

4. Supply and Demand Developments

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

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

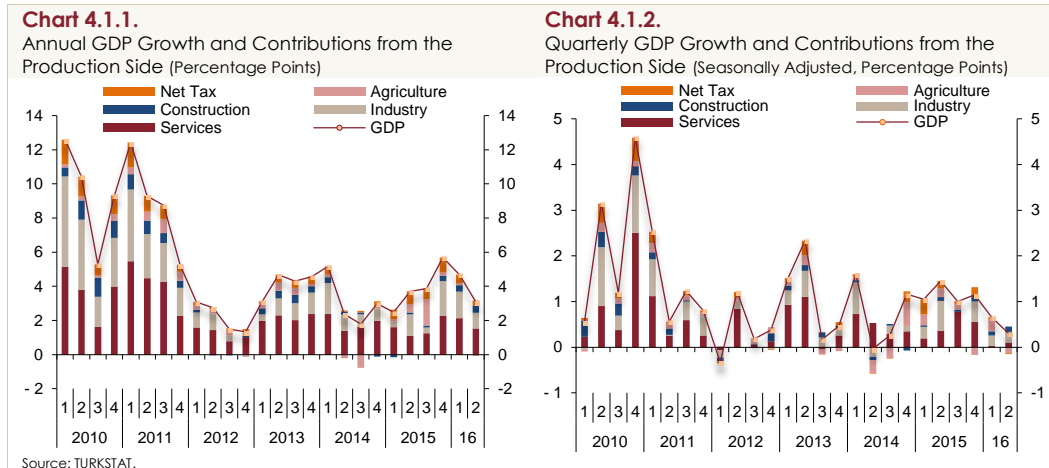
On the other hand, recently released data signal that the contraction in the third quarter is temporary and economic activity will see a rebound in the last quarter. Production, demand and foreign trade indicators for August and September show that the sharp fall in July is not permanent and some of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

