4. Supply and Demand Developments

National accounts data suggest a stronger course in the third quarter compared to the outlook presented in the October Inflation Report. The growth did not slow down in this quarter, while domestic demand remained almost flat and imports continued to tumble. Exports experienced a quarterly increase in the third quarter, thus the net external demand has contributed positively to quarterly growth for two consecutive quarters, and has also contributed positively to annual growth for the first time over an extended time period. Increased contribution of net external demand to growth without seeing a plunge stands in contrast to past experiences, and also points to the effectiveness of the monetary policy targeting a controlled slowdown in the economy, while balancing the demand components concurrently.

Last quarter data indicate that economic activity remained robust, albeit slowing down slightly (Box 4.1). Seasonally adjusted industrial production data point to a stronger quarter-on-quarter increase in the October-November period, while employment in the services sector remained on a steady rise. Even though the economy settled into a relatively milder path following the first quarter of 2011, the desired rate of slowdown could not be attained. Besides, inflation exceeded the forecasts given the developments in the exchange rate, thus requiring the CBRT to adopt tightening measures in the last quarter of the year.

Domestic demand is expected to lose pace in the forthcoming period amid the tightening monetary measures since October, accompanied by the persisting global woes. In fact, consumer loans have remarkably slowed down recently. Meanwhile, global outlook regarding 2012 point to a deceleration in most economies. Given this outlook, aggregate demand conditions are expected to exert no upward pressure on inflation in 2012. Despite the weak course of external demand, the ongoing correction in the current account balance is expected to be sustained over the forthcoming period.

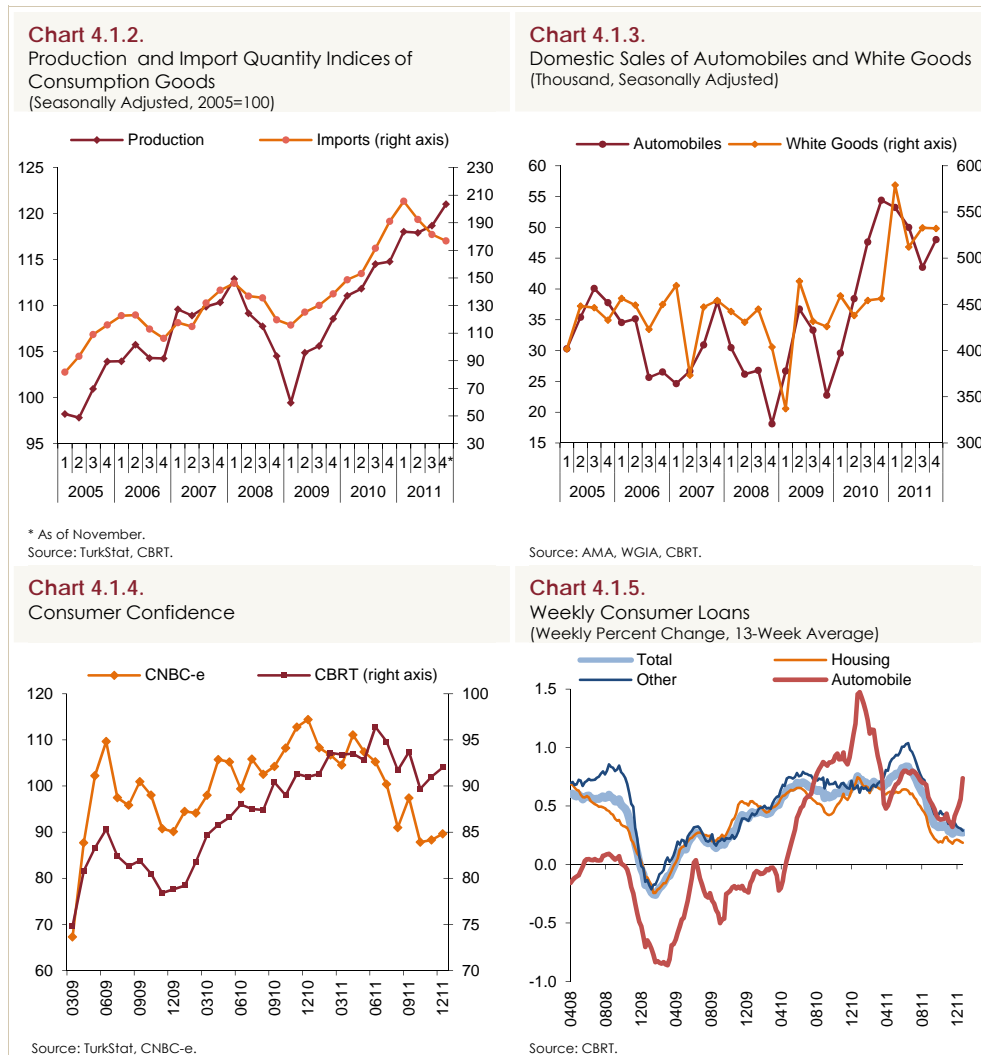## 4.1. Gross Domestic Product Developments and Domestic Demand

The national accounts data released by TurkStat suggest that GDP posted a year-on-year increase by 8.2 percent in the third quarter of 2011. Private demand continued to be a major contributor to annual growth in this quarter, while net external demand contributed positively for the first time after an extended period, thus indicating that demand components were balanced further. In the third quarter, public demand exhibited a stronger course, while the contribution of private investments, albeit remaining high, posted a notable decline compared to the previous periods.

Seasonally adjusted data indicate that GDP recorded a quarterly increase of 1.7 percent in the third quarter (Chart 4.1.1). Private consumption demand increased back to its first-quarter level after a decline in the previous quarter. On the other hand, private machinery and equipment investments plunged significantly amid mounting uncertainties about external developments besides the depreciation of the TL.
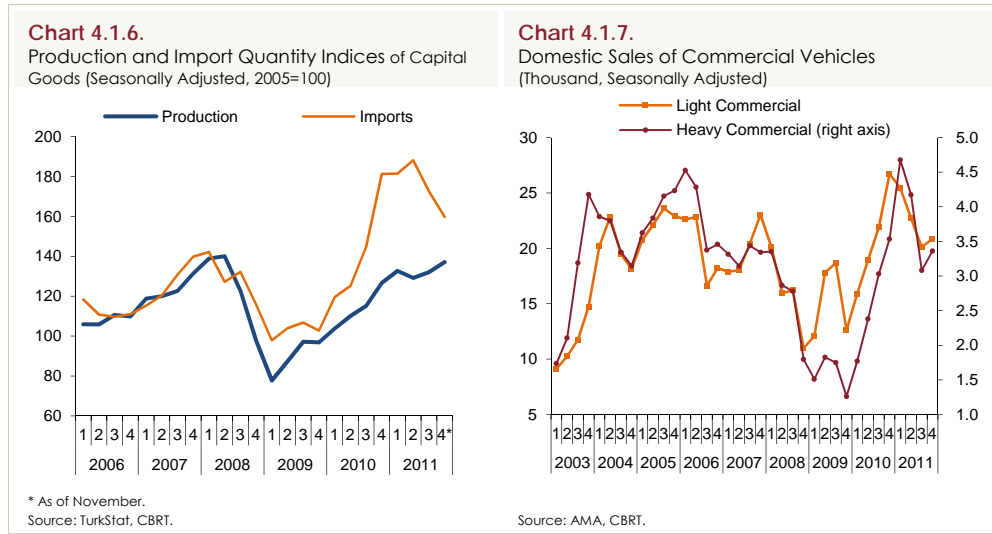
Despite the high quarterly growth in the third quarter, final domestic demand remained nearly flat (Chart 4.1.1). Meanwhile, net external demand provided a stronger support to quarterly growth in the third quarter. Both the flat course of the final domestic demand as well as further balancing between domestic and external demand indicate enhanced effectiveness of the CBRT's monetary policy.

Chart 4.1.1.
GDP and the Final Domestic Demand
(Seasonally Adjusted, 2008Q1=100)

Source: TurkStat, CBRT.
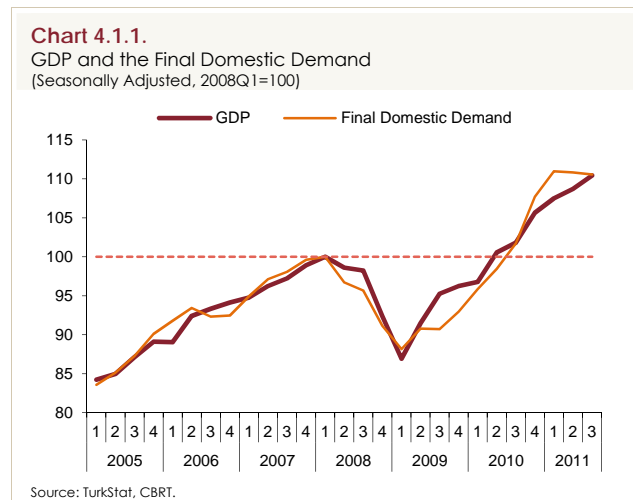
Fourth quarter data point to a moderate increase in the final domestic demand. Production of consumption goods, an indicator of private consumption demand, followed an upward course in the October-November period, while imports of consumption goods, which started to trend down in the second quarter, remained on the fall (Chart 4.1.2). In the meantime, following a plunge in the previous quarter, domestic sales of automobiles picked up in the fourth quarter, while sales of white goods remained flat (Chart 4.1.3). Sales of both white goods and automobiles lag behind their first quarter level; yet, are notably above past-period averages. Consumer confidence indices are in tandem with the moderate course of domestic demand (Chart 4.1.4). Meanwhile, consumer loans are slowing down notably (Chart 4.1.5).

Chart 4.1.2.
Production and Import Quantity Indices of Consumption Goods
(Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

Chart 4.1.3.
Domestic Sales of Automobiles and White Goods
(Thousand, Seasonally Adjusted)

Source: AMA, WGIA, CBRT.

Chart 4.1.4.
Consumer Confidence

Source: TurkStat, CNBC-e.

