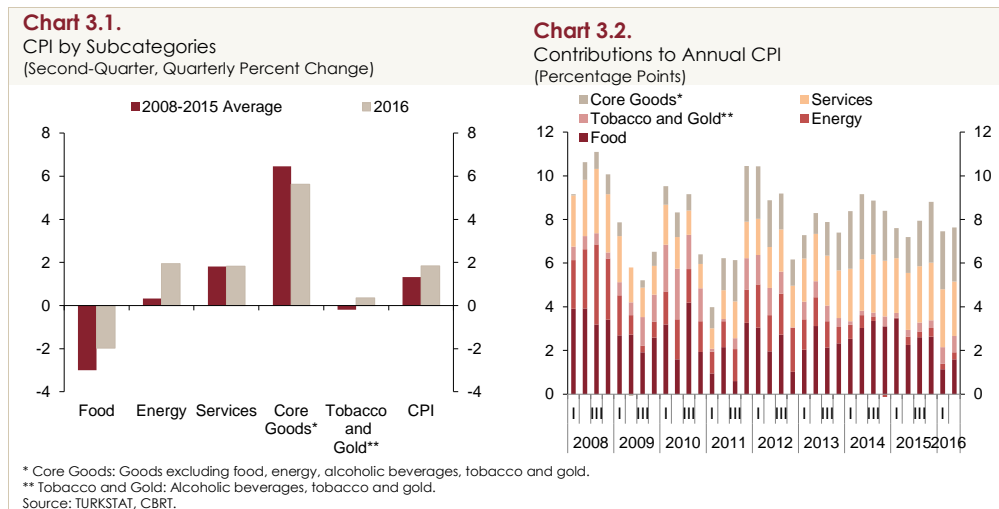


### 3. Inflation Developments

In the second quarter of 2016, consumer inflation inched up by 0.18 points quarter-on-quarter to 7.64 percent on the back of unprocessed food and energy prices. Meanwhile, annual inflation in services and core goods, which make up core inflation, posted a decline. The relatively stable course of the Turkish lira continued to alleviate the cumulative effects of the exchange rate on annual inflation, particularly through core goods. However, import prices, especially oil, registered an increase in this period. Thus, in the second quarter, inflation increased in food and energy, but declined in core goods.

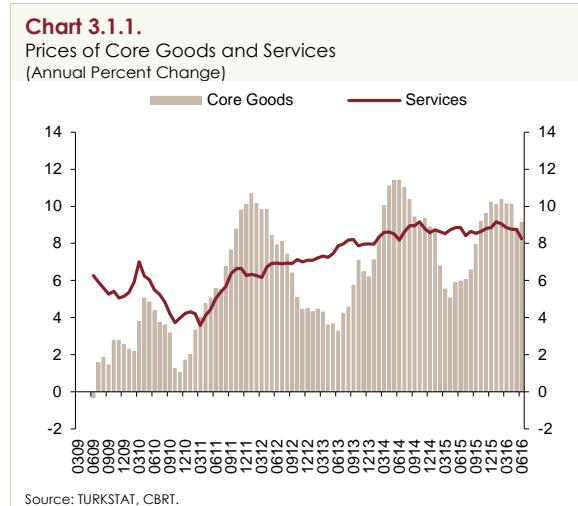


In the second quarter of 2016, price changes proved higher than past averages in food and energy (Chart 3.1). Food prices were driven by the rise in unprocessed food prices, while energy prices were determined by the recent hikes in international oil prices. On the other hand, the quarterly increase in core goods prices remained below past averages largely upon milder seasonal price increases in clothing. As for services, quarterly price increases remained close to past averages, while annual inflation receded in this period. Against these developments, contributions of food and energy to annual inflation edged up by 0.5 and 0.1 points, respectively, in the second quarter, while those of core goods and services edged down by 0.2 and 0.1 points, correspondingly. Thus, core goods contributed more favorably to consumer inflation in this period (Chart 3.2).

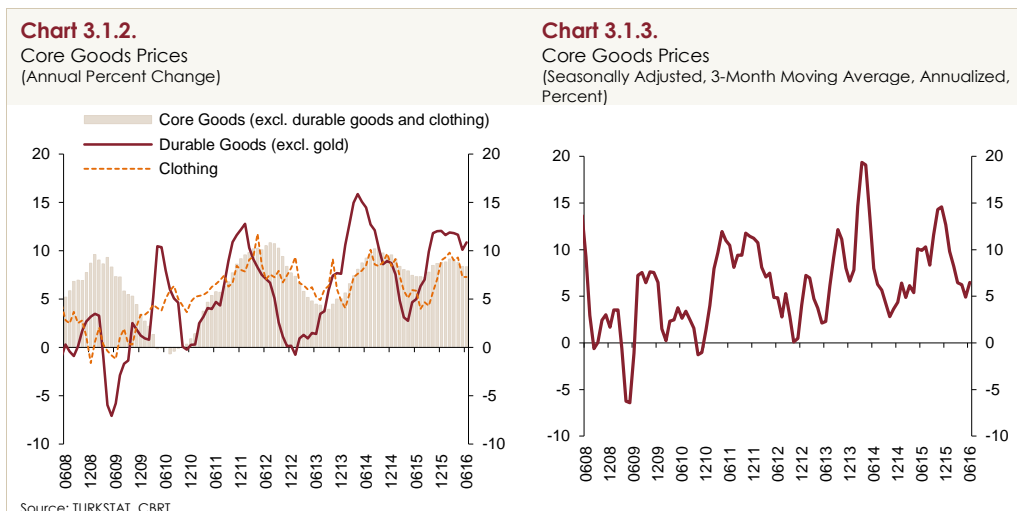
Overall, the first-quarter recovery in food inflation was interrupted in the second quarter of the year, and the hike in oil prices partially curbed the support offered by import prices to the inflation outlook. On the other hand, core inflation indicators recorded an improvement on the back of waning cumulative exchange rate effects and the decelerating annual inflation in certain services categories amid the developments in the tourism sector. In the upcoming period, the likely volatility in the exchange rates keeps upside risks to core inflation prospects brisk. Meanwhile, adopted measures for particular food products should be sustained firmly for further improvement in food prices. However, price hikes in tobacco products in July add around 0.5 points to annual inflation.

### 3.1. Core Inflation Outlook

Annual core goods inflation edged down by 1 point to 9.13 percent in the second quarter (Chart 3.1.1). The fall in core inflation spread across all subcategories, mainly clothing (Chart 3.1.2). Despite a slight increase in June due to durable goods prices, core goods inflation still remained on a favorable track across the second quarter.



In the second quarter of the year, the relatively stable course of the Turkish lira helped durable goods prices post a milder outlook compared to the first quarter. Having increased due to prices of furniture as well as electrical and non-electrical home appliances in April, durable goods prices receded in May, but rebounded in June upon rising automobile and furniture prices. Furniture prices soared continuously, registering a cumulative rise of about 7 percent in the first half of the year. As price increases in clothing remained below seasonal averages, annual inflation in this category fell by 1.71 points in the second quarter (Chart 3.1.2). Meanwhile, annual inflation in core goods excluding clothing and durable goods saw a more limited decline.



The contribution of core goods to annual consumer inflation edged down by around 0.2 points to 2.48 points in the second quarter, while the underlying trend of core goods inflation followed a flat course compared to the previous quarter (Chart 3.1.3). All in all, the second quarter of the year witnessed waning cumulative exchange rate effects on core goods prices, but no apparent change in the underlying trend.