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

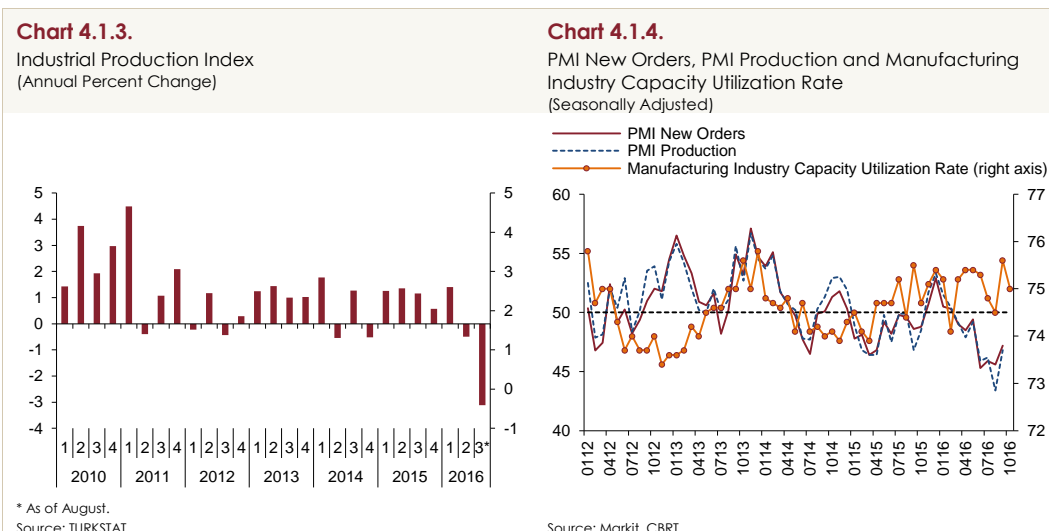
4.1. Supply Developments

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

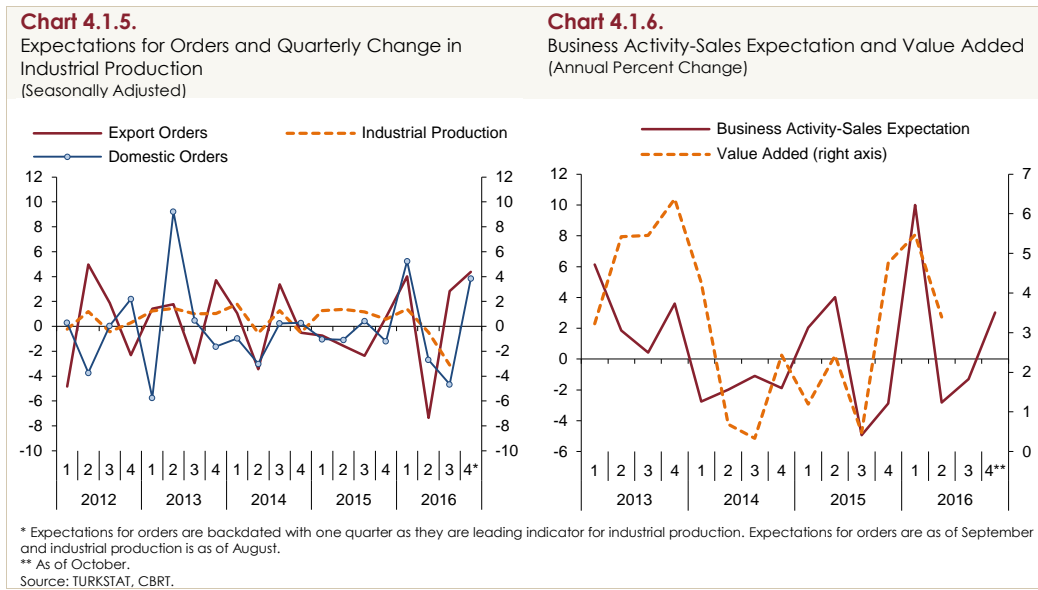
Adjusted for seasonal and calendar effects, the GDP expanded by a mere 0.3 percent with some deceleration compared to the first quarter (Chart 4.1.2). The agricultural value added declined by 1.4 percent while the construction sector posted an accelerated growth. As tourism revenues declined more markedly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



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

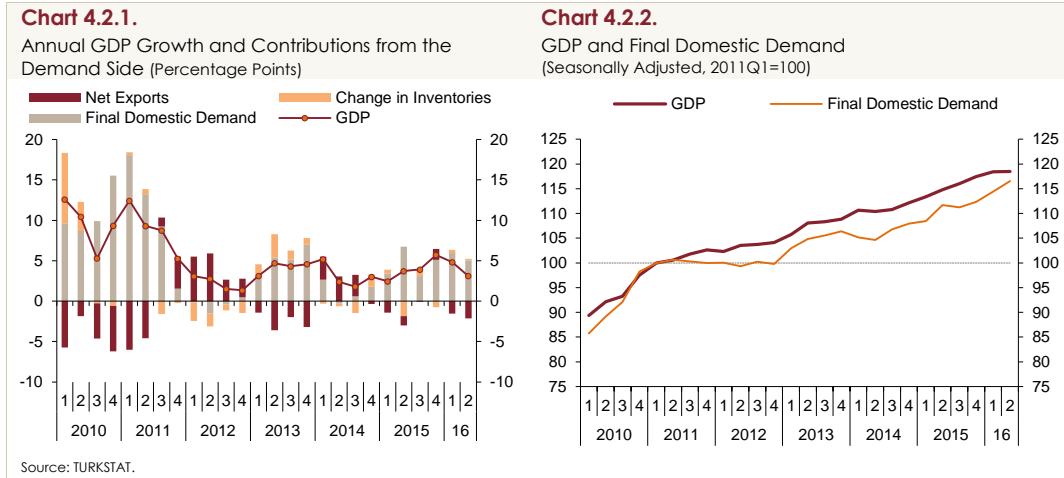


Expectations for orders in the last quarter of the year hint at a notable rebound in the manufacturing industry. Signals suggest that domestic orders, which remain weak compared to external demand in the third quarter, may also be influential in this rebound (Chart 4.1.5). In addition to the industrial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

