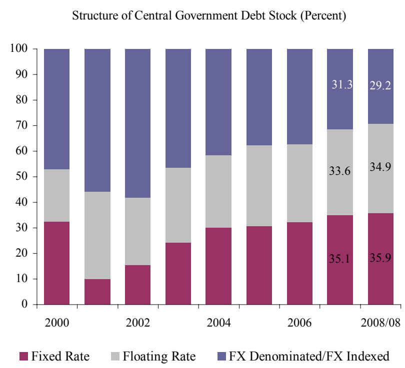
	2005	2006	2007	2008/08*
Parity Effect	-4.8	3.2	3.4	0.0
Tot. Exc. Rate Effect	-0.8	6.4	-21.2	1.3
Net External Borrowing	-0.6	-0.5	-2.6	2.9
Net Domestic Borrowing	21.1	6.7	8.9	8.2

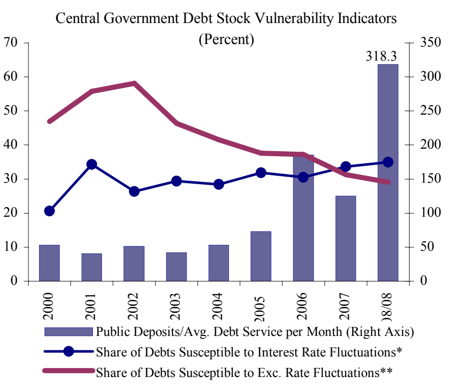
Source: Treasury.

*Changes compared to end-2007.
** Changes arising from movements in USD/EUR and USD/SDR parities.
*** Changes arising from movements in the YTL/USD parity.
Note: Changes in net debt denotes the change adjusted for the exchange rate and parity effect.
Source: Treasury, CBRT.

In the first eight months of 2008, the share of fixed and floating-rate instruments in central government debt stock increased compared with end-2007, while the share of exchange-rate sensitive instruments decreased (Graph 6.2.2). Although the share of exchange-rate sensitive (FX-denominated and FX-indexed) instruments had trended substantially down since 2002 and amounted to 29.2 percent in August 2008, the upward shift in exchange rates continues to put pressure on EU-defined public debt stock. Nevertheless, the maturity of the current FX-denominated debt stock is relatively lengthened and the Treasury still holds a sizeable amount of foreign exchange deposits, which altogether mitigates the risks associated with exchange rate volatility on public sector.

Graph 6.2.2. Structure of Central Government Debt Stock



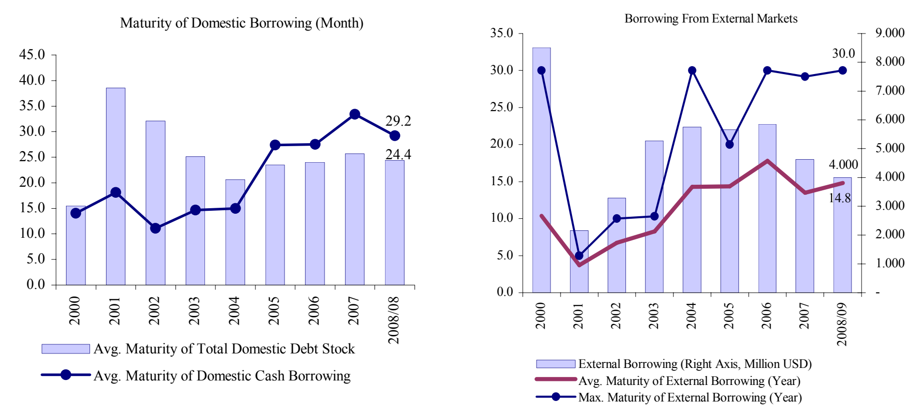


* Debt stock sensitive to interest rates contains discounted securities with a maturity less than 1 year and government securities with flexible interest rates.
** Debt stock sensitive to exchange rates contains foreign debt stock and FX-denominated and FX-indexed domestic debt stock.
Source: Treasury,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

Following the financing strategy intended for reducing the liquidity risk, the ratio of public deposits to average monthly debt service ended May 2008 at a striking 318.3 percent (Graph 6.2.2). The Treasury is expected to maintain its policy of holding large reserves in 2008, which is considered vital in offsetting potential spillovers from the liquidity squeeze in global credit markets.