Chart 4.1.5.
Weekly Consumer Loans
(Weekly Percent Change, 13-Week Average)

Source: CBRT.

Leading indicators point to a mild quarterly increase in the demand for both consumption as well as investment. October-November data indicate a slight increase and a decline in the production and imports of capital goods, respectively (Chart 4.1.6). Meanwhile, after a contraction, domestic sales of light and heavy commercial vehicles edged up in the fourth quarter (Chart 4.1.7).

Chart 4.1.6.
Production and Import Quantity Indices of Capital Goods (Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

Chart 4.1.7.
Domestic Sales of Commercial Vehicles (Thousand, Seasonally Adjusted)
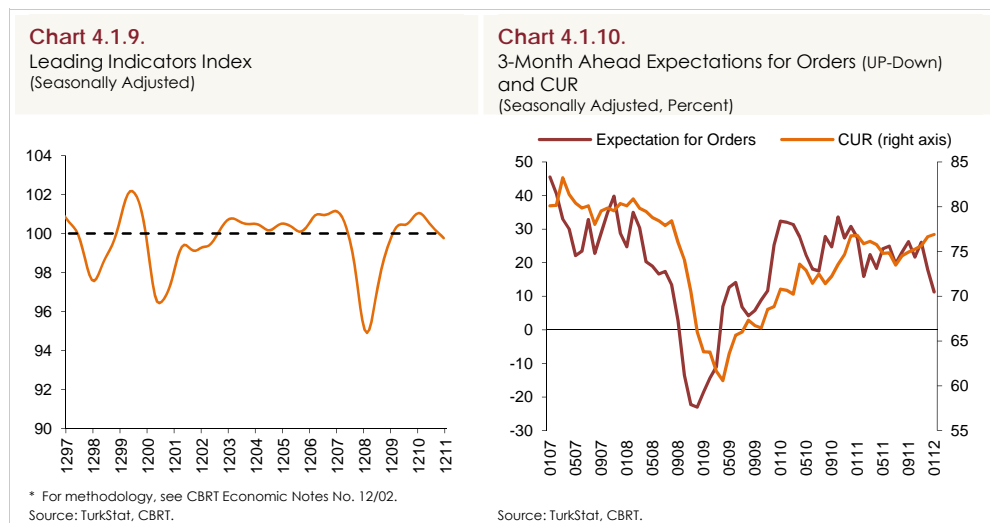
Source: AMA, CBRT.

It should be underlined that the production of consumption and capital goods increased, while imports of consumption and capital goods declined, indicating the significant divergence between imports and the final domestic demand, which usually move in tandem. This points to an increased use of domestic resources, thus indicating the switch of demand from imported goods and services to domestically produced goods due to the depreciation of the TL amid the balancing monetary policies by the CBRT (Box 4.2).

In sum, the recently released data point to a mild growth of the domestic demand in the fourth quarter (Chart 4.1.8).

Chart 4.1.8.
Final Domestic Demand
(Seasonally Adjusted, 2008Q1=100)

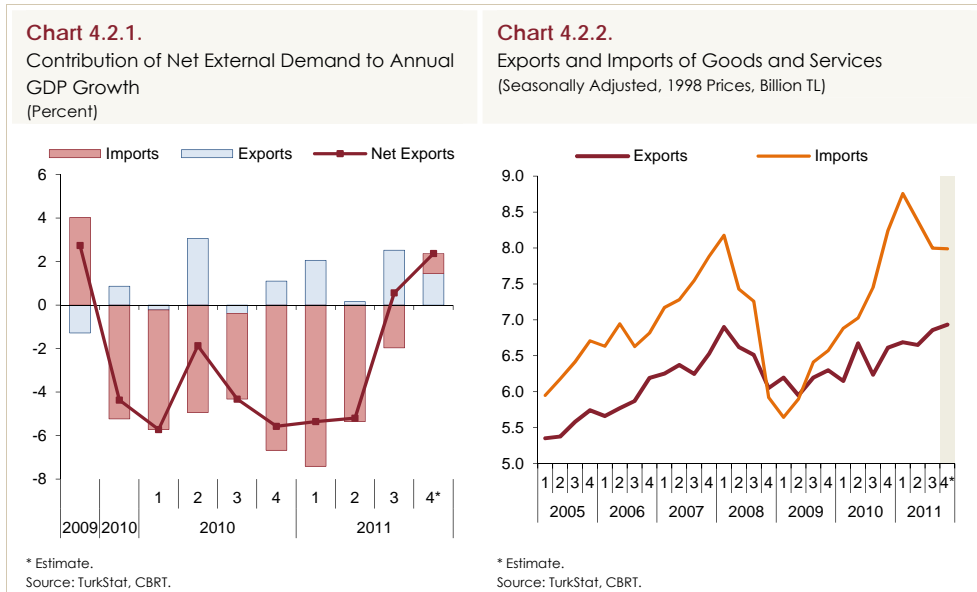* Estimate.
Source: TurkStat, CBRT.
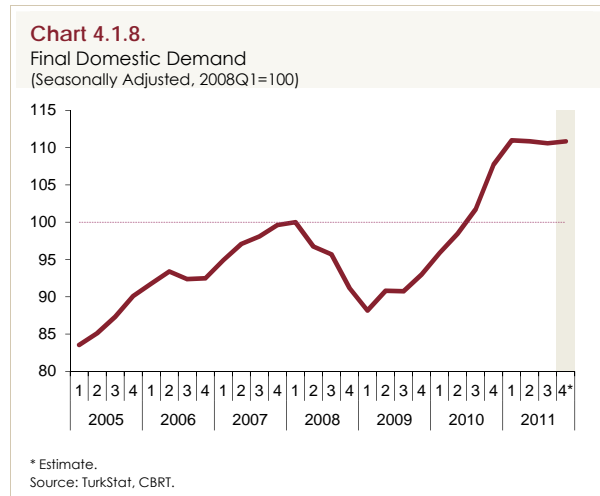
Although the economy settled into a relatively milder path following the first quarter of 2011, the desired rate of slowdown could not be attained, and actual inflation exceeded the forecasts amid exchange rate developments, thus requiring the CBRT to adopt tightening measures as of October. On the back of these measures, domestic demand is expected to slow down further and settle into a moderate course of growth in the forthcoming period. The index derived by the aggregation of selected leading indicators hints for the early signals of the anticipated slowdown (Chart 4.1.9). The sharp decline of the expectation for orders in the manufacturing industry during December and January, especially for the domestic market, will put a cap on the capacity utilization rate in the first quarter (Chart 4.1.10). In the period ahead, the economy is anticipated to be heading for a controlled slowdown, while balancing between domestic and external demand will be maintained, thereby contributing to the normalization of the current account balance.

Chart 4.1.9.
Leading Indicators Index
(Seasonally Adjusted)

* For methodology, see CBRT Economic Notes No. 12/02.
Source: TurkStat, CBRT.

Chart 4.1.10.
3-Month Ahead Expectations for Orders (UP-Down)
and CUR
(Seasonally Adjusted, Percent)
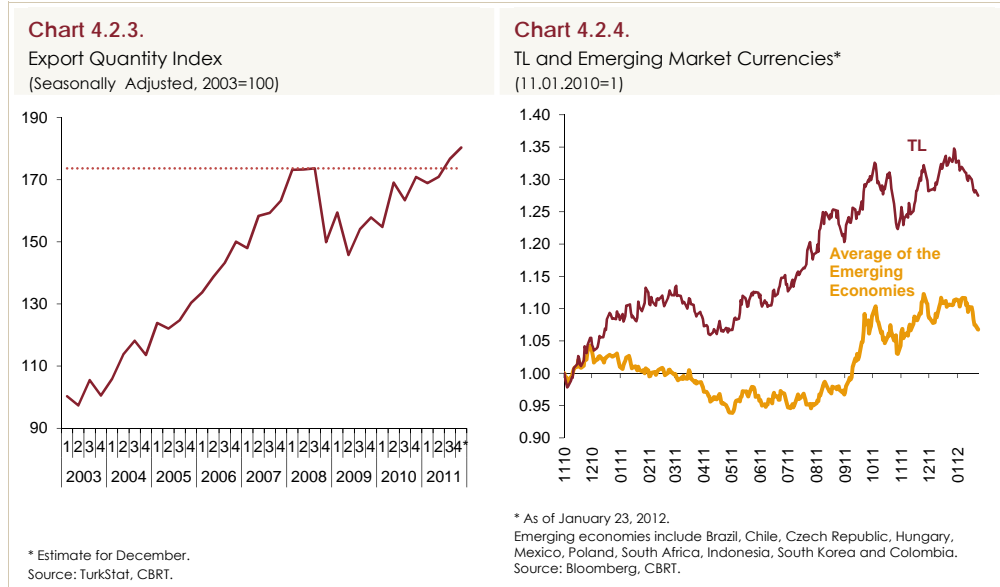

Source: TurkStat, CBRT.

4.2. External Demand

External demand developments in the third quarter of 2011 turned out to be more favorable than projected in the October Inflation Report. Exports of goods and services followed a stronger course, while imports remained weaker than envisaged. Annual growth rates of imports have slowed down gradually since the first quarter, declining to 7.3 percent in the third quarter from 27.3 percent in the first quarter. After a pause in the second quarter, exports of goods and services soared by 10.8 percent in the third quarter on an annual basis. Thus, net external demand, which has contributed negatively to annual growth since the third quarter of 2009, added positively in this period (Chart 4.2.1). Seasonally adjusted data indicate an ebbing quarterly demand for imports against a soaring demand for exports despite intensifying problems in Europe. Thus, net external demand contributed positively to quarterly growth for two consecutive quarters, and the balancing between domestic and external demand gained further momentum.