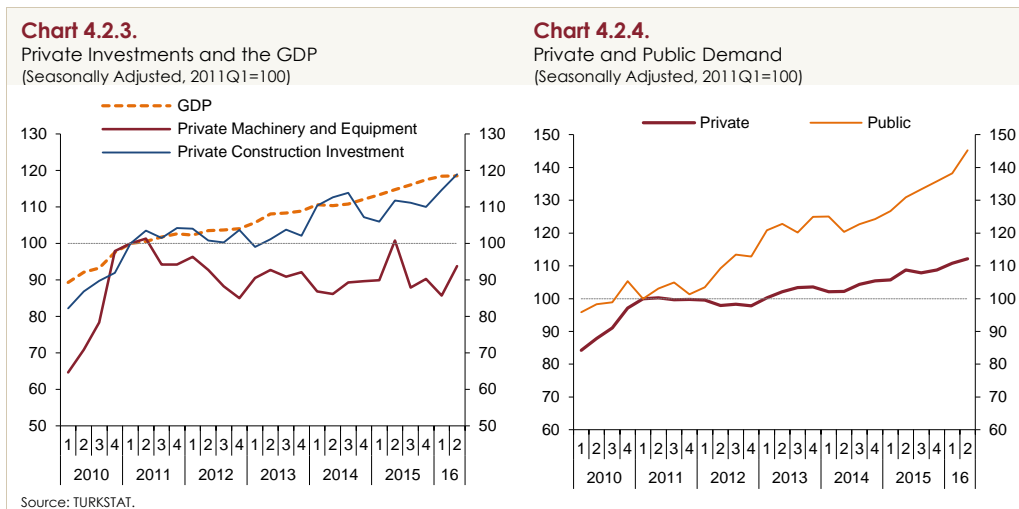


4.2. Demand Developments

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



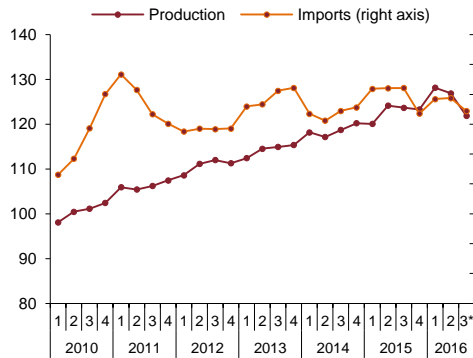
Private demand registered a quarterly growth in the second quarter. Upon a robust course backed by the surge in wages in the first quarter, private consumption saw a limited decline in the second quarter. However, on the investments side, the increases in private machinery and equipment and private construction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



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

Chart 4.2.5.

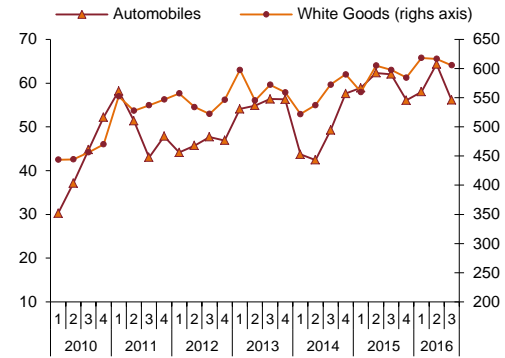
Production and Import Quantity Indices of Consumption Goods
(Seasonally Adjusted, 2010=100)



* As of August.
Source: TURKSTAT, CBRT.

Chart 4.2.6.

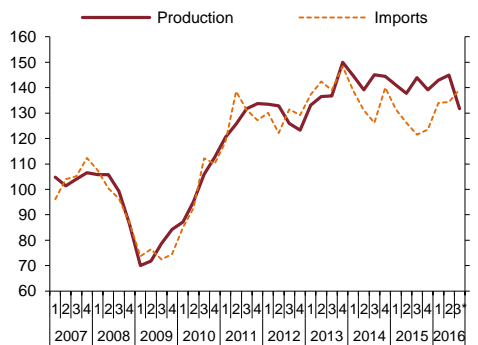
Domestic Sales of Automobiles and White Goods
(Seasonally Adjusted, Thousand)



Source: WGMA, AMA, CBRT.

Chart 4.2.7.

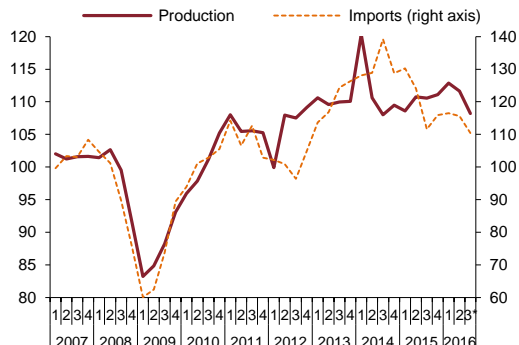
Production and Import Quantity Indices of Machinery and Equipment
(Seasonally Adjusted, 2010=100)



* As of August.
Source: TURKSTAT, CBRT.

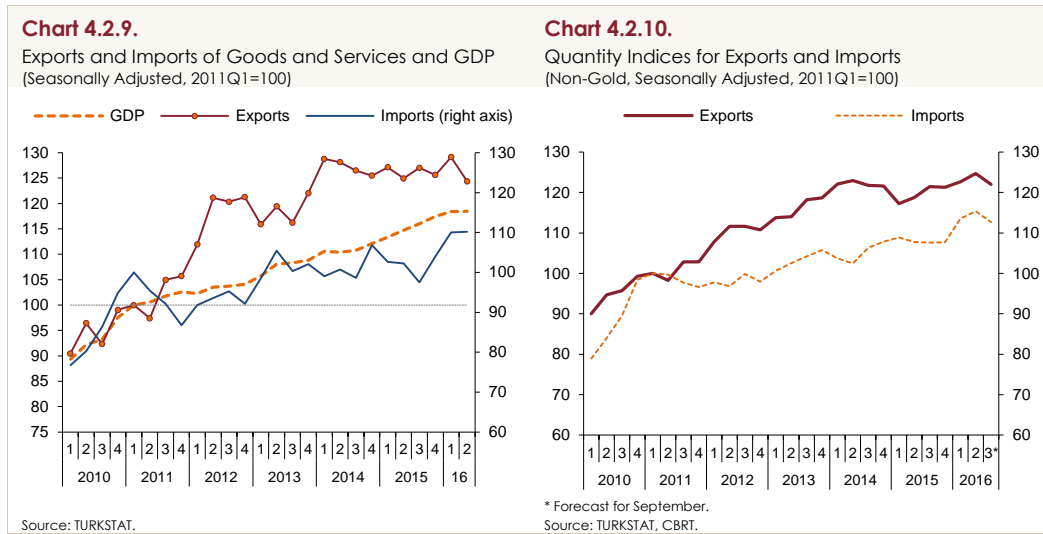
Chart 4.2.8.