The average maturity of domestic cash borrowing equaled 29.2 months by August 2008, down from 2007. Likewise, the average maturity of total domestic debt stock also fell to 24.4 months in August 2008. Moreover, bond issues yielded a USD 4.0 billion worth of long-term foreign debt in September 2008 with an average maturity of 14.8 years (Graph 6.2.3).

Graph 6.2.3. Maturity of Borrowing from Domestic and Foreign Markets



Source: Treasury, CBRT.

7. Medium Term Projections

This chapter summarizes assumptions underlying forecasts and, presents relating medium-term inflation and output gap forecasts and the monetary policy outlook. In addition, the alternative scenarios for oil and food prices and the resulting inflation outlook are also shared. Forecasts in this Report cover the next three years.

7.1. Current Stance, Short-Term Outlook and Assumptions

The assumptions underlying medium-term forecasts are discussed in two groups: assumptions related to domestic economic activity and assumptions related to external factors. These assumptions are revised based on the data released after the July 2008 Inflation Report and compiled from the general outlook, analyses and expertise presented in previous chapters.

Second-quarter GDP figures were widely consistent with the outlook presented in the July 2008 Inflation Report. Domestic demand had contributed to GDP growth only slightly, while the contribution from net foreign demand had turned positive. Recent information on the demand for consumption and investment suggest that the slowdown in economic activity continued into the third quarter. Given the global financial turmoil, domestic demand is expected to weaken further in the fourth quarter. Hence, our revised forecasts incorporate a larger contribution of aggregate demand conditions to disinflation in the second half of the year.

After rising on heightened political uncertainty in early third quarter, medium-term real interest rates fell back as the political uncertainty faded. Yet, they jumped again in September due to increased global uncertainty. Therefore, our forecasts are based on the assumption that real interest rates curb domestic demand and help inflation ease further.

The New Turkish lira had some rebound against major currencies in early third quarter on the reduced perception of internal and external risks. However, the uncertainty resulting from the deepening of the global financial crisis has created an unusually high demand for USD liquidity, leading to a significant depreciation in currencies of emerging economies, including Turkey. The significant slowdown in domestic demand growth should limit the exchange rate pass-through. Therefore, we expect the pass-through from exchange rates to the domestic inflation to be relatively limited compared to previous episodes. Hence, first-round effects of the recent depreciation is likely to add around 1.2 percentage points to 2008 end-year inflation and 1.5 percentage points to 2009 inflation.

We also revised down our forecasts of food price inflation for 2008 and 2009. After reaching considerable highs in the first half of 2008, food prices slowed down year-on-year in the third quarter as a result of improved domestic production and reduced international prices. In view of these developments, we have lowered the assumptions for food price inflation from 14 to 11 percent for 2008, and from 9 to 7.5 percent for 2009. These changes have led to a downward revision of about 0.8 and 0.4 points for 2008 and 2009, respectively. The rate of increase in food prices is expected to decelerate in time. Accordingly, we have revised our assumptions for 2010 food inflation down from 7 to 6 percent.

Baseline assumptions in the July Inflation Report assumed oil prices to be aroud USD 140 per barrel by the end of 2008 and envisaged a constant path over the forecast horizon. However, oil prices displayed a sharp fall in the meantime, prompting a downward revision in our assumptions. Taking the average future prices in the first three weeks of October as a benchmark, we have revised our baseline scenario for oil prices down to USD 80 per barrel. On the other hand, the sharp increase in domestic prices of other energy items such as electricity and natural gas partly limited the favorable impact of the fall in oil prices. Overall, the developments in energy prices have led to a downward revision in our end-2008 inflation forecast by 0.5 points, and in our end-2009 forecast by 1.1 points.