Chart 4.2.1.
Contribution of Net External Demand to Annual GDP Growth
(Percent)

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

* Estimate.
Source: TurkStat, CBRT.
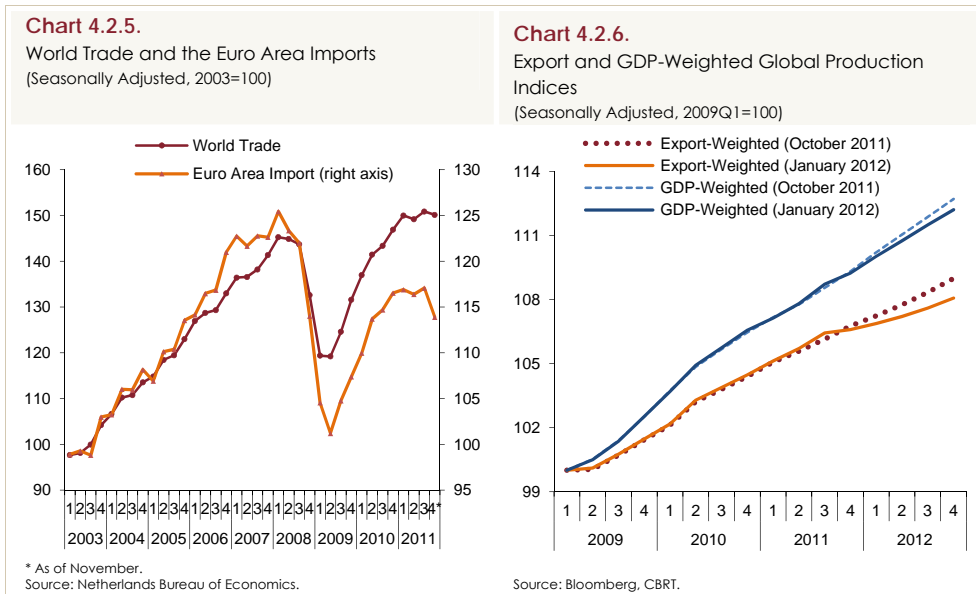
* Estimate.
Source: TurkStat, CBRT.

Exports quantity index continued to recover gradually after following a slower course of growth in the post-crisis period. Last quarter data signal a quarterly increase in exports of goods despite adverse global developments (Chart 4.2.3). This is attributed to the gained competitiveness advantage on the back of exchange rate developments as well as heightened search for new markets amid slowdown in the domestic demand. Since November 2010, the depreciation of TL against the USD has been notably higher relative to other

emerging market currencies (Chart 4.2.4). In this respect, exchange rate is expected to provide further support to exports in the period ahead.

Chart 4.2.3.
Export Quantity Index
(Seasonally Adjusted, 2003=100)

* Estimate for December.
Source: TurkStat, CBRT.

Chart 4.2.4.
TL and Emerging Market Currencies*
(11.01.2010=1)

* As of January 23, 2012.
Emerging economies include Brazil, Chile, Czech Republic, Hungary, Mexico, Poland, South Africa, Indonesia, South Korea and Colombia.
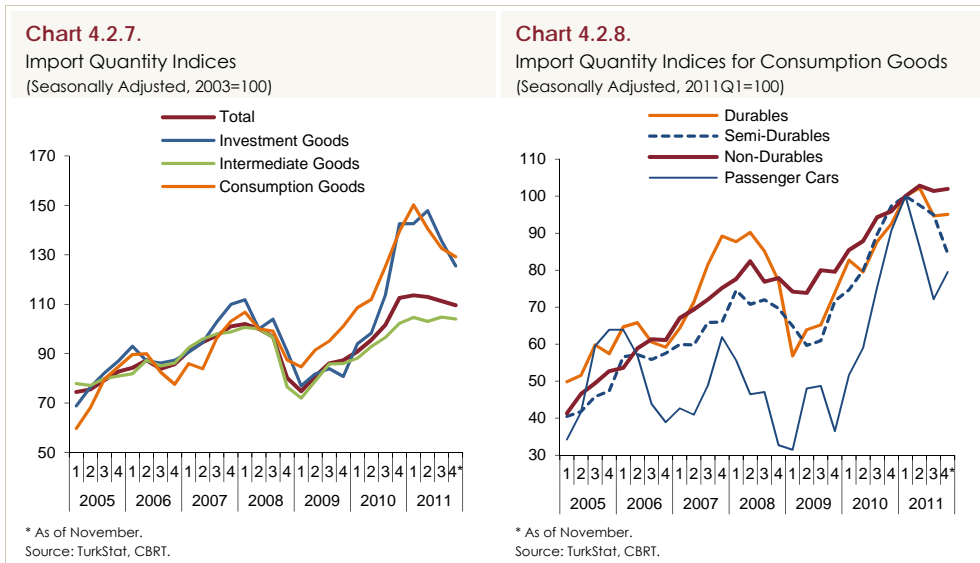Source: Bloomberg, CBRT.

Meanwhile, uncertainties regarding the solution of problems in the Euro Area, which were further intensified in August, remain brisk. The last quarter decline of the import demand in the Euro Area, Turkey's major trading partner, is crucial as far as our export opportunities are concerned (Chart 4.2.5). Moreover, the U.S. economic growth continues to present a weak outlook. Uncertainties in advanced economies put a cap on the world trade, and adversely affect the consumer and investor confidence on a global scale.
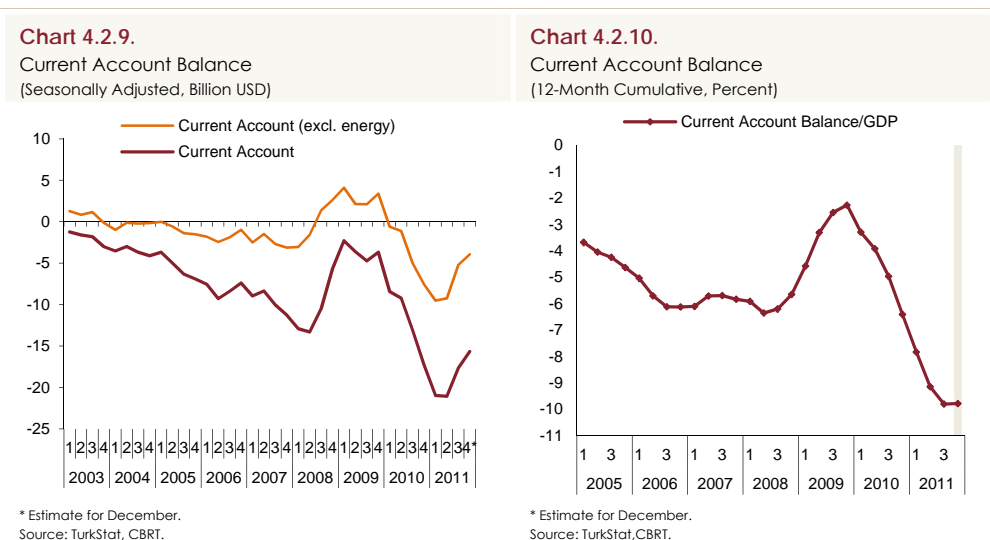
Downward revision of the GDP-weighted global production index in the inter-reporting period confirms the unfavorable outlook around the globe. Moreover, the relatively higher downward revision in export-weighted global production index presents an even weaker outlook for export opportunities (Chart 4.2.6). In this respect, global problems are expected to further restrict the external demand despite gained competitiveness advantage amid exchange rate developments besides new market opportunities.

Chart 4.2.5.
World Trade and the Euro Area Imports
(Seasonally Adjusted, 2003=100)

Chart 4.2.6.
Export and GDP-Weighted Global Production Indices
(Seasonally Adjusted, 2009Q1=100)

* As of November.
Source: Netherlands Bureau of Economics.

Source: Bloomberg, CBRT.

The import quantity index, which has gradually slowed down since the onset of 2011, fell down further in the October-November period, and posted a quarter-on-quarter decline (Chart 4.2.7). The analysis of the import quantity index by subcategories indicates a slight decline in the imports of intermediate goods, while a drastic decline in the imports of consumption and investment goods (Chart 4.2.8). In order to have a better understanding of the effects of the balancing monetary policy, analysis of imports by subcategories is useful. Accordingly, imports of transport vehicles, passenger cars, semi-durables and durables, i.e. subcategories which are sensitive to exchange rate and financing conditions, remained below their first quarter levels. Meanwhile, the slowdown in the demand for imported goods that are relatively more sensitive to current income and employment conditions, remained limited. Against this background, imports of goods and services are expected to decline further in the last quarter, albeit slightly (Chart 4.2.2).

Chart 4.2.7.
Import Quantity Indices
(Seasonally Adjusted, 2003=100)

- Total
- Investment Goods
- Intermediate Goods
- Consumption Goods

* As of November.
Source: TurkStat, CBRT.

Chart 4.2.8.
Import Quantity Indices for Consumption Goods
(Seasonally Adjusted, 2011Q1=100)

- Durables
- Semi-Durables
- Non-Durables
- Passenger Cars

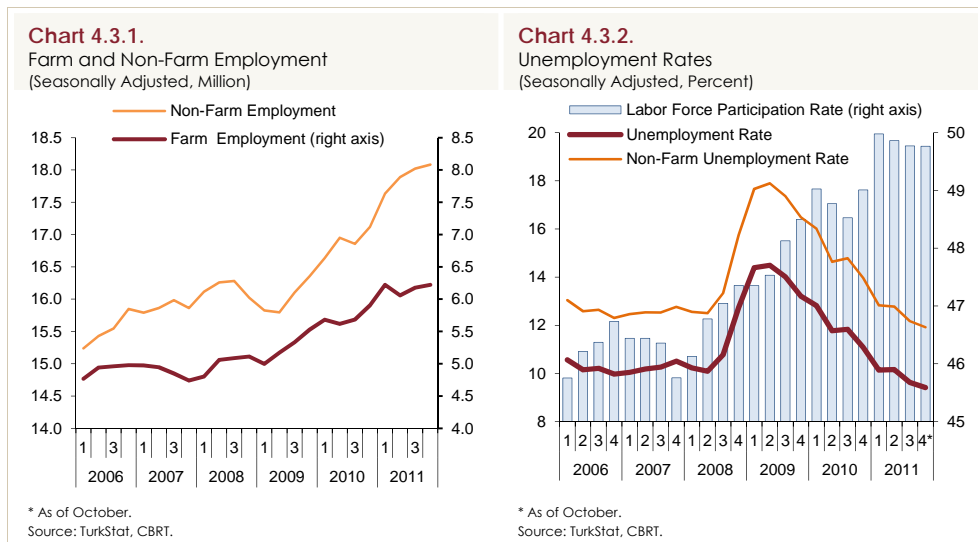* As of November.
Source: TurkStat, CBRT.