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



* As of August.
Source: TURKSTAT, CBRT.

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

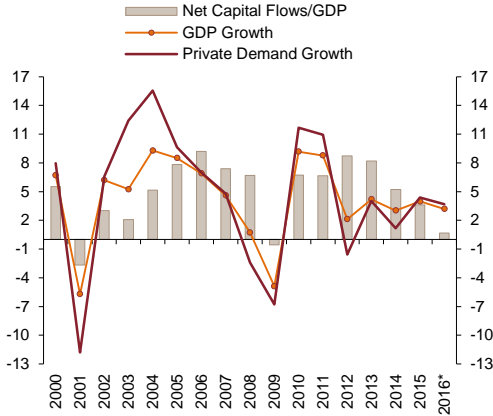


In short, economic activity posted an increase mainly on the back of the final domestic demand in the second quarter of 2016. The third-quarter downturn in economic activity, which is driven by the tourism slump, deepened amid the developments in July and economic activity recorded a quarterly contraction.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

Outlook for 2017

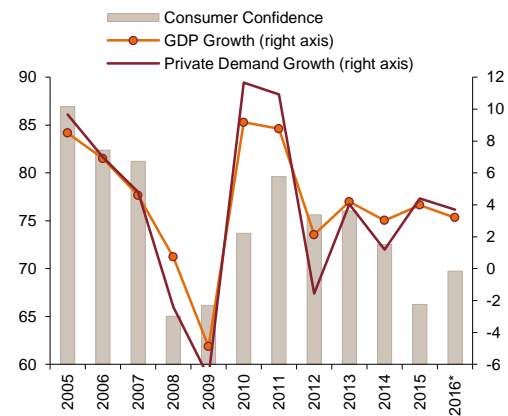
The Turkish economy was subject to a series of adverse shocks in 2016. The contraction in the tourism sector, the loss of confidence driven by the domestic uncertainties, geopolitical tensions and the declining exports to neighbor countries amid the developments in oil prices as well as tight financial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

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



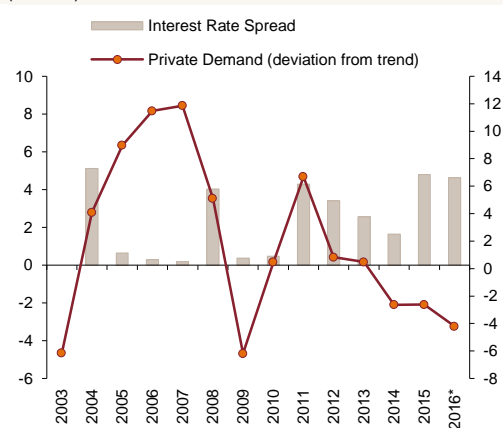
* Net capital flows are based on data covering January-June 2016 period. Forecasts for GDP and private demand growth are based on MTP projections.
Source: TURKSTAT, CBRT.

Chart 4.2.12.
Consumer Confidence and Growth
(Percent)



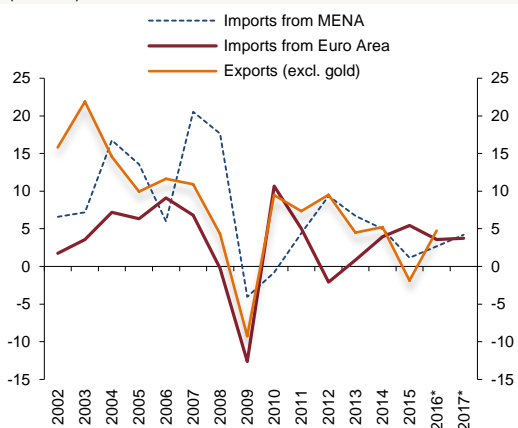
* Consumer confidence is based on data covering January-September 2016 period. Forecasts for GDP and private demand growth are based on MTP projections.
Source: TURKSTAT, CBRT.