Other significant variables providing input to medium-term inflation forecasts are the assumptions related to external economic activity. Given the turmoil in global financial markets, we have revised our Euro area growth forecasts down from the July Inflation Report. Considering forecasts and survey results from international agencies, our euro area growth forecast for 2008 is revised down to 0.7 percent from 1.6 percent. We assume euro area inflation to remain above 2 percent for a prolonged time and to edge down to 2 percent by the end of 2009. In addition to the euro area, we also incorporated the foresights regarding other developed economies and changes in international liquidity conditions into developing forecasts.

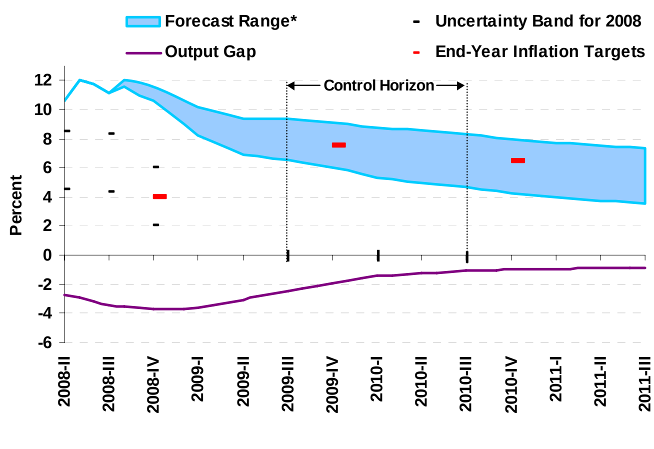
7.2. Medium-Term Outlook

This part, firstly, presents our baseline scenario forecasts that are developed within the framework of the abovementioned assumptions and projections. Furthermore, we propose two alternative scenarios where food and oil prices are higher in one and lower in the other, compared to those in the baseline scenario, and present our resulting inflation and output gap forecasts.

7.2.1. Baseline Scenario

In view of the above assumptions, we have revised up our end-2008 inflation forecast to 11.1 percent. Our medium term forecasts suggest that, with 70 percent probability, inflation will be between 6.1 and 9.1 percent (mid-point 7.6) at the end of 2009, and between 4.3 and 7.9 percent (mid-point 6.1) at the end of 2010. We forecast inflation to come down to 5.4 percent by the end of the third quarter of 2011 (Graph 7.2.1.1).

Graph 7.2.1.1. Inflation and Output Gap Forecasts



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

The deepening of the global financial turmoil indicates that the recent slowdown in economic activity will continue into the final quarter. Output gap forecasts that are developed from this assumption suggest that aggregate demand conditions will make an accelerating contribution to disinflation in the fourth quarter of 2008 (Graph 7.2.1.1).

To sum up, there has been no major revision in our medium term inflation forecasts, as the impact of the favorable food and energy prices and the weakening demand on inflation will be largely offset by the pass-through from recent exchange rate depreciation.

It should be emphasized that any new data or information regarding the inflation outlook may lead to a change in our policy stance. Given the exceptionally high level of uncertainties in global financial markets, monetary policy needs to remain flexible.