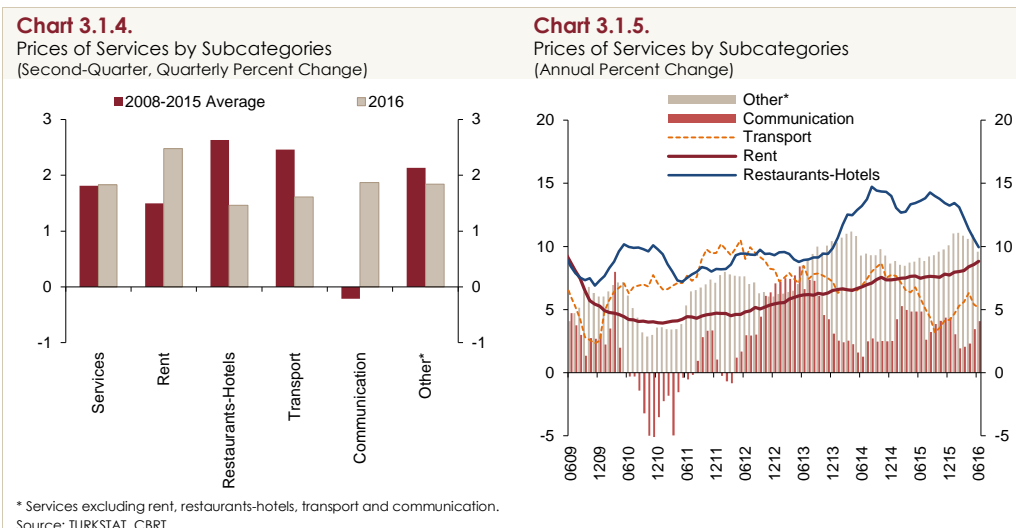
**Table 3.1.1.**

Prices of Goods and Services  
(Quarterly and Annual Percent Change)

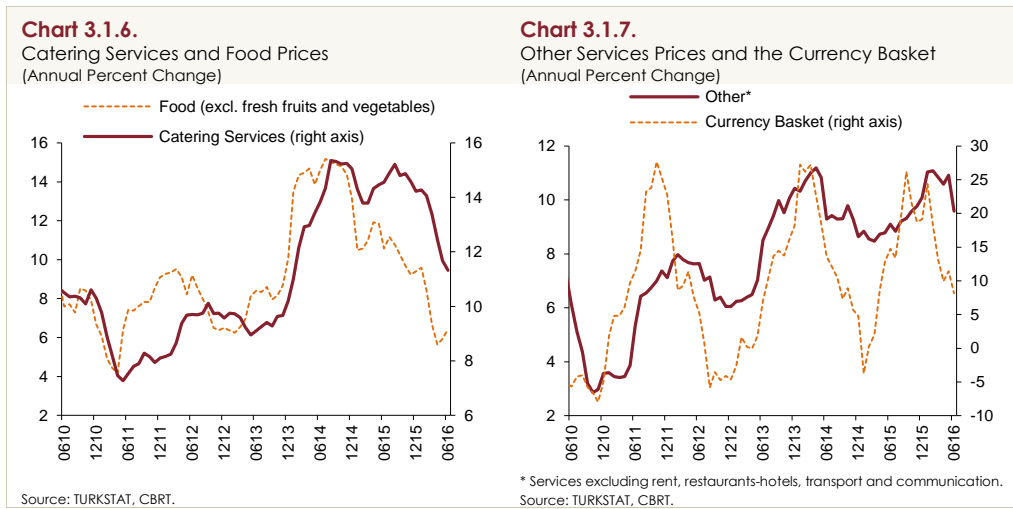
|   | 2015        |              |             |              | 2016         |             |             |
|---|-------------|--------------|-------------|--------------|--------------|-------------|-------------|
|   | II          | III          | IV          | Annual       | I            | II          | Annual      |
| <b>CPI</b>                                    | <b>1.68</b> | <b>1.39</b>  | <b>2.44</b> | <b>8.81</b>  | <b>1.75</b>  | <b>1.84</b> | <b>7.64</b> |
| <b>1. Goods</b>                               | <b>1.37</b> | <b>0.81</b>  | <b>3.02</b> | <b>8.79</b>  | <b>1.51</b>  | <b>1.85</b> | <b>7.37</b> |
| Energy  | 1.44        | -0.70        | 0.24        | 2.96         | 0.85         | 1.94        | 2.33        |
| Food and Non-Alcoholic Beverages              | -3.85       | 2.85         | 3.03        | 10.87        | 2.65         | -1.97       | 6.63        |
| Unprocessed Food                              | -9.27       | 3.56         | 4.07        | 13.83        | 2.49         | -5.29       | 4.62        |
| Processed Food                                | 1.45        | 2.22         | 2.11        | 8.33         | 2.80         | 1.01        | 8.38        |
| <b>Core Goods</b>                             | <b>6.60</b> | <b>-0.57</b> | <b>5.15</b> | <b>10.22</b> | <b>-1.18</b> | <b>5.63</b> | <b>9.13</b> |
| Clothing and Footwear                         | 22.37       | -11.81       | 15.34       | 9.00         | -12.42       | 20.44       | 7.30        |
| Durable Goods (excl. gold)                    | 1.43        | 4.57         | 1.66        | 12.05        | 3.70         | 0.57        | 10.87       |
| Furniture                                     | 1.24        | 3.20         | 2.32        | 10.70        | 5.72         | 1.03        | 12.79       |
| Electrical and Non-Electrical Appliances      | 0.98        | 4.00         | 1.96        | 9.69         | 1.38         | -1.04       | 6.39        |
| Automobile                                    | 1.51        | 5.71         | 1.07        | 14.01        | 4.95         | 1.28        | 13.56       |
| Other Durable Goods                           | 3.70        | 2.61         | 2.94        | 12.28        | 0.87         | 2.40        | 9.11        |
| Core Goods (excl. clothing and durable goods) | 2.16        | 2.25         | 2.32        | 8.79         | 2.06         | 1.48        | 8.36        |
| Alcoholic Beverages, Tobacco and Gold         | 0.61        | 2.32         | -0.94       | 6.56         | 11.14        | 0.35        | 13.05       |
| <b>2. Services</b>                            | <b>2.40</b> | <b>2.76</b>  | <b>1.10</b> | <b>8.85</b>  | <b>2.33</b>  | <b>1.83</b> | <b>8.25</b> |
| Rent  | 1.77        | 2.38         | 1.90        | 7.73         | 1.80         | 2.48        | 8.83        |
| Restaurants-Hotels                            | 3.59        | 4.29         | 1.34        | 13.23        | 2.53         | 1.46        | 9.95        |
| Transport                                     | 2.06        | 1.41         | 0.56        | 4.17         | 1.47         | 1.61        | 5.14        |
| Communication                                 | -0.11       | 1.53         | 0.63        | 4.36         | 0.00         | 1.87        | 4.08        |
| Other Services*                               | 3.00        | 2.87         | 0.92        | 10.09        | 3.65         | 1.84        | 9.59        |

\* Services excluding rent, restaurants- hotels, transport and communication.  
Source: TURKSTAT, CBRT.