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



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

Chart 4.2.14.
Exports and Global Demand
(Percent)



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

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

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

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

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

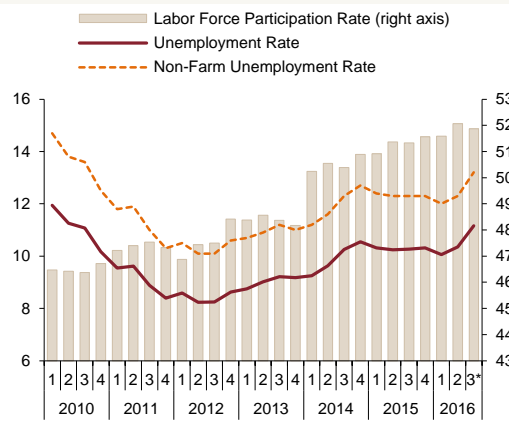
In sum, factors are present to support the recovery in growth in 2017. Due to the low base in tourism activities in 2016 stemming from geopolitical developments, exports of services are expected to contribute both directly and indirectly to growth in 2017. In addition, it is projected in 2017 that the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

4.3. Labor Market

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

Chart 4.3.1.

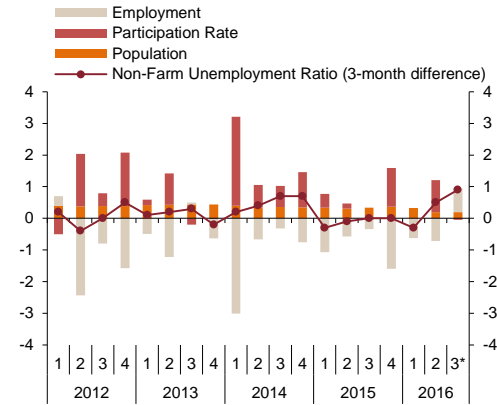
Participation and Unemployment Rates
(Seasonally Adjusted, Percent)



* As of July.
Source: TURKSTAT.

Chart 4.3.2.

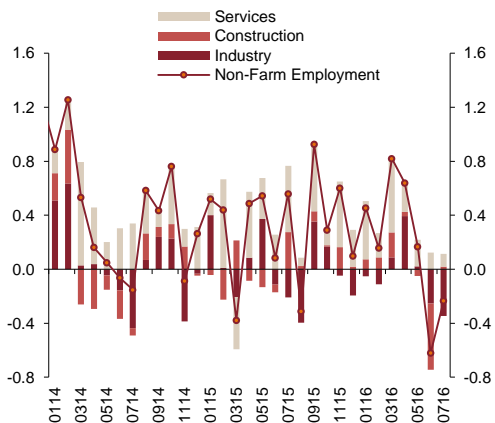
Contributions to Quarterly Changes in Non-Farm Unemployment
(Seasonally Adjusted, Percentage Points)



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

Chart 4.3.3.

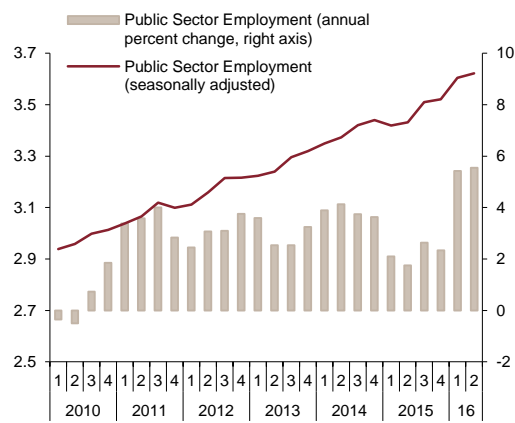
Contributions to Monthly Changes in Non-Farm Unemployment
(Seasonally Adjusted, Percentage Points)



Source: TURKSTAT.

Chart 4.3.4.