7.2.2. Alternative Scenarios

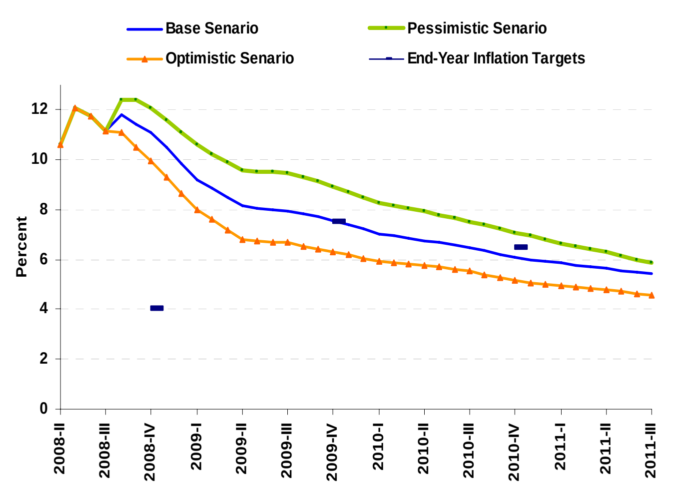
Due to uncertainties surrounding food and oil prices, it is believed that the publicizing of the alternative scenarios with varying price trends would provide a better assessment for the inflation outlook.

In the first scenario, we suggest that oil and food prices are higher than in the baseline scenario. Thus, we assume that food price inflation materializes at 12.5, 10, and 9 percent throughout the 2008-2010 period, whereas oil prices rise to USD 110 at the end of 2008, staying constant thereafter.[1] Assuming an appropriate monetary policy response, our forecasts under this scenario suggest that inflation will be 8.9 percent at the end of 2009 and around 7.1 percent at the end of 2010 (Graph 7.2.2.1).

In the second scenario, we suggest that oil and food prices are lower than in the baseline scenario. Accordingly, we assume that food price inflation materializes at 9.5, 5, and 3 percent throughout the 2008-2010 period, whereas oil prices ease to USD 50 at the end of 2008, staying constant thereafter. Assuming an appropriate policy response, our forecasts under this scenario suggest that inflation will be 6.3 percent at the end of 2009 and around 5.2 percent at the end of 2010 (Graph 7.2.2.1).

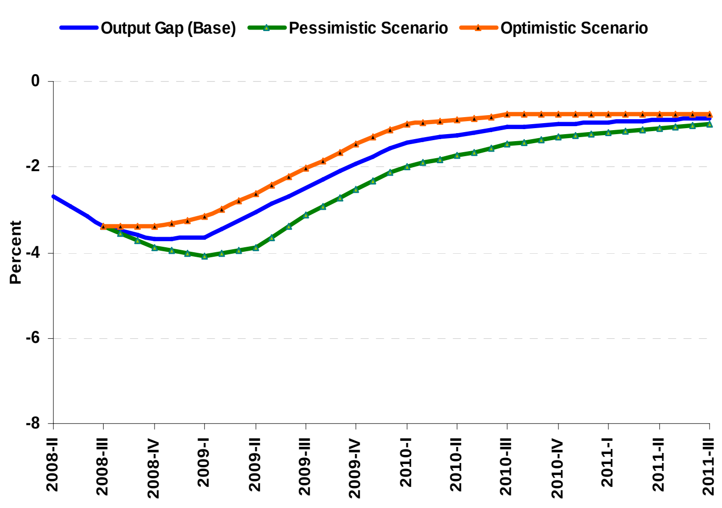
[1] Our scenarios for oil prices are based on the three-month average of the crude oil volatility index (OVX) from Chicago Board Options Exchange (CBOE).

Graph 7.2.2.1. Inflation Forecasts: Baseline Scenario and Alternative Scenarios



Our output gap forecasts under both scenarios are shown in Graph 7.2.2.2. According to our second scenario, the output gap starts to close gradually in the upcoming period, whereas in the first scenario, the output gap continues to widen for some time and narrows only by mid-2010.

Graph 7.2.2.2. Output Gap Forecasts: Baseline Scenario and Alternative Scenarios



7.3. Risks

Recent problems in global credit markets have led to a loss of confidence in the global financial system. These developments have adversely affected the global liquidity flows and triggered an extraordinary demand for liquidity, especially in USD. Acting promptly and in a coordinated manner, central banks are taking decisions in an effort to overcome the liquidity squeeze in money markets. In line with these efforts, we have taken several measures to maintain the smooth functioning of domestic foreign exchange markets. Firstly, the CBRT resumed its intermediary role in the Foreign Exchange Deposit Market. Secondly, foreign exchange purchase auctions were suspended in order to further enhance the liquidity conditions of Turkish banks. Thirdly, we have started to inject foreign exchange liquidity into the market through foreign exchange selling auctions to avoid undesired volatility in foreign exchange markets. We will continue to implement necessary measures to ensure the well functioning of financial markets in Turkey.