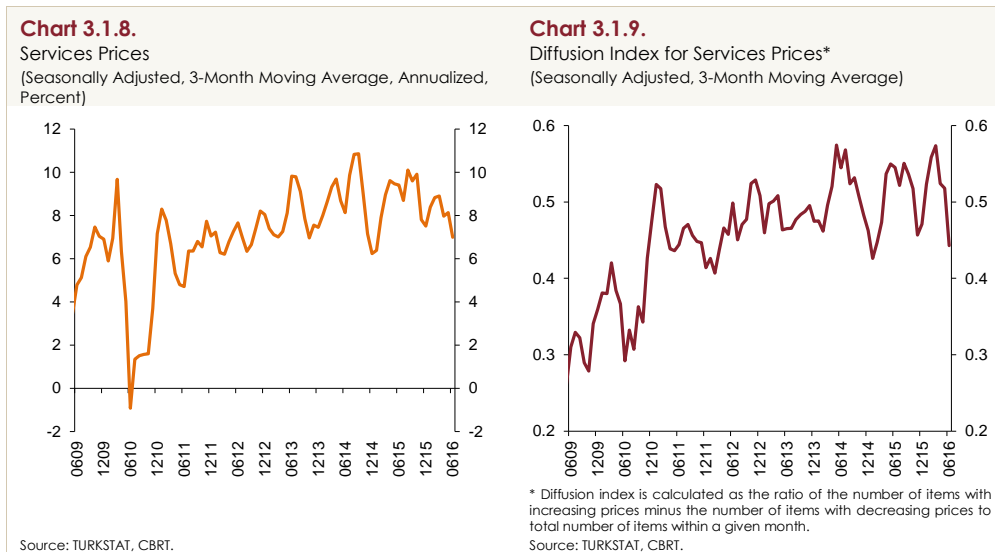
In the second quarter, prices of services increased by 1.83 percent and hovered around past averages, while annual inflation in this category fell by 0.6 points to 8.25 percent (Charts 3.1.1 and 3.1.4). Price increases in restaurants-hotels, transport and other services remained below past averages in this period and annual inflation in these categories recorded a decline (Charts 3.1.4 and 3.1.5). On the other hand, having accelerated lately, prices in rent and communication services increased above historical averages in the second quarter by also driving up the annual inflation in these categories (Charts 3.1.4 and 3.1.5).



In the second quarter of the year, cost-side pressures on services inflation waned partially. Annual inflation in catering services, which is sensitive to changes in food prices excluding fresh fruits and vegetables, declined to 11.32 percent in this period (Chart 3.1.6). Meanwhile, particularly owing to the fall in the number of foreign tourists, prices of accommodation services recorded a decline for the first time in the index history in the second quarter of the year. This decline of 2 percent in the prices of accommodation services caused annual inflation in the restaurants-hotels to decelerate more markedly in this period. As for other services, the waning cumulative exchange rate effects pulled annual inflation down by 1.25 points compared to the previous quarter (Chart 3.1.7).



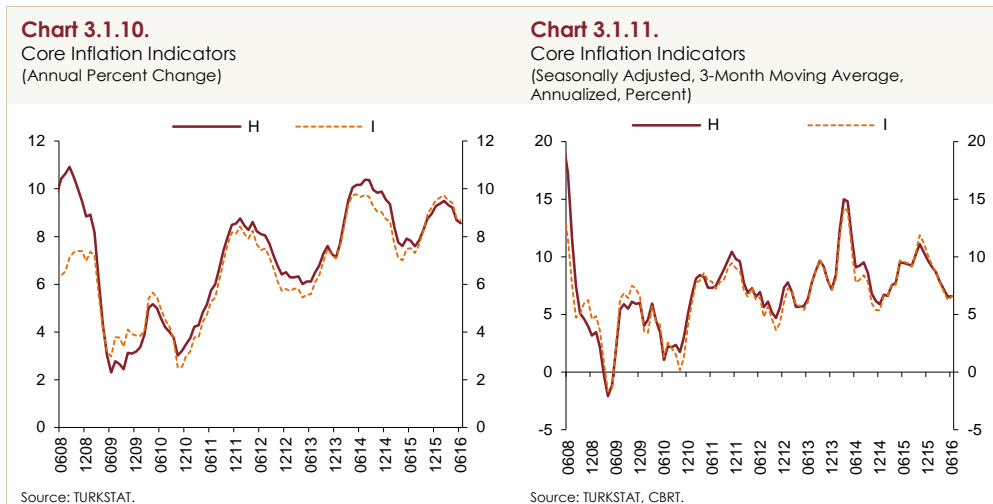
Indicators on the underlying trend of services inflation displayed a relatively mild course in the second quarter of the year. In particular, both the underlying trend of inflation based on seasonally adjusted data in 3-month moving averages and the price increasing tendency implied by the diffusion index receded (Charts 3.1.8 and 3.1.9).



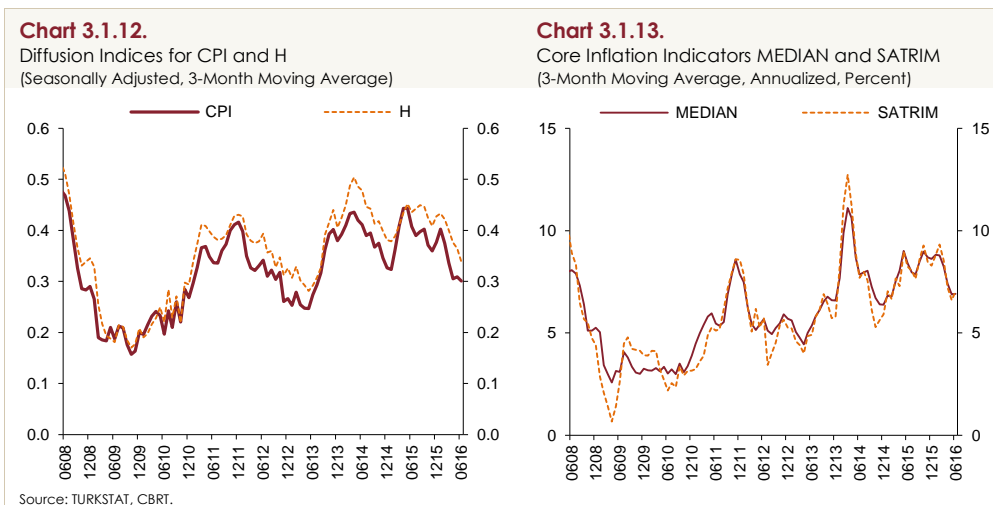
In sum, improvement in food and exchange-rate-based cost factors as well as the falling demand in the tourism sector caused services inflation to decelerate in this period, especially through

accommodation, transport and catering services. Moreover, indicators regarding the underlying trend of inflation and pricing behavior improved as well. On the other hand, services inflation still remains high amid wage developments, the headline inflation level and the current course of inflation expectations. These factors are estimated to weigh upon the recent acceleration in rent inflation as well.

In line with the slowdown in prices of core goods and services, annual inflation in H and I core inflation indicators fell by around 0.8 points quarter-on-quarter to 8.56 and 8.67 percent, respectively (Chart 3.1.10). In addition, the underlying trend of core inflation indicators also exhibited a slowdown driven by prices of services (Chart 3.1.11).