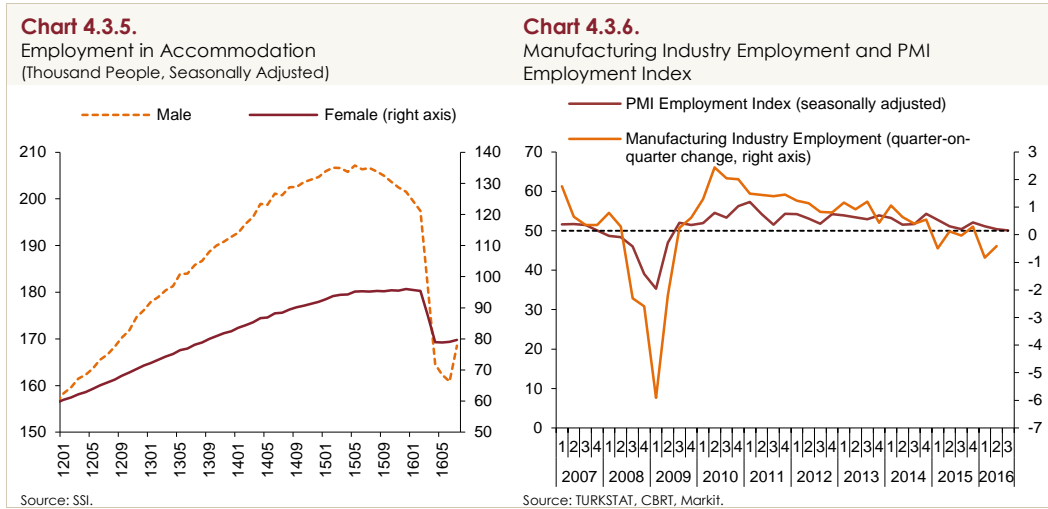
Public Sector Employment



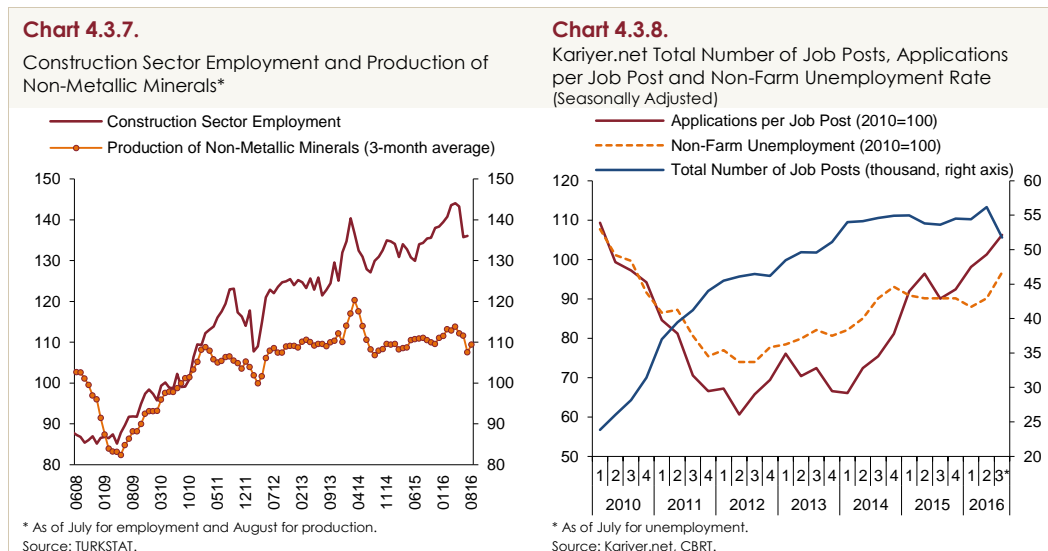
Source: Ministry of Finance.

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

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



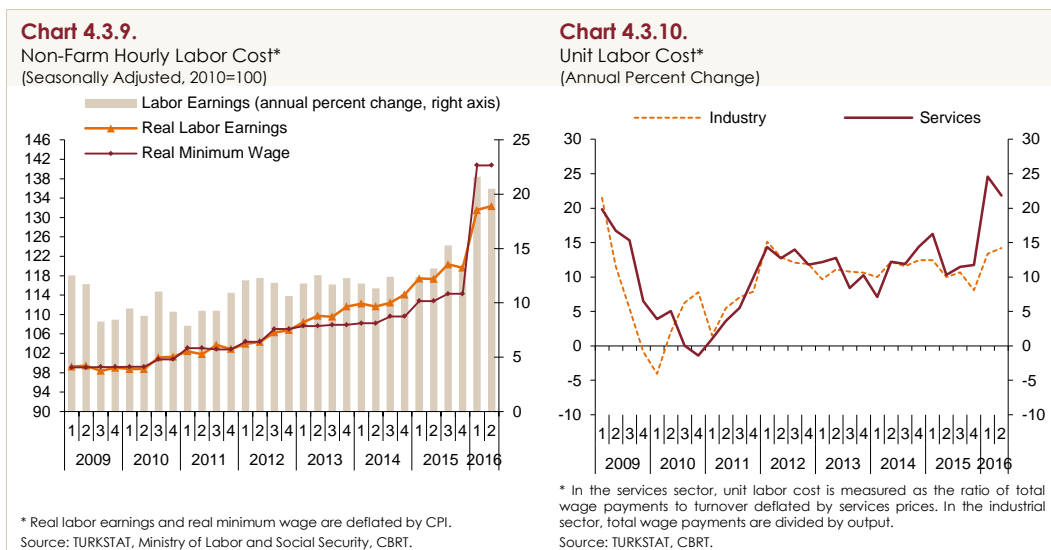
Having declined downwards since April, the production of non-metallic minerals, which is closely associated with construction employment, followed a weak course across the quarter, despite a fast recovery in August. In line with this outlook, the decline in construction employment in the June period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