In sum, net external demand is anticipated to have positive contributions to both quarterly and annual growth in the last quarter. Amid further balancing between domestic and external demand, the improvement in seasonally adjusted current account balance is estimated to have favorably affected the annualized figures in the last quarter (Charts 4.2.9 and 4.2.10). Recent indicators point that correction in the 12-month current account balance, which started in the last quarter, will also continue through the first quarter of 2012. Yet, it should be underlined that in order to lower current account balance to desired levels in the long term, structural measures are needed besides monetary measures (Box 4.3).

Chart 4.2.9.
Current Account Balance
(Seasonally Adjusted, Billion USD)

- Current Account (excl. energy)
- Current Account

* Estimate for December.
Source: TurkStat, CBRT.

Chart 4.2.10.
Current Account Balance
(12-Month Cumulative, Percent)

- Current Account Balance/GDP

* Estimate for December.
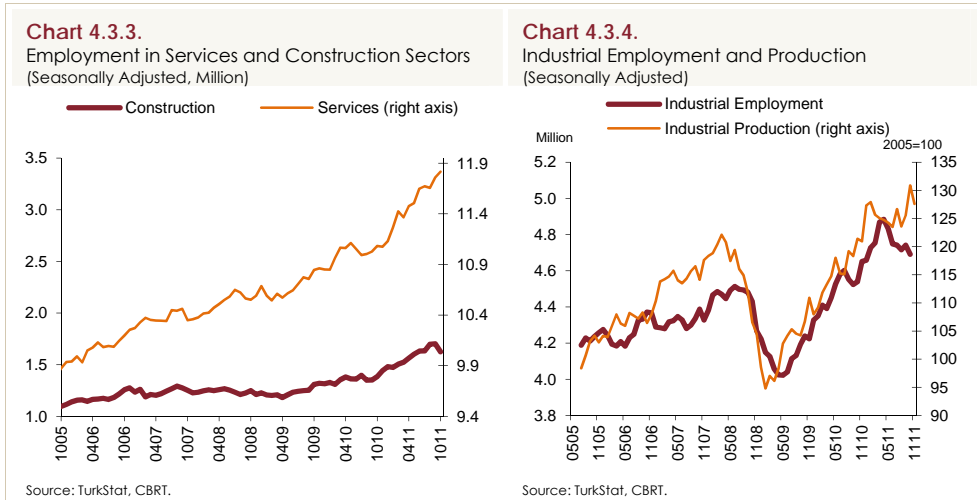Source: TurkStat, CBRT.

4.3. Labor Market

Third quarter employment developments in 2011 were broadly consistent with the outlook presented in the October Inflation Report. Seasonally adjusted industrial employment posted a decline as envisaged, while non-farm employment growth slowed down quarter-on-quarter. Additionally, farm employment edged up in this period, remaining above the pre-crisis levels (Chart 4.3.1). Accordingly, the unemployment rate, which receded back to its pre-crisis levels in the first quarter of 2011, continued to fall in the third quarter, going far below its pre-crisis levels by October (Chart 4.3.2).

Chart 4.3.1.
Farm and Non-Farm Employment
(Seasonally Adjusted, Million)

* As of October.
Source: TurkStat, CBRT.

Chart 4.3.2.
Unemployment Rates
(Seasonally Adjusted, Percent)
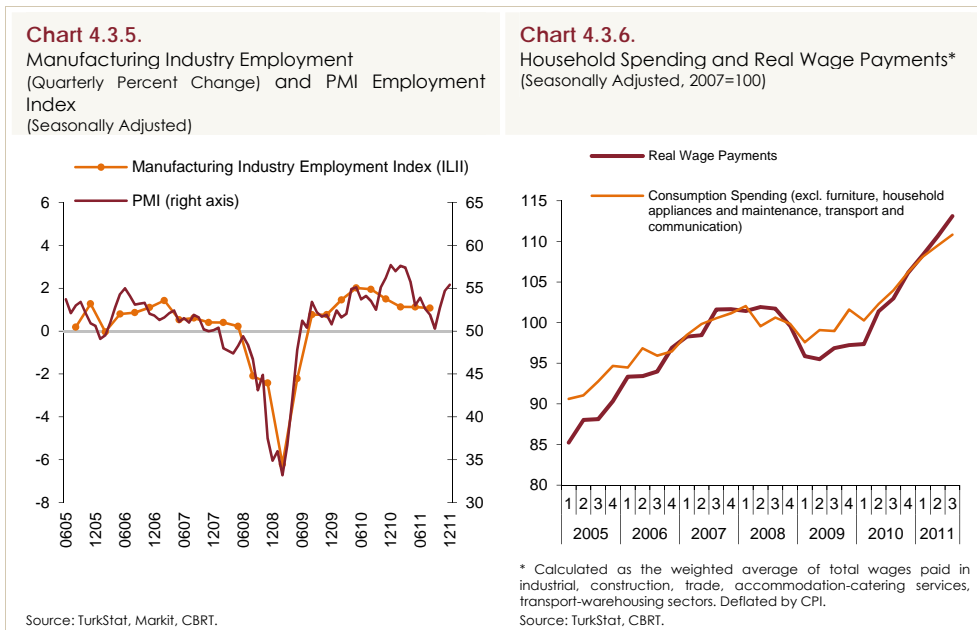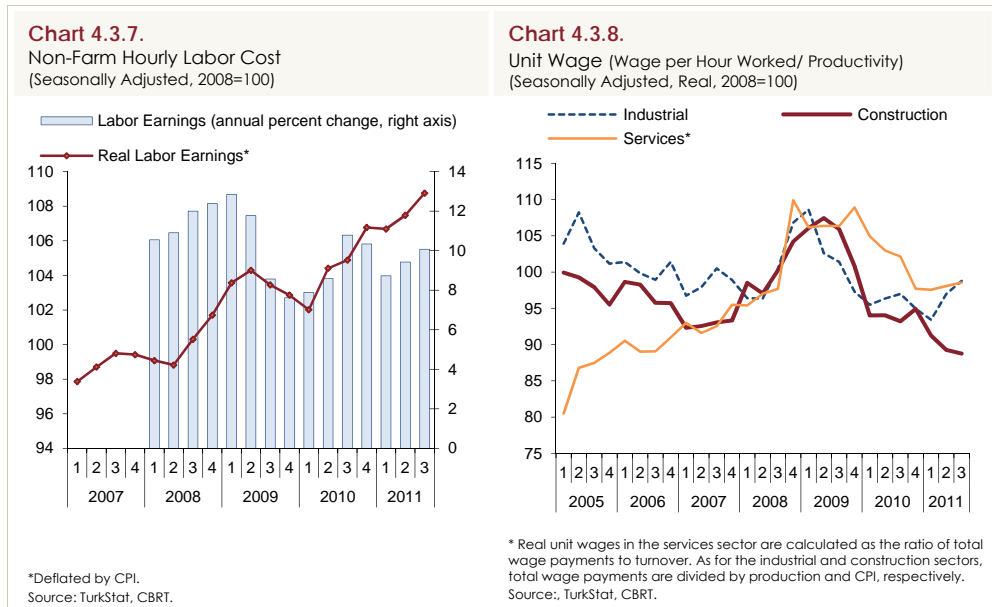

* As of October.
Source: TurkStat, CBRT.

In the third quarter of 2011, services and construction sectors contributed positively, while industrial employment contributed negatively to seasonally adjusted non-farm employment (Charts 4.3.3 and 4.3.4). Industrial employment edged down in the September-October period, while services employment increased further. Employment growth in services and construction sectors was above 2005-2007 averages throughout 2011. Robust increases in employment in these sectors were influential on the sharp decline of the unemployment rate in 2011 (Box 4.4).

Despite the slowdown in the value added, employment growth in the construction sector remained robust during the first nine months of the year. Even though remaining high in annualized terms, seasonally adjusted employment growth in the construction sector declined in the September-October period, thus presenting an outlook more consistent with the developments in the value added.
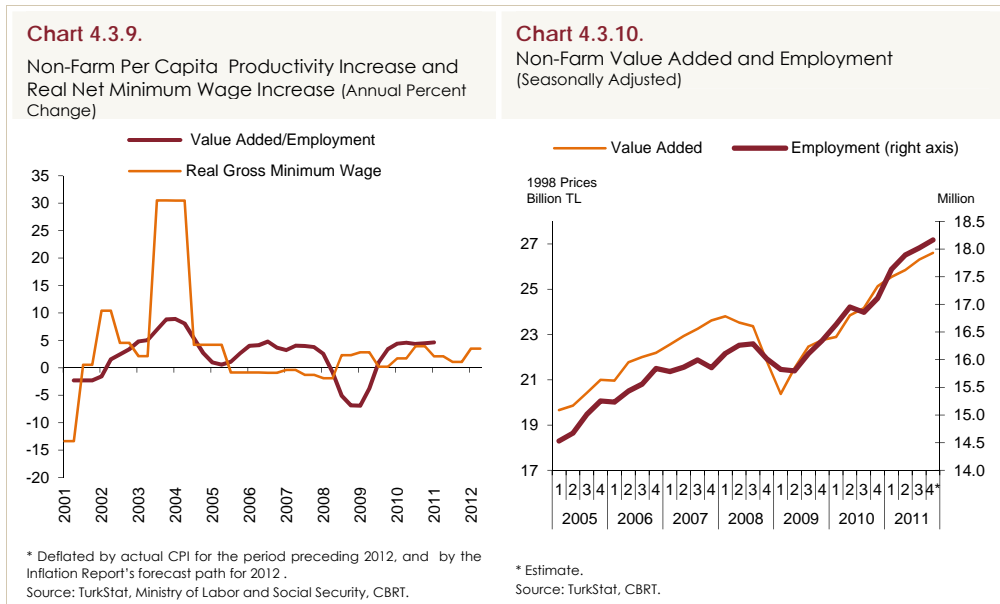
Chart 4.3.3.
Employment in Services and Construction Sectors
(Seasonally Adjusted, Million)

Construction   Services (right axis)

Source: TurkStat, CBRT.