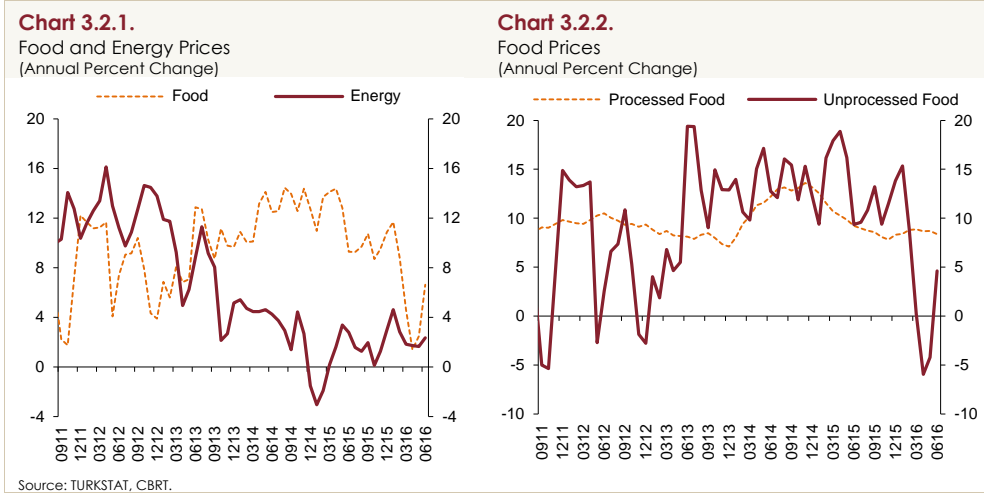


The likelihood of prices to rise diminished as implied by the diffusion indices compared to the first quarter (Chart 3.1.12). Similarly, SATRIM and MEDIAN, the alternative core inflation indices monitored by the CBRT, also recorded a quarter-on-quarter decline (Chart 3.1.13). In sum, indicators for tendency and pricing behavior pointed to some deceleration in the underlying trend of inflation in the second quarter of the year.

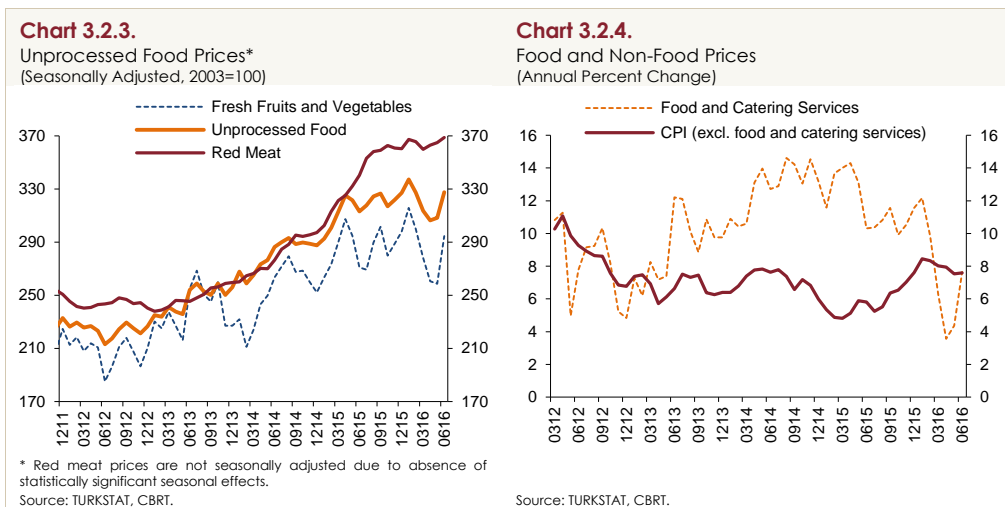


### 3.2. Food, Energy and Alcohol-Tobacco Prices

Annual inflation in food prices, which plummeted in the first quarter of the year, increased by around 2 points to 6.63 percent in the second quarter (Chart 3.2.1). Thus, inflation in food prices remained consistent with the projected path for June in the April Inflation Report.



Following a slump at the end of the previous quarter, annual inflation in unprocessed food prices increased by 4.40 points to 4.62 percent in this quarter (Chart 3.2.2). After a decline in the February-April period, seasonally adjusted unprocessed food prices remained relatively mild in May and surged in June (Chart 3.2.3). The rise in June is mainly attributed to the base effect in vegetable prices as well as the increase in fruit prices. In particular, the prices of cherry, watermelon and apricot, which entered the index in June, hovered above past years' averages. Red meat prices, which followed a mild course in the first quarter amid the adopted measures, rose by 2.48 percent in the second quarter (Chart 3.2.3). In the upcoming period, imports by the Meat and Milk Board, especially of livestock, are likely to support domestic supply, helping red meat prices remain relatively moderate.

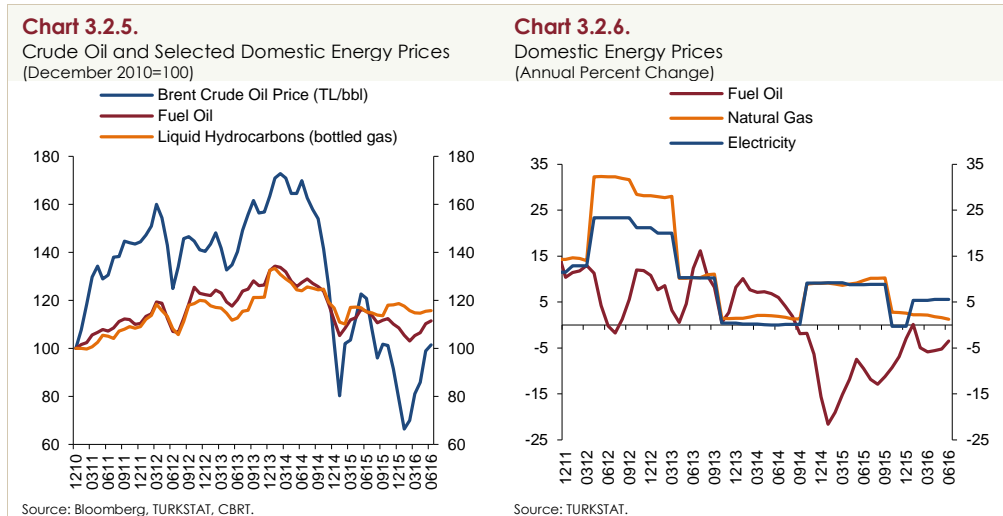


On the processed food front, annual inflation edged down by 0.48 points to 8.38 percent in the second quarter (Chart 3.2.2). Annual inflation in processed food excluding bread and cereals,

processed vegetable products and tea displayed a slowdown. Raw milk prices pulled prices of cheese and dairy products down, while prices of fats and oils remained almost flat in this period. On the other hand, despite the mild course in wheat prices, prices of bread and cereals remained on the rise. Tea prices, which have been increasing since early 2014, continued with an uptrend in this period. Tea prices are likely to go up further amid the 12-percent increase in purchasing prices of fresh tea leaves in May.

Annual inflation in the food and catering services prices increased by 1.34 points to 7.65 percent, while CPI inflation excluding food and catering services fell by 0.43 points to 7.59 percent in the second quarter (Chart 3.2.4). Thus, food prices followed a similar course to CPI excluding food and catering services in June. Pulling inflation down to target-consistent levels in food-related categories is critical. In this regard, the measures to be taken by the Food and Agricultural Products Markets Monitoring and Evaluation Committee are invaluable (Box 3.1).