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

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

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



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

Box
4.1

Effects of Tourism on Main Macroeconomic Aggregates

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

Effects on the Current Account Balance

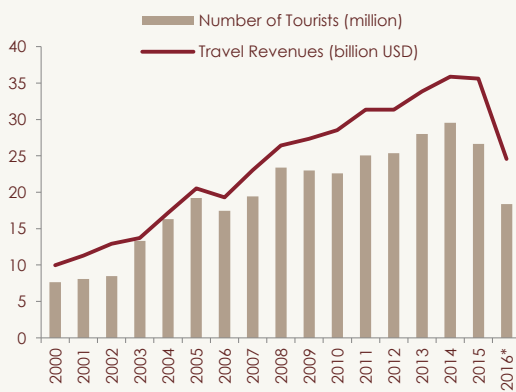
A significant portion of tourism revenues are recorded as travel revenues under services revenues in the balance of payments statistics. In recent years, travel revenues have covered around 50 percent of the foreign trade deficit. Given their effects on the revenues from transport and other services,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

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

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

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

Chart 1. Travel Revenues and Number of Tourists



* Forecast.

Source: TURKSTAT, CBRT, Authors' calculations.

Effects on Growth

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

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

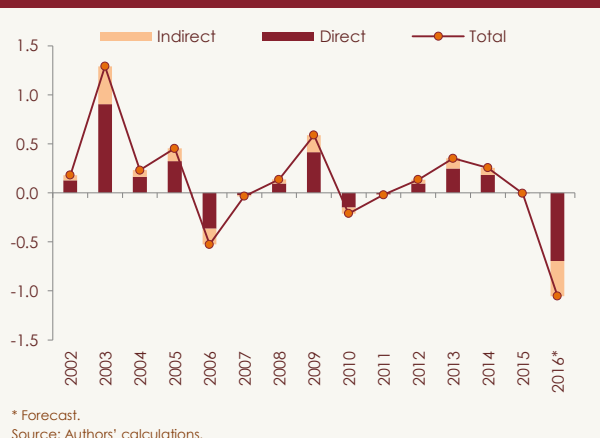
Chart 2 illustrates the direct and indirect effects of tourism revenues on growth. Accordingly, similar to 2006 and 2010, tourism revenues are expected to have a downward effect on growth in 2016. Assuming a 31-percent drop in travel revenues, tourism has a direct and indirect effect of -0.7 and -0.4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

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

Effects on Employment

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

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



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

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

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

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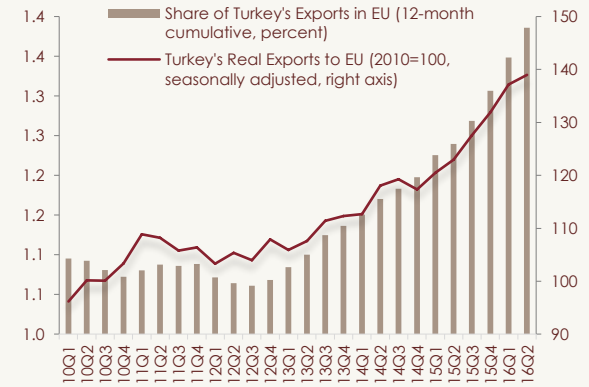
² In analyzing the effect of job loss on unemployment rate, the positive co-movement between employment and labor force should be taken into account. In fact, job loss or anticipation of no possibility to find employment may cause discouraged workers to stay out of the market. Aldan and Gürçihan-Yüncüler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

Box
4.2

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

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

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



Source: Eurostat.

Relative Unit Value

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

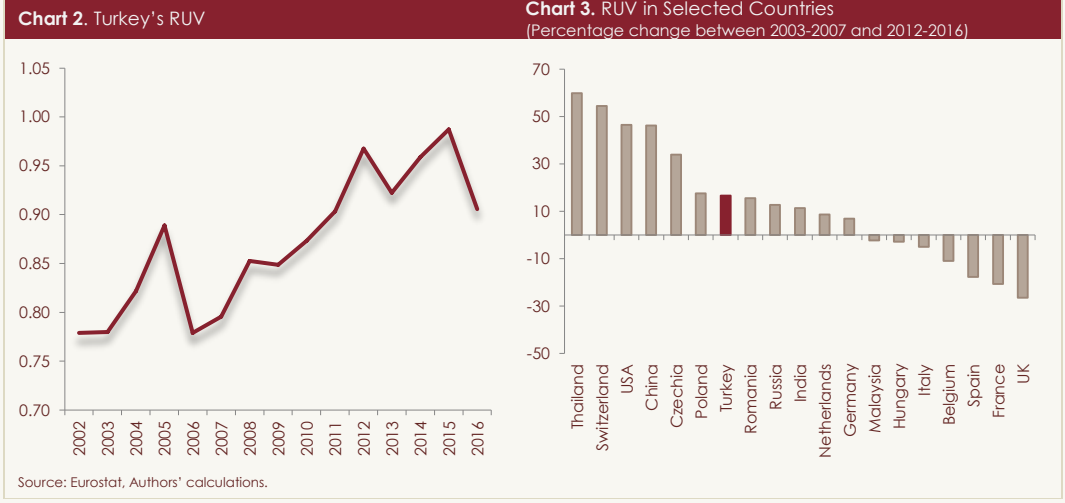
RUV measurements are based on Eurostat data. Unit values are obtained by dividing EUR-denominated total value of exports to the total quantity of exports individually for each country and on a sectoral basis. Competing countries include a balanced group of EU and non-EU countries as well as emerging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