Chart 4.3.4.
Industrial Employment and Production
(Seasonally Adjusted)

Industrial Employment
Industrial Production (right axis)

Million   2005=100

Source: TurkStat, CBRT.

Having declined since the first quarter of the year, industrial sector production picked up in the last quarter. Similarly, after following a downtrend from the onset of 2011 till August, the employment indicator PMI recovered in November-December period, thus signaling an improvement in employment conditions in the last quarter. Against this background, industrial employment is expected to increase in the last quarter, yet only gradually, given the uncertainties regarding the U.S. and the Euro Area economic outlook (Chart 4.3.5).

Chart 4.3.5.
Manufacturing Industry Employment
(Quarterly Percent Change) and PMI Employment Index
(Seasonally Adjusted)

Manufacturing Industry Employment Index (ILII)
PMI (right axis)

Source: TurkStat, Markit, CBRT.

Chart 4.3.6.
Household Spending and Real Wage Payments*
(Seasonally Adjusted, 2007=100)

Real Wage Payments
Consumption Spending (excl. furniture, household appliances and maintenance, transport and communication)

* Calculated as the weighted average of total wages paid in industrial, construction, trade, accommodation-catering services, transport-warehousing sectors. Deflated by CPI.
Source: TurkStat, CBRT.

Chart 4.3.7.
Non-Farm Hourly Labor Cost
(Seasonally Adjusted, 2008=100)

Chart 4.3.8.
Unit Wage (Wage per Hour Worked/ Productivity)
(Seasonally Adjusted, Real, 2008=100)

*Deflated by CPI.
Source: TurkStat, CBRT.

* Real unit wages in the services sector are calculated as the ratio of total wage payments to turnover. As for the industrial and construction sectors, total wage payments are divided by production and CPI, respectively.
Source:, TurkStat, CBRT.

Assessment of the labor market developments in terms of domestic demand outlook indicates that real wage payments have continued to bolster demand in the third quarter of 2011, particularly for goods and services sensitive to current income (Chart 4.3.6). On the cost side, non-farm hourly real earnings index, published under the Labor Cost Indices, posted a quarter-on-quarter increase in the third quarter of 2011 (Chart 4.3.7). However, real unit wages that also encompass productivity developments, increased remarkably only in the industrial sector amid the weak course of the industrial production (Chart 4.3.8). Real unit wages posted a quarter-on-quarter decline in the construction sector, while edging up in the services sector. In sum, wage-driven cost pressures on prices are considered to be absent as of the third quarter of 2011.

Minimum wages for 2012 were announced. Accordingly, gross monthly minimum wage for 16-year olds was set as TL 886,5 for the first and TL 940,5 for the second period of 2012, corresponding to annual average increases by 11.9 and 4.7 percent, in nominal and real terms, respectively. Recent average per capita productivity increase in non-farm sectors is by around 4.5 percent (Chart 4.3.9). Real wage increases are estimated to exert no pressure on prices should productivity increases remain intact throughout 2012.

Chart 4.3.9.

Non-Farm Per Capita Productivity Increase and Real Net Minimum Wage Increase (Annual Percent Change)

* Deflated by actual CPI for the period preceding 2012, and by the Inflation Report's forecast path for 2012 .
Source: TurkStat, Ministry of Labor and Social Security, CBRT.

Chart 4.3.10.

Non-Farm Value Added and Employment (Seasonally Adjusted)

* Estimate.
Source: TurkStat, CBRT.

In sum, given the deterioration in the industrial sector, employment growth remained limited in the July-September period, despite a robust increase in services and construction sectors. In October, non-farm employment dropped on declining employment in the industrial sector accompanied by lower employment in the construction sector, which previously followed a robust course. Leading indicators in the last quarter point to a favorable outlook for industrial employment. Despite the expectation for a fall in employment in the construction sector, the downward course of the industrial employment is expected to come to a halt, and non-farm employment growth in the last quarter is anticipated to follow the third-quarter growth rates amid rising employment in the services sector (Chart 4.3.10). 2012 forecasts indicate that the projected slowdown in the economic activity will restrict employment opportunities.

Box 4.1	A Real-Time Business Cycle Indicator for Turkey

Economic activity indicators are major inputs to the decision making process of the inflation targeting central banks. A complete picture encompassing both the future trends as well as the present outlook calls for an accurate measurement and estimation of the expansion, contraction, heating and cooling phases of the economic activity. Yet, the economic outlook cannot be gauged by a single indicator, thus warranting a holistic approach.

As a matter of fact, Lucas (1977) defines business cycles as a dynamic formation entailing the interaction and co-movement of multiple variables. Building on this view, Aruoba, Diebold and Scotti (2009) modeled business conditions as a common, yet unobserved component (factor) that drags key variables. Thus, the common factor is estimated for selected series, which are assumed to be highly representative of the U.S. economy, through a dynamic factor model. Regularly released by the Philadelphia Fed, this index not only proved successful in grasping the turning points of the U.S. economy historically, but also beneficial for decision making because of its real-time features.[1]

Chart 1. Economic Activity Index

Source: Aruoba and Sarıkaya (2012).

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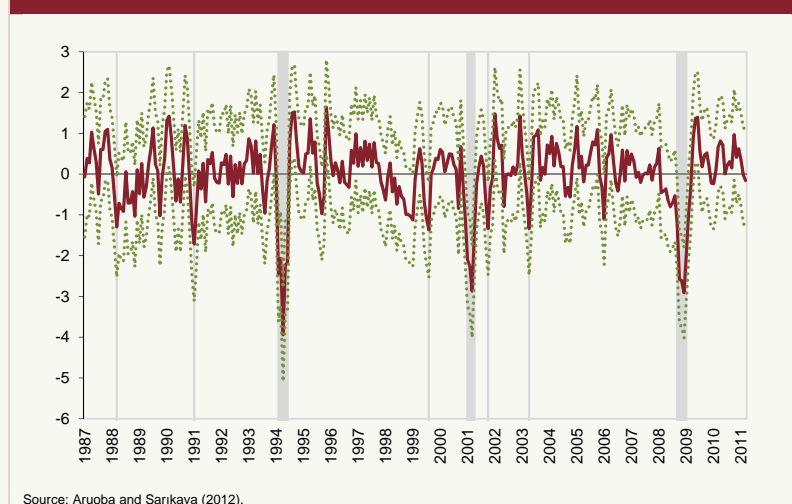
[1] The index released for the U.S. economy is available at http://www.philadelphiafed.org/research-and-data/real-time-center/business-conditions-index/

In the light of the findings by Aruoba and Sarıkaya (2012), this Box evaluates the recent trends of the economic activity in the Turkish economy, by using a dynamic factor model based on Aruoba, Diebold and Scotti (2009). The study, by covering the 1987-2011 period and enabling the simultaneous evaluation of indicators released in various frequencies, aggregates data on industrial production, imports of intermediate goods, electricity generation, employment and GDP in a statistically optimal manner, and produces an economic activity indicator on a monthly basis.

Chart 1 presents the factor (economic activity indicator), derived by assuming that the abovementioned five variables reflect a common component. The burgundy line depicts the factor, while the green lines illustrate the standard error bands indicating the 95 percent confidence interval. Widening of error bands at the end-sample due to increased data uncertainty calls for a cautious approach for evaluating the recent developments. The indicator remaining above (below) zero shows growth (contraction) periods, and the absolute sizes give information on the pace of growth (contraction). The index remaining stable on the same direction hints for the phase of the business cycle. A lingering below zero signals a contraction in the economy, whereas elevation above zero points to a stable growth.

Chart 2. Index (3-Month Average) and Growth (Quarterly)

Source: Aruoba and Sarıkaya (2012), TurkStat.

The index enables the detection of past turbulence/recession periods and allows for their comparative analysis. When the periods when upper limit falls below zero is defined as contraction by also taking margin of error into account, the range of grey areas in Chart 1 clearly shows the severity of the fluctuations. This is because the severity of any crisis depends on whether the upper limit of the index goes below zero, and also, for how long it remains there. Accordingly, 1994, 2001 and 2008-09 crises stand out as the deepest recession periods in the Turkish economy.

Leaving the historical account of business cycles aside, real-time information content of the index is more crucial for policymakers taking decisions with a forward looking perspective. Excluding periods of sharp contraction and the subsequent rapid recovery, the derived index takes a value within the range of [-1, 1]. When matched with the actual data, it is possible to state that index values close to 1 indicate robustness in the economic activity. According to Chart 2, which shows the relation between the index and the quarterly growth rates, the second and fourth quarters of 2010 constitute such an example. When compared to the robust course of growth in these periods, the index, which follows a relatively milder course since the onset of 2011, signals that economic activity lost pace in the last quarter.

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Aruoba, S.B., Ç. Sarıkaya, (2012), "Türkiye için Bir Reel İktisadi Faaliyet Göstergesi", (in Turkish), CBRT Working Paper Series, forthcoming.

Lucas, R.E., (1977), "Understanding Business Cycles", Carnegie-Rochester Conference Series on Public Policy, 5(1): 7–29.
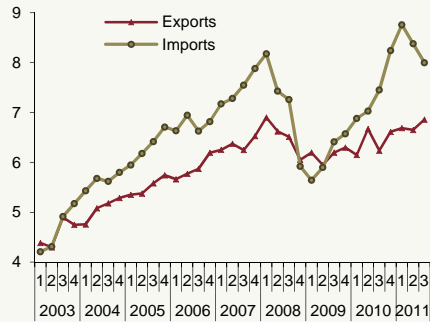
Box 4.2	Recent Developments in the Demand Composition

Following the global crisis, domestic demand recorded a robust recovery amid expansionary monetary and fiscal policies, whereas global growth, and hence, the external demand remained weak. Towards the end-2010, capital inflows were stimulated in line with the excessive easing in monetary and fiscal policies in advanced economies in addition to ample liquidity conditions, thereby strengthening the domestic demand further through credit channel, while also reinforcing the demand for imported goods by causing an excessive appreciation of the TL. Global demand continued to remain weak in this environment, leading to divergence in the paces of recovery between domestic and external demand as well as a deterioration in the foreign trade balance (Charts 1 and 2).