Energy prices increased by 1.94 percent in the second quarter (Table 3.1.1). Brent crude oil prices jumped by 24 percent in this quarter. Accordingly, fuel prices soared by 5.72 percent (Chart 3.2.5). Municipal water tariffs recorded an uptick by 1.67 percent in this period. All in all, annual energy inflation rose by 0.68 points to 2.33 percent in June also due to the base effect. Thus, energy prices continued to contribute positively to the CPI inflation.



Following an increase of 10.69 percent in the first quarter, prices of alcoholic beverages and tobacco products remained flat in the second quarter. However, producers still opted for price hikes in cigarettes despite absence of remarkable tax adjustments in July. Given the composition of the consumer basket, this rise is projected to push prices of tobacco products up by around 10 percent in total, which will add around 0.5 points to consumer inflation. As the price adjustment was made within the month, the price hike in tobacco products will be reflected in consumer inflation in July and August.

### 3.3. Domestic Producer Prices

Domestic producer prices (D-PPI) rose by 2.43 percent in the second quarter amid manufacturing price developments. However, annual D-PPI inflation posted a quarter-on-quarter decline of 0.39 points to 3.41 percent (Table 3.3.1 and Chart 3.3.1).

**Table 3.3.1.**

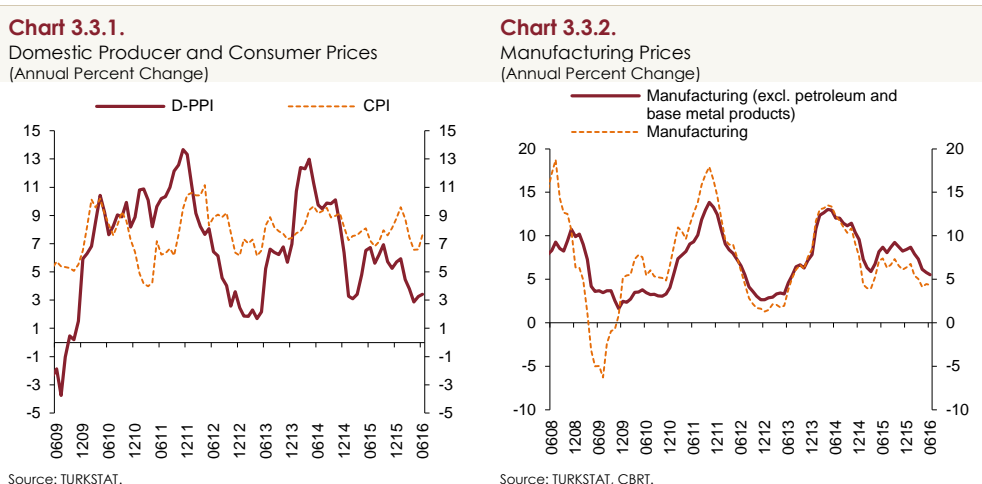
D-PPI and Subcategories

(Quarterly and Annual Percent Change)

|   | 2015        |             |              |             | 2016        |             |             |
|---|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
|   | II          | III         | IV           | Annual      | I           | II          | Annual      |
| <b>D-PPI</b>  | <b>2.81</b> | <b>2.20</b> | <b>-1.94</b> | <b>5.71</b> | <b>0.75</b> | <b>2.43</b> | <b>3.41</b> |
| Mining  | 3.59        | -3.41       | -1.08        | -0.69       | -1.36       | 6.49        | 0.36        |
| Manufacturing   | 3.45        | 2.12        | -1.89        | 6.38        | 1.33        | 2.75        | 4.33        |
| Manufacturing (excl. petroleum products)                | 3.12        | 2.70        | -1.32        | 7.28        | 1.56        | 2.14        | 5.13        |
| Manufacturing (excl. petroleum and base metal products) | 3.22        | 2.88        | -0.57        | 8.44        | 1.66        | 1.49        | 5.53        |
| Electricity and Gas                                     | -3.33       | 5.38        | -3.39        | 0.19        | -4.99       | -2.96       | -6.14       |
| Water   | 2.21        | 0.27        | 2.89         | 19.95       | 3.27        | 1.52        | 8.17        |
| <b>D-PPI by Main Industry Groups</b>                    |             |             |              |             |             |             |             |
| Intermediate Goods                                      | 2.96        | 3.05        | -2.30        | 5.69        | 1.19        | 2.59        | 4.51        |
| Durable Goods   | 3.20        | 4.07        | -0.40        | 12.48       | 4.76        | 2.56        | 11.37       |
| Durable Goods (excl. jewelry)                           | 2.98        | 2.87        | 2.54         | 11.78       | 3.31        | 0.97        | 10.04       |
| Non-Durable Goods                                       | 3.31        | 0.60        | -0.52        | 6.73        | 1.55        | 1.81        | 3.46        |
| Capital Goods   | 1.33        | 5.15        | -0.45        | -10.08      | 1.59        | 1.03        | 7.44        |
| Energy  | 2.87        | -0.49       | -5.54        | -2.57       | -4.86       | 4.46        | -6.58       |

Source: TURKSTAT, CBRT.

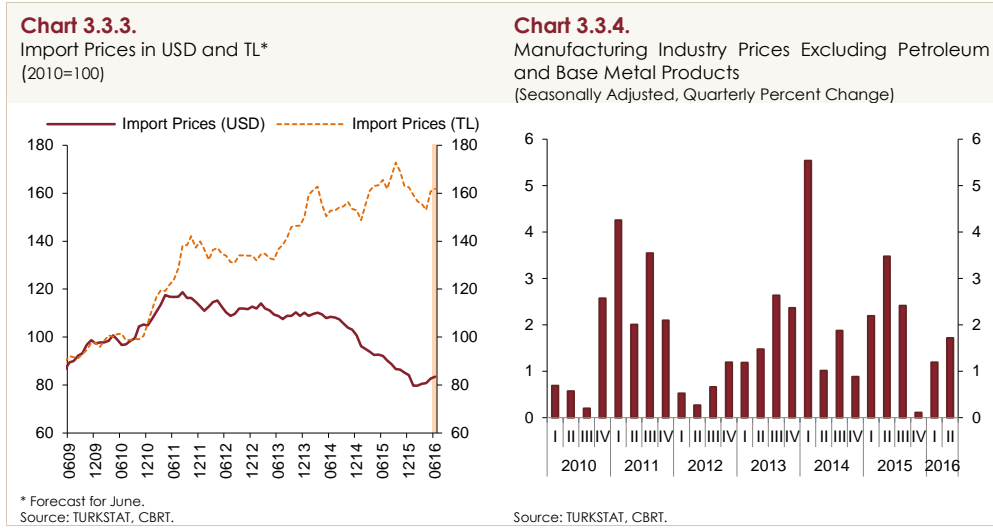
In the second quarter of the year, manufacturing industry prices soared by 2.75 and 4.33 percent in quarter-on-quarter and year-on-year terms, respectively (Table 3.3.1 and Chart 3.3.2). Increases in the manufacturing industry prices are mainly owed to surging crude oil prices, while food and industrial metal manufacturing also stood out with notable price hikes. On the other hand, the stable course of exchange rates curbed these pressures. As a result, import price hikes in both USD and TL-denominated terms remained limited in the second quarter (Chart 3.3.3).