Looking ahead, credit conditions are expected to continue to tighten in the forthcoming period. Regarding the inflation outlook, these developments create upside risks through potential portfolio movements in the short term, but downside risks through weaker aggregate demand in the medium term. Given the uncertainty surrounding the global economic outlook, monetary policy needs to be flexible on either side. In fact, in this report, we do not provide any explicit signal for the future course of the policy rates. Future monetary policy decisions will depend on the impact of the ongoing financial turmoil on the domestic economy.

Commodity prices continue to be volatile, creating risks to the inflation outlook. Despite the downward revision in projections for food and energy prices, our main scenario is still based on quite conservative assumptions, implying that the risks are on both sides. Accordingly, monetary policy will be conducted so as to minimize upside deviations from the targets, should the upside risks materialize. Downward surprises in food and energy prices, on the other hand, will be perceived as an opportunity to pull inflation below the target.

Finally, a critical underlying assumption for the inflation and monetary policy outlook outlined above is that government expenditures and incomes policy will evolve in line with the official projections, and that there will be no further increases in indirect taxes or administered price adjustments, except those required by the automatic pricing mechanisms in place. In particular, this means any needed tightening in the fiscal balance would occur largely through expenditure cuts rather than higher excise taxes. Any deviation from this framework may lead to a revision of the outlook for inflation and monetary policy.

Prudent monetary policy is necessary but not sufficient to maintain the resilience of the economy against the global financial turmoil. Preserving the fiscal discipline and strengthening the structural reform agenda would also help to mitigate the adverse effects of the ongoing shocks on the domestic economy. In this respect, the European Union accession process and the implementation of structural reforms envisaged in the economic program remain to be of utmost importance. In particular, advances in structural reforms, which would improve the quality of fiscal discipline and enhance productivity gains, are monitored closely by the CBRT with regard to their implications on macroeconomic and price stability.

GRAPHS

1. OVERVIEW

2. INTERNATIONAL ECONOMIC DEVELOPMENTS

3. INFLATION DEVELOPMENTS

4. SUPPLY AND DEMAND DEVELOPMENTS

TABLES

ABBREVIATIONS

AIG	American International Group
ABCP	Asset Based Commercial Paper
AMA	Automotive Manufacturers Association
BoE	Bank of England
BoC	Bank of Canada
BoJ	Bank of Japan
BRSA	Banking Regulation and Supervision Agency
BTS	Business Tendency Survey
CBRT	Central Bank of the Republic of Turkey
CDS	Credit Default Swap
CPFF	Commercial Paper Funding Facility
CPI	Consumer Prices Index
CSRA	Credit Suisse Risk Appetite Index
ECB	European Central Bank
EMBI	Emerging Markets Bonds Index
EMI	Emerging Markets Index
EU	European Union
Fed	Federal Reserve
FHFA	Federal Housing Finance Agency
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices
GS	Goldman Sachs
IFS	International Financial Statistics
ISE	Istanbul Stock Exchange
JPY	Japanese Yen
MPC	Monetary Policy Comittee
MSCI	Morgan Stanley Capital Index
MTFT	Medium term Fiscal Framework
OECD	Organization for Economic Co-Operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PCDF	Primary Dealer Credit Facility
PMI	Purchasing Managers Index
SAP	Southeastern Anatolia Project
SCA	Special CPI Aggregates
SNB	Swiss National Bank
TAF	Term Auction Facility
TARP	Troubled Asset Relief Program
TURKSTAT	Turkish Statistical Institution
USA	United States of America
YTL	New Turkish lira