In order to prevent and mitigate macro financial risks stemming from the divergence between domestic and external demand, the CBRT adopted a new policy mix entailing the coordinated use of policy rate, required reserves and other liquidity instruments, as of the last quarter of 2010. The main objective of this policy is to ensure a balanced demand composition by restricting excessive loan utilization and appreciation of the TL driven by speculative capital inflows, and hence, to provide a soft-landing in the economy and to enable the current account deficit to fall to reasonable levels.

| **Chart 1.** Imports and Exports of Goods and Services (Seasonally Adjusted,1998 Prices, Billion TL)	**Chart 2.** GDP and the Final Domestic Demand (Seasonally Adjusted,1998 Prices, 2008Q1=100)

Source: TurkStat, CBRT.
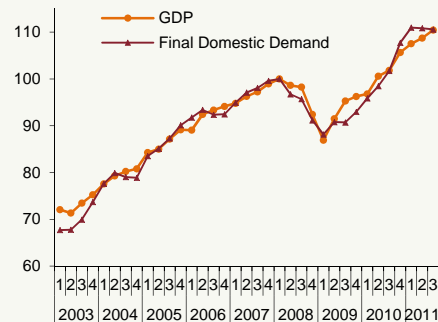
Source: TurkStat, CBRT.

Effects of the balancing monetary policy on the domestic demand were manifested throughout 2011. In fact, despite the uptrend in GDP, final domestic demand remained almost flat in the second and third quarters of 2011, and the imports of goods and services posted a notable decline. For a better understanding of the observed balancing in the demand composition amid the CBRT's policy mix implementation, the determinants of the flat course of the domestic demand in addition to the decline in imports are investigated in the remaining of the analysis.

An analysis of the sub-items of consumption spending indicates a recently notable slowdown in the domestic demand components, which are sensitive to exchange rate and financing conditions, and therefore, are directly subject to the CBRT's tightening policies (Chart 3). This trend can be clearly observed in private machinery and equipment investments and the consumption of furniture, household equipment, transport and communication. Meanwhile, other consumption spending, which is mostly sensitive to current income, and therefore, employment developments, maintains its stable uptrend and continues to contribute to growth. In short, while items with relatively higher import components exhibited a slowdown primarily due to the cumulative depreciation of the TL as well as the increase in loan costs, demand increased further for items with relatively lower import components such as food and services. Therefore, while imports plunged, growth was maintained without any sharp declines, contrary to the past experiences.

Chart 3. Sub-items of Domestic Consumption and Investments on Private Machinery and Equipment
(Seasonally Adjusted, 2008Q1=100)
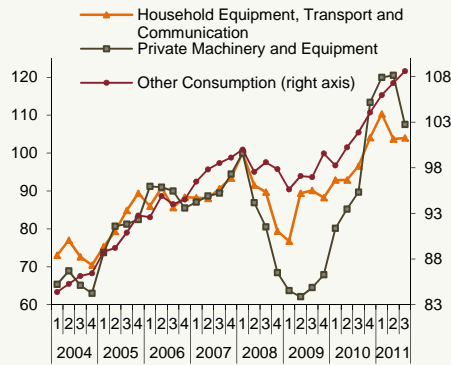
* Other Consumption includes food, clothing, expenditures on housing (housing, water, electricity, gas and other fuels), health, recreation and culture, education, restaurants and hotels, miscellaneous goods and services.
Source: TurkStat, CBRT.

Chart 4. Final Domestic Demand and Imports of Goods and Services
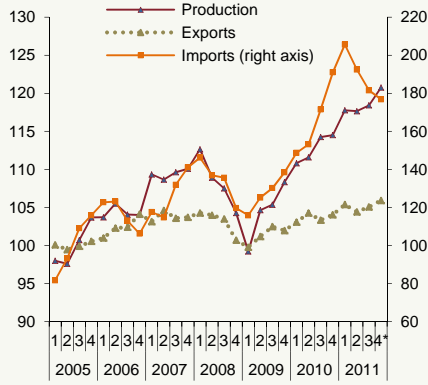(Seasonally Adjusted, 2008Q1=100)
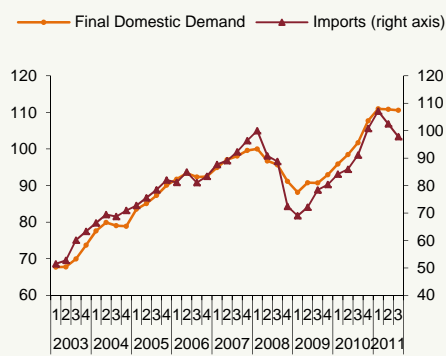
Source: TurkStat, CBRT.

Another significant factor for the balancing of domestic and external demand is the switch of domestic demand from imports to domestically produced goods and services, due to depreciation of the TL amid the CBRT's balancing monetary policy implementations. As a matter of fact, imports of goods and services, which usually move in tandem with the final domestic demand, have recently exhibited a notable divergence, indicating an increase in the share of domestic component of the final domestic demand (Chart 4). In fact, while production of consumption, investment and intermediate goods has recently increased, imports moved inversely (Charts 5, 6 and 7). In short, demand has switched from imported goods towards domestic ones, and the last quarter data indicate that this trend continues (Chart 8).[2] Under these circumstances, support of exports to production strengthens the re-balancing.
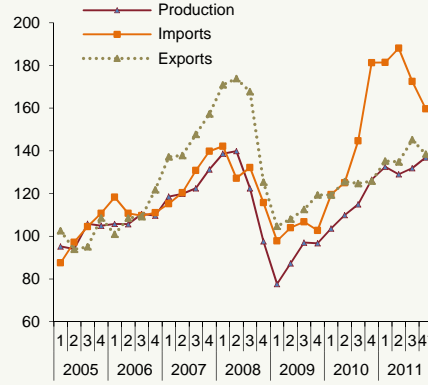
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[2] For details on the calculation of the domestic sales index, please see Akkoyun, Bozok and Şen-Doğan (2011).

Chart 5. Production, Imports and Exports of Consumption Goods
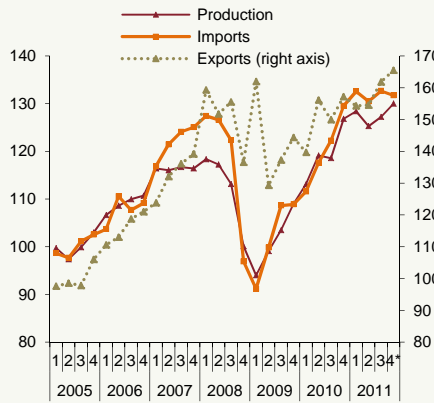(Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

Chart 6. Production, Imports and Exports of Investment Goods
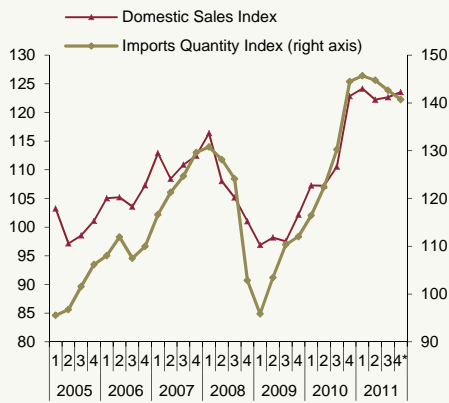(Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

Chart 7. Production, Imports and Exports of Intermediate Goods
(Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

Chart 8. Domestic Sales and Imports Quantity Indices
(Seasonally Adjusted, 2005=100)

* As of November.
Source: TurkStat, CBRT.

In sum, the CBRT's monetary policy implementation slows down domestic demand, while also balancing the demand composition. In fact, following the widening in the first quarter of 2011, the gap between imports and exports narrowed down as the tight monetary policy took effect. While imports plunged in this period, exports maintained an uptrend. Consequently, the positive contribution of net exports to growth displayed a sharp rise in the third quarter of the year.

REFERENCES

Akkoyun, H.Ç., İ. Bozok and B. Şen-Doğan, (2011), "İç ve Dış Talebe İlişkin Alternatif Göstergeler" (in Turkish), CBRT Economic Notes No. 11/17.

| Box 4.3	A Sectoral Look at the Import Coverage Ratio of Exports

Besides other cyclical factors, the current account deficit has started to trend down also on account of the macroprudential measures taken by the CBRT.[3] However, the current account deficit is not only influenced by cyclical, but also by structural factors. Hence, in order to depict the structural side of the current account deficit, this Box evaluates the developments in the foreign trade balance by sectors, on the basis of coverage ratio, which is the ratio of exports to imports.[4]

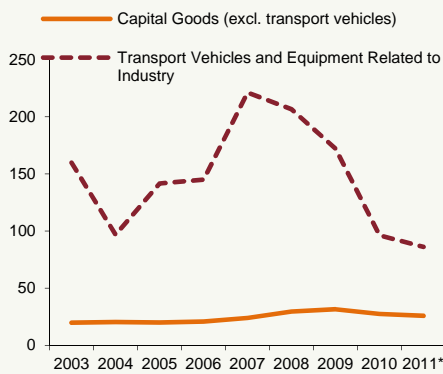**Chart 1.** Ratio of Exports to Imports
(Percent)
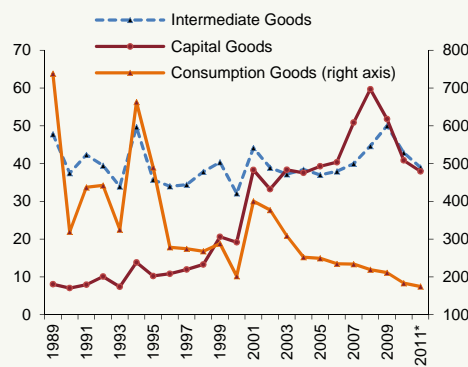
* As of November.
Source: TurkStat.