Prices were up across all main industrial categories in this period (Table 3.3.1). Energy prices saw an uptick by 4.46 percent due to crude oil prices. The 2.59 percent increase in the prices of intermediate goods was driven by iron and steel prices. Prices of durable goods rose by 2.56 percent due to jewelry prices, while prices of durable goods excluding jewelry posted a more limited increase

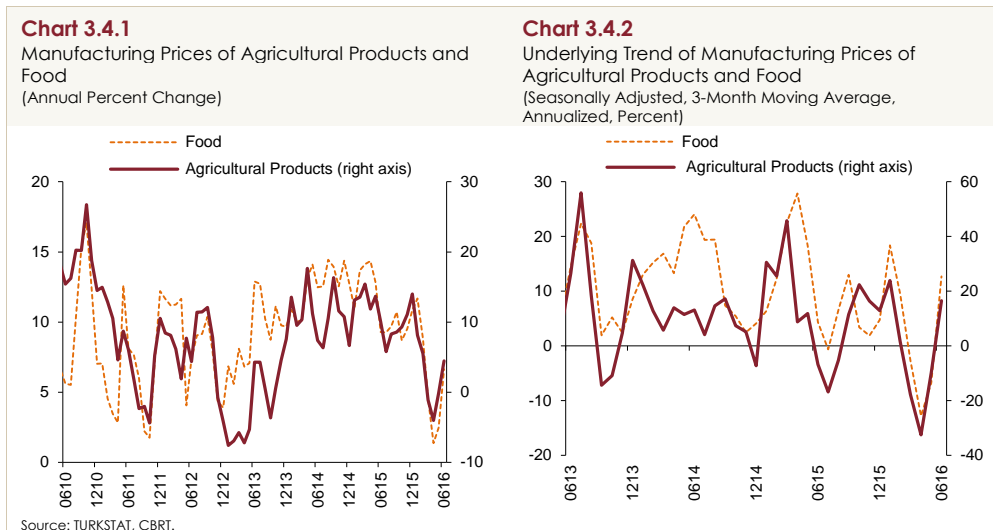


owing to the furniture sector. The price increase in non-durable goods, on the other hand, was shaped by food manufacturing prices, particularly meat and meat products. Against these developments, the course of inflation in the manufacturing industry prices excluding petroleum and base metal products, which entails information on the underlying trend of producer prices, recorded a quarterly increase, yet cost pressures remained relatively subdued (Chart 3.3.4).



### 3.4. Producer Prices of Agricultural Products

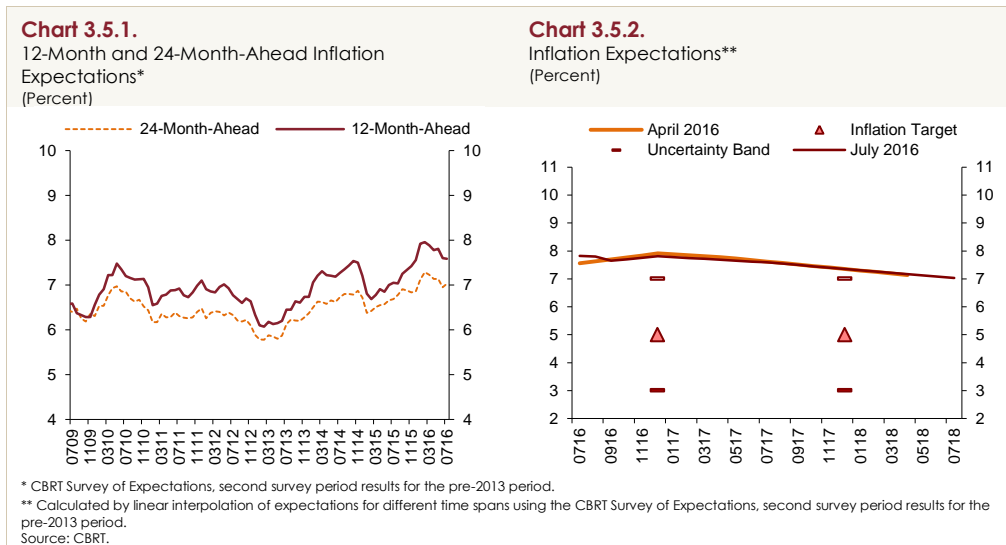
In the second quarter of 2016, agricultural Producer Price Index (Agriculture-PPI) surged by 4.81 percent, while annual inflation in this category increased by 5.5 points to 4.45 percent (Chart 3.4.1). Annual inflation in fruits and vegetables registered a quarterly increase in this period. Live cattle and raw milk producer prices, in addition to cereal prices, also recorded increases owing to the rise in wheat prices. Additionally, sugar beet and purchasing prices of fresh tea leaves witnessed hikes as well.



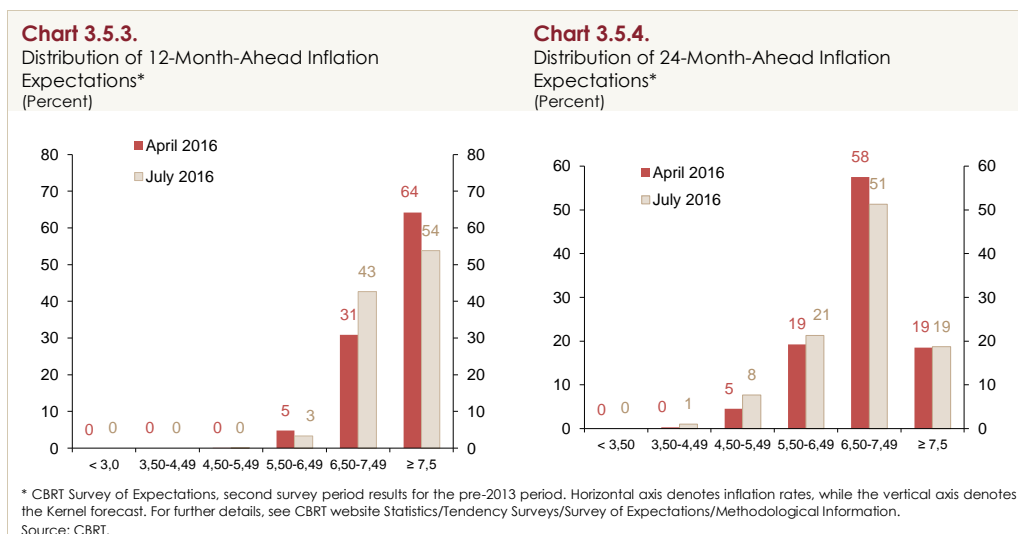
Seasonally adjusted data in 3-month moving averages suggest a notable uptick in the underlying trend of manufacturing prices of agricultural products, which was also reflected in consumer prices for food (Chart 3.4.2).

### 3.5. Expectations

Backed by the favorable course of consumer inflation since February, medium-term inflation expectations improved further in the second quarter of 2016. The higher-than expected June inflation pushed the year-end inflation expectation up to 7.81 percent, yet medium-term expectations remained almost unchanged in this month (Chart 3.5.1). Across maturities, medium-term inflation remained virtually unchanged in the inter-reporting period (Chart 3.5.2). However, inflation expectations still hover above the 5-percent year-end target set for 2016 and 2017.