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

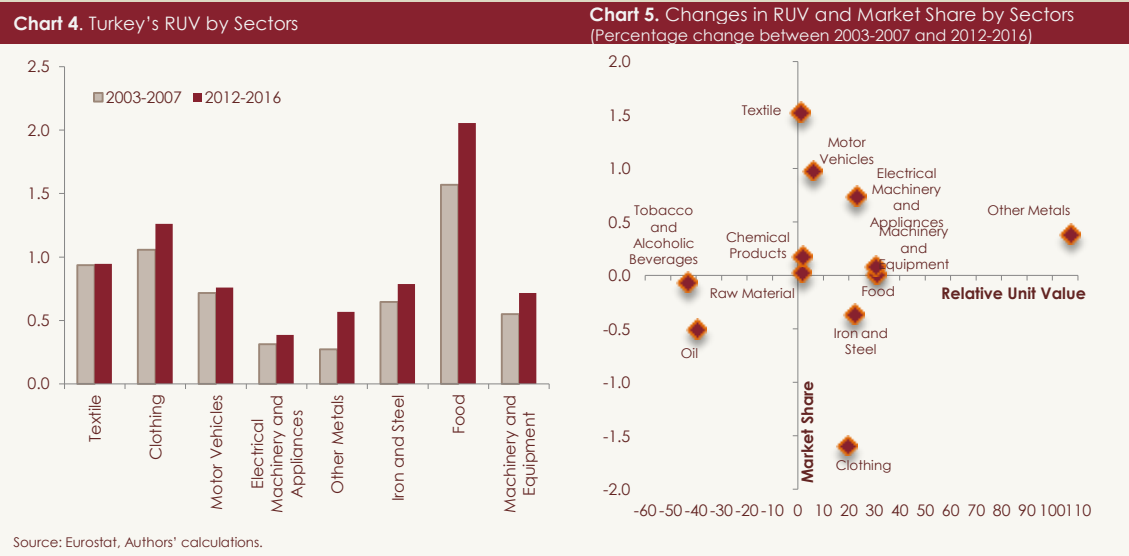
⁴ In broad terms, RUV is calculated as the ratio of export unit value for an individual country to the world unit value.

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

⁵ Reis and Farole (2012).



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



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

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

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

Conclusion

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

Box
4.3

The Impact of Agricultural Banking on Agricultural Productivity

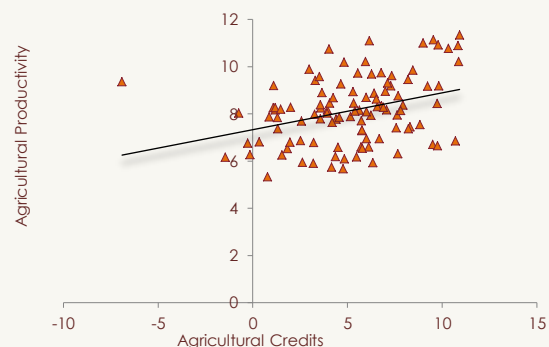
Current macroeconomic policies are hampered by external volatilities in food supply and food prices. Hence, developing policies to minimize these fluctuations are one of the top priorities in policymakers' agenda. Academic studies show that agricultural productivity has a favorable impact on both the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

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

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

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

Chart 1. Agricultural Productivity and Agricultural Credits*



* Natural logarithms of the average real values of both series over 1991-2014 period for each country.
Source: World Bank, FAO, Aysoy et al. (2016).

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

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

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

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

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

Table 1	Dependent Variable: Agricultural Value Added								
	Total			Developing Countries			Developed Country		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Agricultural Credits	0.151*** (0.048)	0.051*** (0.018)	0.050*** (0.011)	0.254*** (0.043)	0.054** (0.026)	0.056*** (0.012)	0.023 (0.041)	0.030 (0.019)	0.039** (0.017)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	90	1005	847	71	795	671	19	210	176
Table 2	Dependent Variable: Agricultural Productivity								
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
Agricultural Credits	0.172* (0.098)	0.045** (0.018)	0.042*** (0.011)	0.258*** (0.061)	0.026 (0.020)	0.018 (0.013)	0.032 (0.041)	0.076*** (0.014)	0.093*** (0.018)
Control Variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	90	1005	847	71	795	671	19	210	176

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

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

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

REFERENCES

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