Chart 2. Coverage Ratio for Selected Intermediate Goods
(Percent)
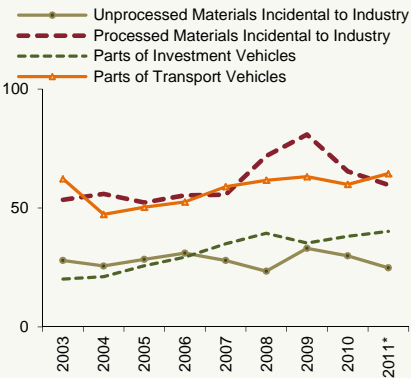
* As of November.
Source: TurkStat.

Chart 3. Coverage Ratio for Investment Goods
(Percent)

* As of November.
Source: TurkStat.

Chart 4. Coverage Ratio for Selected Consumption Goods
(Percent)
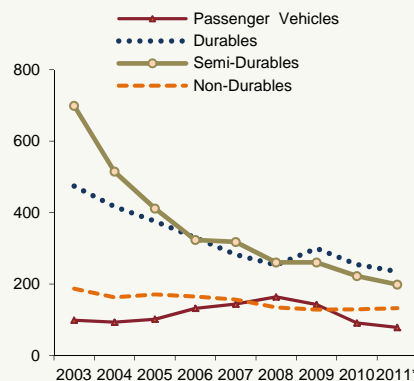
* As of November.
Source: TurkStat.

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[3] See Box 4.2, Charts 4.2.9 and 4.2.10.

[4] TurkStat announces data on exports and imports in USD (with current prices) under various classifications. Coverage ratios in this Box are calculated according to broad economic categories (BEC) classification and exports by chapters.

Assessment of coverage ratios separately for intermediate, investment and consumption goods indicates that the coverage ratio for intermediate goods has hovered around 40 percent since 1989 (Chart 1). Coverage ratio for investment goods is remarkably different between pre-2001 and post-2001 periods. As for the consumption goods, the downward trend in the post-2001 period is noteworthy. The low coverage ratio for intermediate goods that also includes energy imports is considered to be normal. However, the coverage ratio for investment goods being even lower than intermediate goods is striking. For consumption goods, the coverage ratio has trended downwards despite the positive foreign trade balance.

Given the structural transformation of our economy in the post-2001 period, coverage ratios were analyzed further for the 2003-2011 period (Charts 2, 3 and 4). In order to have a detailed assessment of the recent developments by sectors, foreign trade is analyzed by chapters (exports and imports are classified under 98 chapters). Accordingly, the first four sectors with the highest share in our exports are net importers in the January-November 2011 period (Table 1). Woven and non-woven clothes, materials of iron and steel, and fruits and vegetables are the net exporter items with relatively higher shares in exports.

The declining coverage ratios in the post-crisis period, and hence, the widening of the foreign trade deficit, are also attributed to varying sensitivity of sectors to business cycles. For example, transport vehicles related to investment (like light commercial vehicles) and passenger vehicles, which were net exporters in the 2003-2009 period, have become net importers during the last couple of years is due to higher sensitivity of these sectors to business cycles. In other words, the robust course of domestic demand positively influenced the demand for both commercial and passenger vehicles, yet persisting problems in the global economy put a cap on the demand for these goods, manifesting the divergence between domestic and external demand. In this context, domestic demand for these items is contained through balancing measures taken by the CBRT. On the other hand, it should be underlined that given their sensitivity to business cycles, these items, which significantly restricted our exports during and after the global crisis, have the potential to give strong support to export growth as soon as the global problems are eased.

Table 1. Coverage Ratios* (Percent)	Coverage Ratio			Share of Exports			Share of Imports		
	2003-2009 Average	2010	2011	2003-2009 Average	2010	2011	2003-2010 Average	2010	2011
Motor vehicles, tractors, bicycles, motorcycles and others	111.7	102.9	92.5	13.1	12.1	11.7	7.9	7.2	7.0
Boilers: machinery devices and apparatus, parts	36.8	44.3	42.3	7.4	8.3	8.5	13.3	11.5	11.2
Iron and steel	60.0	54.2	54.3	7.9	7.7	8.3	8.6	8.7	8.5
Electrical machinery and appliances, segments and parts	57.4	51.4	51.8	7.0	6.6	6.5	8.0	7.9	7.0
Knitted clothes and accessories	2109.2	767.5	752.4	8.5	6.8	6.3	0.3	0.5	0.5
Mineral fuels, mineral oils and preparations, candles	12.4	11.6	12.2	3.8	3.9	4.9	19.3	20.7	22.3
Materials of iron and steel	234.7	246.6	226.0	3.8	4.3	4.3	1.1	1.1	1.1
Woven clothes and accessories	902.5	299.1	266.4	5.8	4.1	3.8	0.5	0.8	0.8
Plastic and materials thereof	33.3	38.2	36.0	2.5	3.3	3.4	4.9	5.2	5.3
Edible fruits, nuts, peel of citrus fruits and melon	1349.0	1107.7	1015.1	2.8	3.1	2.8	0.1	0.2	0.2
Pearls, precious stones and metal products, coins	80.8	123.4	49.1	2.8	3.3	2.7	3.2	1.6	3.1
Rubber and materials thereof	84.2	81.7	77.4	1.4	1.7	2.0	1.1	1.3	1.4
Salt, sulphur, soil and stones, plasters and cement	476.0	798.6	564.4	1.6	2.2	1.9	0.2	0.2	0.2
Aluminum and materials thereof	71.8	77.0	70.1	1.3	1.7	1.7	1.2	1.3	1.4
Other textiles products, used materials, rag	2678.7	1251.8	1045.1	2.4	1.6	1.6	0.1	0.1	0.1
Furniture, lighting fittings, illuminated nameplates, prefabricated buildings	188.6	165.3	146.9	1.4	1.6	1.5	0.5	0.6	0.6
Cotton, cotton thread and cotton textiles	61.6	42.8	51.8	1.6	1.3	1.4	1.7	1.8	1.6
Parts of vegetables, fruits, plants, canned nuts	2644.0	2370.4	1796.3	1.4	1.3	1.2	0.0	0.0	0.0
Carpets and flooring made of weavable substances	532.3	698.3	805.6	0.9	1.1	1.2	0.1	0.1	0.1
Knitted clothes	371.3	340.1	281.5	0.8	1.1	1.1	0.2	0.2	0.2
Weavable artificial and synthetic fibers	82.1	74.1	72.5	1.2	1.1	1.1	0.9	0.9	0.8
Copper and materials thereof	34.1	32.2	33.8	0.7	0.9	1.1	1.4	1.8	1.7
Paper and carton paper: materials of pulp and carton paper	35.7	43.2	44.4	0.8	1.1	1.0	1.5	1.5	1.3
Synthetic and artificial fibers	71.4	53.6	53.0	1.2	1.0	1.0	1.1	1.1	1.0
Ships, vessels and vehicles floating on the water	242.2	106.5	85.9	1.5	1.0	1.0	0.5	0.6	0.6
Metal ores, slag and ash	87.8	129.8	95.9	0.5	1.1	0.9	0.4	0.5	0.5
Inorganic chemical preparations, organic, inorganic compounds	47.4	65.4	70.1	0.5	0.8	0.9	0.7	0.8	0.7
Materials made of stone, plaster, cement, amianthus, mica etc.	297.5	240.2	204.0	0.9	0.9	0.8	0.2	0.2	0.2
Milling products, malt, starch, inulin, wheat gluten	2218.8	1364.5	1618.3	0.5	0.6	0.8	0.0	0.0	0.0
Edible vegetables and some roots and nodes	830.0	351.1	289.4	0.8	1.0	0.8	0.1	0.2	0.2
Preparations basically made of grains, wheat, starch, milk	454.3	475.1	504.8	0.5	0.7	0.8	0.1	0.1	0.1
Animal and vegetable fats and oils and preparations thereof	56.2	46.3	62.3	0.6	0.4	0.7	0.7	0.5	0.7
Glass and materials thereof	164.8	146.5	137.0	0.9	0.8	0.7	0.3	0.3	0.3
Ceramic products	288.0	201.7	193.1	0.8	0.7	0.7	0.2	0.2	0.2
Soaps, organic surface-active agents, washing-lubricating preparations	118.7	108.4	93.4	0.6	0.6	0.6	0.3	0.3	0.3

* As of November 2011. The items in the table are listed as per their shares within exports in the January-November period for 2011. Averages represent the arithmetic averages of the respective periods. The selected 35 items out of 98 chapters make up nearly 90 percent of our total exports.
Source: TurkStat.

In recent years, durables and semi-durables, which comprise nearly 20 percent of our exports, follow a steady fall in coverage ratios, while the coverage ratio of investment goods (including machinery and equipment but excluding transport vehicles) hovers below 30 percent. On contrary, the coverage ratios across supplier industry items such as parts of transport vehicles and parts of investment vehicles are on the rise. Moreover, the coverage ratio of raw materials processed for industrial purposes is relatively high. The varying of coverage ratios by sectors can also be attributed to structural factors in the 2003-2011 period, during which, various phases of business cycles (like expansion and contraction) were experienced at home and abroad. Accordingly, in order to lower current account balance to desirable levels in the long run, supply-side policies which also consider sector-specific dynamics are crucial, besides demand management measures like monetary policy implementations.[5]

In sum, being more effective especially on items that are sensitive to exchange rate and financing conditions as well as business cycles, adopted measures by the CBRT contribute to the balancing between domestic and external demand and help current account deficit to reach reasonable levels. Yet, given the influential role of structural factors on the foreign trade deficit as well as the varying of incentives for import demand by sectors, micro measures considering sector-specific developments are crucial besides macro measures.