The dispersion of medium-term inflation expectations points to some improvement in inflation expectations in July compared to April (Charts 3.5.3 and 3.5.4). The percentage of respondents expecting 12-month-ahead inflation to be between 6.5 and 7.49 percent increased, whereas those expecting it to be 7.5 percent or above decreased. Meanwhile, the dispersion of 24-month-ahead inflation expectations improved only slightly.



Box  
3.1

## The Importance of Food Prices in Controlling Inflation

Food prices are the most important sub-item of the CPI regarding price stability. This is due to the considerable weight of food in the consumer basket as well as the high rate of increases and volatility in food prices. In addition to its direct effects, changes in food prices impose indirect effects on other subcategories, mainly services, and may change the level of inflation and the course of inflation expectations in the short term.

Being essential consumer goods, food products are of primary importance from a social perspective as well. As of 2016, food prices constitute about one fourth of the price index despite the declining share of food within the consumer basket amid rising income levels (Akçelik, 2016). Thus, food prices have an influence on major macroeconomic variables like inflation, purchasing power, wealth and the distribution of income. Therefore, developments in food prices play a great role in price stability and long-term macroeconomic stability.

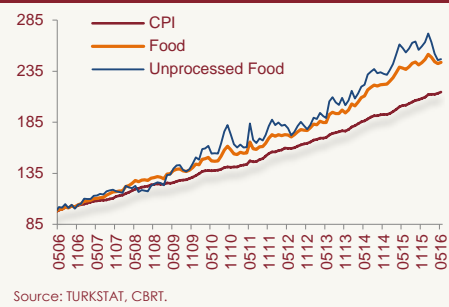
#### High Course of Food Prices

The course of seasonally adjusted price indices reveals that the food price index has remained higher than the CPI over the last decade, where the gap between the two indices grew more apparent especially after 2009 (Chart 1). Moreover, the divergence from CPI is more evident across unprocessed food prices (Chart 2).

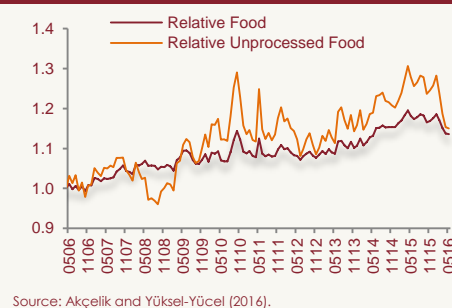
Accordingly, annual inflation in food prices was well above consumer inflation in the 2006-2015 period. Except for 2012, this became a major factor for the deviation of inflation from the inflation target. Table 1 presents the average additional contribution of food prices to inflation, which is computed by the difference between the year-end food inflation realization and the inflation target multiplied by the weight of food in the consumption basket. Results indicate that under the assumption that food inflation remained consistent with the target, average consumer inflation could have been 1.3 points lower in the 2006-2015 period. This shows that measures for food and agricultural product markets may provide significant gains in controlling inflation.

The relatively high course of food prices stand out also in international comparisons. Accordingly, relative food prices in Turkey diverge negatively when compared to EU countries, which are classified by the size of the economy, geographical proximity and weather conditions (Chart 3). The divergence of the relative prices is more apparent especially after 2010.

**Chart 1. Price Indices**  
(Seasonally Adjusted, 2006=100)



**Chart 2. Relative Food Price Indices**  
(Seasonally Adjusted, Relative to CPI, 2006=1)



**Table 1. Average Additional Contribution of Food Prices to Deviation of Consumer Inflation from Target (Percent)**

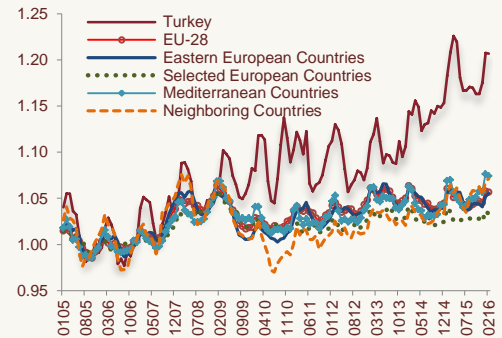
|  | 2006-2015<br>Average |
|--|----------------------|
| CPI Inflation                                    | 8.20                 |
| Food Inflation                                   | 10.08                |
| Average Deviation from Target                    | 2.95                 |
| Additional Contribution to Deviation from Target | 1.28                 |

Source: TURKSTAT, CBRT.

### High Volatility in Food Prices

Food price inflation in Turkey is high not only in level but also with respect to volatility (Chart 3). Previous studies by the CBRT indicate that the unprocessed food prices exhibit the highest volatility among sub-items of the consumer price index and the volatility in unprocessed food prices is notably higher in Turkey than that in the EU countries (Öğünç, 2010). Recent studies also show that food prices have been highly volatile in the 2010-2016 period as well (Table 2). The fact that Turkey has the highest volatility among all country groups after 2010 suggests a negative divergence, which is also valid for the 2005-2016 period.

**Chart 3. Average Relative Food Prices\***  
(2006=1)



\* Simple average. Eastern European countries include Bulgaria, Croatia, Czechia, Greece, Hungary, Poland, Romania, Slovakia and Slovenia. Selected European countries include Austria, Belgium, Denmark, Germany, France, Ireland, Netherlands, Portugal, Spain, Finland, Sweden, Norway, Switzerland, UK and Italy. Mediterranean countries include Croatia, France, Greece, Italy, Spain, Malta and Slovenia. Neighboring countries include Bulgaria and Greece.  
Source: Akçelik and Yüksel-Yücel (2016).

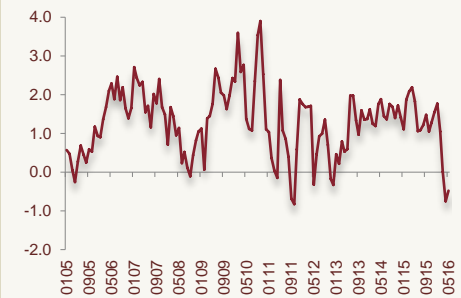
**Table 2. Unexpected Volatility in Food Prices during 2010-2016\***

| Eastern European Countries |             | Selected European Countries |             | Mediterranean Countries |             | Neighboring Countries |             |
|----------------------------|-------------|-----------------------------|-------------|-------------------------|-------------|-----------------------|-------------|
| <b>Turkey</b>              | <b>0.73</b> | <b>Turkey</b>               | <b>0.73</b> | <b>Turkey</b>           | <b>0.73</b> | <b>Turkey</b>         | <b>0.73</b> |
| Bulgaria                   | 0.31        | Switzerland                 | 0.23        | Malta                   | 0.27        | Bulgaria              | 0.31        |
| Hungary                    | 0.28        | UK                          | 0.22        | Slovenia                | 0.24        | Greece                | 0.12        |
| Slovenia                   | 0.24        | Denmark                     | 0.21        | France                  | 0.13        |                       |             |
| Poland                     | 0.19        | Netherlands                 | 0.17        | Croatia                 | 0.13        |                       |             |
| Czechia                    | 0.17        | Austria                     | 0.16        | Greece                  | 0.12        |                       |             |
| Romania                    | 0.14        | Norway                      | 0.16        | Spain                   | 0.08        |                       |             |
| Slovakia                   | 0.13        | Finland                     | 0.14        | Italy                   | 0.07        |                       |             |
| Croatia                    | 0.13        | France                      | 0.13        |                         |             |                       |             |
| Greece                     | 0.12        | Belgium                     | 0.11        |                         |             |                       |             |
|                            |             | Germany                     | 0.09        |                         |             |                       |             |
|                            |             | Sweden                      | 0.08        |                         |             |                       |             |
|                            |             | Portugal                    | 0.08        |                         |             |                       |             |
|                            |             | Spain                       | 0.08        |                         |             |                       |             |
|                            |             | Ireland                     | 0.07        |                         |             |                       |             |
|                            |             | Italy                       | 0.07        |                         |             |                       |             |
| <b>Average</b>             | <b>0.19</b> | <b>Average</b>              | <b>0.13</b> | <b>Average</b>          | <b>0.15</b> | <b>Average</b>        | <b>0.21</b> |

\* Unexpected volatility is measured in the spirit of Alvarez and Matea (1999). Accordingly, respective volatility criterion is obtained by multiplying the standard deviation of residuals of the SARIMA model by 100, which is estimated by TRAMO-SEATS using DEMETRA+ for each country (including intervention solutions like level shifts, additive extreme value). Data are in logarithms. Residual sampling period covers 2010:02 to 2016:02. Average values do not include Turkey.  
Source: Akçelik and Yüksel-Yücel (2016).

The high course of volatility is attributed to unprocessed food prices. In fact, the contribution of the unprocessed food prices to annual consumer inflation can vary within a wide range from -1 to 4 points, and exhibit considerable month-on-month fluctuations (Chart 4). The fluctuations create a significant uncertainty in the analysis and the forecast of CPI inflation by also impeding the management of expectations.

**Chart 4. Contribution of Unprocessed Food Prices to Annual Consumer Inflation**  
(Percent)



Source: TURKSTAT, CBRT.

The relatively high volatility in unprocessed food prices may be due to either the calculation method or structural factors (CBRT, 2011). In particular, the method and the chosen weight structure used to include the prices of fresh fruits and vegetables, which account for the majority of the volatility in unprocessed food, in index may be influential in the volatility in prices (Atuk et al., 2013). Meanwhile, structural factors leading to high volatility in unprocessed food prices are the high dependence of production on weather conditions, the need to improve warehousing, improvements in the long distribution chain between the producer and the final consumer as well as the inspection/surveillance mechanism.

#### **The Food and Agricultural Products Markets Monitoring and the Evaluation Committee**

Adverse effects of food price hikes and high volatility on consumer inflation necessitated the close monitoring of food and agricultural product markets. Accordingly, the Food and Agricultural Products Markets Monitoring and Evaluation Committee was established as per the Prime Ministry Mandate No. 2014/20 published in the Official Gazette No. 29200 on December 9, 2014.

The Committee gathers under the governance of the Undersecretary of Food, Agriculture and Livestock Ministry with the participation of the Undersecretaries of the Ministries of Economy, Customs and Trade, Development and Finance, the Undersecretary of Treasury, the Governor of the CBRT and the President of the Turkish Statistical Institute. The main goal of the Committee is to monitor and evaluate short-term and long-term changes in supply and demand, exports and imports as well as production and consumption of food and agricultural products. The Committee also observes and assesses the possible impacts of these changes and the developments regarding the distribution chain on prices, and when necessary, submits proposals regarding the measures to be taken and policies to be implemented.

The Committee usually gathers on a quarterly basis, and also on the demand of the chairman or any member, if necessary. The Committee also has a study group which meets on a regular basis. The study group presents its findings to the Committee, while issues discussed in this respect are reported to the Economy Coordination Board by the Committee.

So far, the Committee has analyzed several products, mainly red meat, and discussed the required measures to be taken. The study group contacted sector representatives about problems and adoption of necessary measures, which were then reported to the Committee. With the participation of the Turkish Grain Board, the study group monitored the prices and the costs of cereals, especially wheat, and discussed possible measures. Respective ministries performed activities on the examination, detection and inspection of various agricultural products. Examination by the Competition Authority was requested when deemed necessary. External trade measures regarding particular products were evaluated. Cost margin analyses were conducted on the supply chains of red meat, tea, hazelnut, olive oil, bread and various fresh fruits and vegetables. In addition to monitoring and evaluating the market, the Committee also performed studies regarding specific measures that may include structural issues progressing under the lead of the institution in charge.

In its 6<sup>th</sup> meeting, the Committee specified products that provided high contributions to annual consumer inflation in May (Chart 5). Measures taken particularly for red meat were monitored closely. To offset the supply shortage in red meat and improve the quality of livestock in Turkey, a series of studies were performed by the Ministry of Food, Agriculture and Livestock. Accordingly, on May 3, the General Directorates of Agricultural Enterprises and the Meat and Milk Board were bestowed the import tariff quota with zero customs duty for beef and breeding livestock to remain effective until end-2016. Thanks to the measures taken in red meat, the uptrend in prices has recently been replaced by a mild course (Chart 3.2.3). Stability in red meat prices can be achieved by supporting the short-term import policy with medium-term and long-term structural measures.

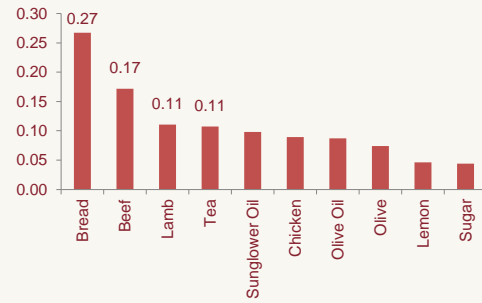
Actions taken by the Food and Agricultural Products Markets Monitoring and Evaluation Committee set an

invaluable precedent for the joint effort of institutions to achieve lasting price stability in Turkey. Rendering these acquisitions permanent, focusing also on structural issues by deepening the efforts and thereby pulling food-related inflation down to levels consistent with the inflation target are of great significance. Detailed proposals for solutions on a product basis were put forth by the Committee, which are significant steps in this endeavor.

#### REFERENCES

- Akçelik, F., 2016, Income Groups and Inflation in Turkey, Master's Thesis, METU Economics Department.
- Akçelik, F. and C. Yüksel-Yücel, 2016, Türkiye'de Gıda Fiyatları: Uluslararası Bir Karşılaştırma (in Turkish), CBT Research Notes in Economics No. 16/23.
- Alvarez, L.J. and M.L.L. Matea, 1999, Underlying Inflation Measures in Spain, Bank of Spain Working Paper No. 9911.
- Atuk, O., M.U. Özmen and O. Sevinç, 2013, Treatment of Seasonal Products and CPI Volatility, Central Bank Review, 13(1): 51-82.
- CBRT, 2011, Sources of Volatility in Unprocessed Food Prices, Box 3.1, Inflation Report 2011-I.
- Öğünç, F., 2010, Türkiye'de İşlenmemiş Gıda Enflasyonunda Oynaklık: Durum Tespiti (in Turkish), CBT Research Notes in Economics No. 10/05.

**Chart 5.** Contribution of Food Products to Annual Consumer Inflation\* (Top-10 Products, May 2016)



\* Simple contributions to annual inflation are obtained by multiplying the annual rate of increase in the price of a product by the current weight of that product.  
Source: TURKSTAT, CBRT.