REFERENCES

Saygılı, Ş., C. Cihan, C. Yalçın and T. Hamsici, (2010), "Türkiye İmalat Sanayinin İthalat Yapısı" (in Turkish), CBRT Working Paper No.10/02.

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[5] For a study on import demand by sectors, see Saygılı et al. (2010),

Box 4.4	A Comparison of the Recent Unemployment Rates to 2005-2007 Period by Sectoral Employment Dynamics

Unemployment rates have recently plunged even beyond expectations, hitting the all-time low since 2005. This Box analyzes the underlying reasons of the recent decline in unemployment rates by sectoral employment dynamics. To this end, labor market developments through the second half of 2010 and 2011, the period of almost completed recovery following the economic crisis, is compared with the 2005-2007 period, when unemployment rates posted only a limited decline. A major common feature of the analyzed periods is the high growth rates recorded in both periods. In the 2005-2007 period, the average quarterly growth rate of the non-farm value added was 7.2 percent in annualized terms, while it was 8.2 percent in the second half of 2010 and 2011.

Table 1. The Decomposition of the Average Monthly Changes in the Unemployment Rate
(Percentage Point, Seasonally Adjusted)

|	Unemployment Rate Difference (Total) (1)	Unemployment Rate Difference (Monthly Average) (2)=(3)+(4)	Effect of the Labor Force Increase (Monthly Average) (3)		Effect of the Employment Increase (Monthly Average) (4)	
			Farm (3a)	Non-Farm (3b)	Farm (4a)	Non-Farm (4b)
Unemployment Rate						
2005:2-2007:12	-0.078	-0.002	-0.100	0.181	0.110	-0.196
2010:7-2011:10	-2.073	-0.130	0.106	0.157	-0.125	-0.270
Non-Farm Unemployment Rate						
2005:2-2007:12	-0.847	-0.024		0.231		-0.255
2010:7-2011:10	-2.434	-0.152		0.200		-0.352

Source: TurkStat, CBRT.

Table 1 depicts the sources of change in total and non-farm unemployment rates. Change in unemployment rate is decomposed into the effects of the increase in labor force and employment. Accordingly, the total decline in unemployment rate was only 0.078 points during 2005 and 2007. In this period, the total increase in farm and non-farm employment hardly met the increase in labor supply stemming from the rising population. Meanwhile, non-farm unemployment rate experienced a more pronounced decline of 0.847 points in the same period. Across non-farm sectors, the average monthly effect of the increase in the labor force on unemployment was 0.231 point, while the effect of the rise in employment was -0.255 point, resulting in a net decline in non-farm unemployment rate. In seasonally adjusted terms, non-farm unemployment rate, which was 13.3 percent in early 2005, went down to 12.5 percent at end-2007.

Unemployment rates declined by more than 2 points from 2010:7 to 2011:10. This period exhibits significant differences compared to the 2005:2-2007:12 period. Firstly, the effect of the increase in non-farm employment on unemployment rates is stronger in the recent period. Moreover, labor force and employment also increased in the farm sector. Out of these differences, the effect of non-farm employment stands out. The primary reason for the faster decline in unemployment rates in the recent period is the stronger increase in the non-farm employment. As the rise in farm employment is largely balanced by the increase in labor force, the change in farm unemployment remains limited, thus leaving the total unemployment rate nearly unchanged. [6]

Seasonally adjusted average monthly increase in non-farm employment was 0.29 and 0.41 percent during 2005-2007 and 2010:7-2011:10, respectively. An analysis of the sectoral contributions to increase in non-farm employment in these two periods signifies the role of construction and community services sectors in the relatively higher increase of the non-farm employment in the recent period (Chart 1). Chart 2, displaying the monthly average increases in non-farm sectors also shows high-rated increases in employment in these sectors.

Chart 1. Contributions by Sectors to Average Monthly Increases in Non-Farm Employment
(Percentage Point, Seasonally Adjusted)

Source: TurkStat, CBRT.

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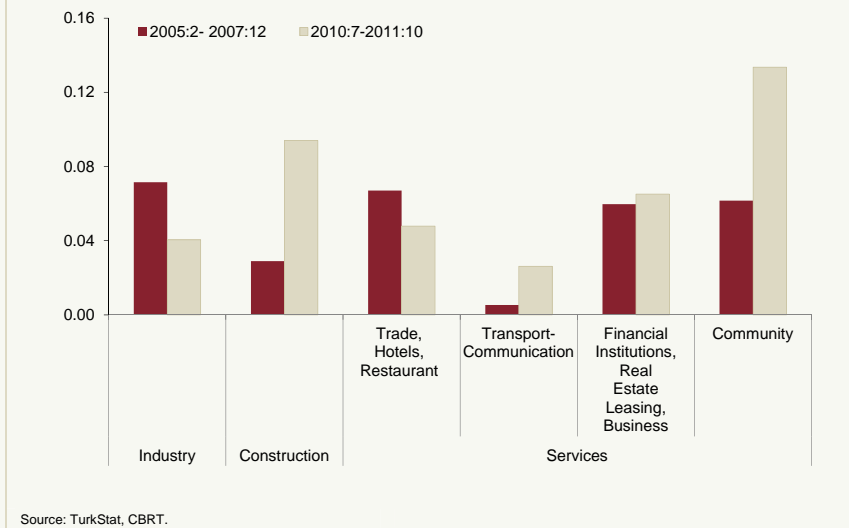
[6] The share of labor force in the farm sector within the total labor force has increased since end-2008. Given that farm unemployment rate is quite lower than non-farm unemployment rate, this increase in favor of the farm labor force reduces total unemployment rate, albeit only marginally.

Chart 2. Average Monthly Increases in Non-Farm Employment by Sectors
(Percentage Point, Seasonally Adjusted)

Source: TurkStat, CBRT.
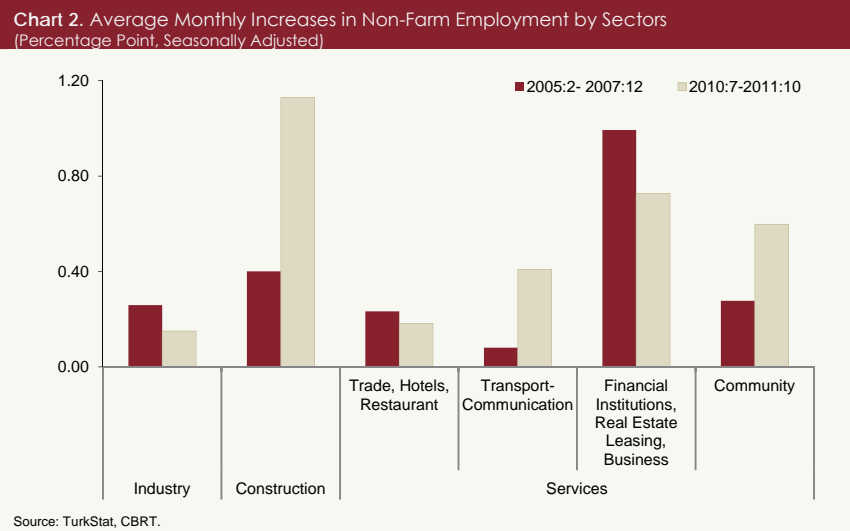
At this point, illustrating the effects of the increases in construction and community services sectors on unemployment rate will be beneficial. Chart 3 shows the unemployment rate under the scenario that non-farm employment grows at a similar pace to 2005-2007 period as of June 2010, while holding everything else constant, i.e. construction and community services sectors do not experience these high-rated increases (Scenario 1). Under this scenario, unemployment rate surpasses the actual unemployment rate by 1.1 point, reaching 10.5 percent as of October 2011. Given the observed high and positive relation between labor force and employment in non-farm sectors, and hence, assuming that labor force growth was in line with the

Chart 3. Effect of an Additional Rise in Employment in Construction and Community Services on Unemployment Rate: Scenario Analysis*
(Seasonally Adjusted)

* In Scenario 1, other factors affecting unemployment rate are assumed to remain unchanged while the monthly rate of increase in non-farm employment is held constant at 0.27 percent since June 2010. In Scenario 2, in addition to Scenario 1 assumptions, non-farm labor force is assumed to have changed. The effect of the change in employment on change in the labor force is estimated through a linear equation, but instead of the yielding employment rate, the assumed employment rate, which is lower, is used to calculate the hypothetical increase in labor force.
Source: TurkStat, CBRT.

slower employment growth in these sectors, the unemployment rate surpasses the actual unemployment rate by 0.6 point reaching 10 percent as of October 2011 (Scenario 2).
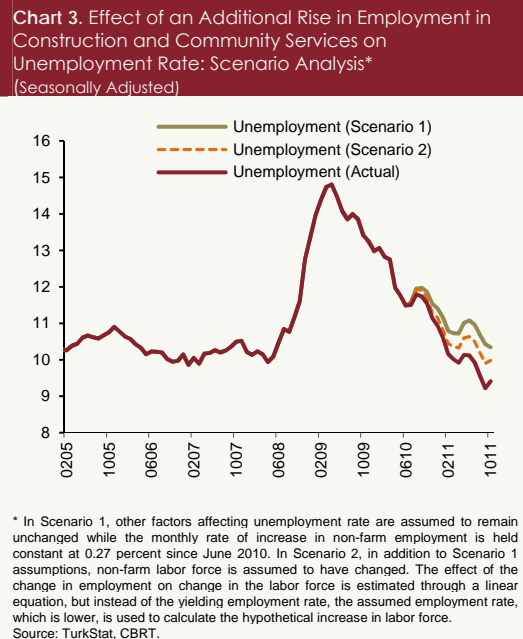
As for the decomposition of community services, the recent surge originates from public administration and defense, human healthcare and social work activities and education sectors.

In sum, it is noteworthy that the recent improvement in employment is not observed across all sectors. In terms of contribution to non-farm employment, besides industry, services related to industry and finance as well as insurance, real estate and business services sectors display a similar course to the pre-crisis period, while the plunge in unemployment was mainly caused by increases in employment across sectors that have relatively closer relations with the public sector and/or that are more responsive to domestic credit conditions such as construction and community services.