

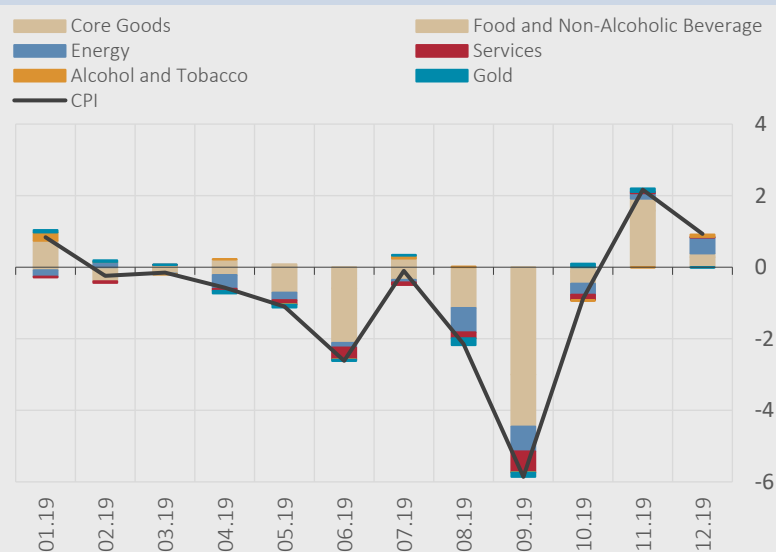
## Box 3.2

### Reflections of Base Effects on Consumer Price Inflation

By the end of 2018, consumer price inflation reached 20.30% following a series of adverse shocks led by exchange rates and food prices. Since the second quarter of 2018, food prices, led by unprocessed food prices, have increased significantly mainly due to negative supply conditions. The effects of the depreciation of the Turkish lira throughout the year, caused by the volatility in international financial markets and domestic uncertainties, diffused across all subgroups, primarily the core goods and energy groups, through the channels of cost and expectations. This sharp loss of value in the Turkish lira pushed inflation up to high levels in September and October by both affecting pricing behavior negatively and causing front-loaded price increases. On the other hand, monthly inflation figures for the last two months of 2018 posted significant declines on the back of the monetary tightening as well as temporary tax cuts on durable goods. In sum, in 2018, the monthly inflation followed a visibly different path during certain periods in comparison to its typical course. Accordingly, this box analyzes the base effects of 2018 monthly inflation figures on the 2019 consumer price inflation.

The base effect stems from the deviation of the month-on-month change in the previous year from the typical monthly change in the respective month. Thus, in addition to the current price developments, annual inflation may also be affected by the base effect.<sup>1</sup> As a matter of fact, base effects will have a significant impact on the course of inflation in 2019.

**Chart 1: Monthly Contribution of Base Effects on Annual Consumer Price Inflation (by Subgroups, % Points)**



Source: CBRT, TURKSTAT.

<sup>1</sup> For details, see Inflation Report 2016/1, Box 3.1. In this work, the average monthly inflation recorded in the 2014-2017 period is defined as “typical” monthly change for each subcategory in order to capture the recent dynamics of inflation better. While calculated base effects are slightly higher, main results hold even when a longer period is considered for calculations of typical monthly changes.

The base effects in annual CPI inflation in 2019 by subcategories are given in Chart 1. Accordingly, the food, core goods and energy groups proved to be the largest contributors of disinflation throughout the year. Despite having had an upward effect in the first month of the year, the food group-driven base effect is expected to exert mostly downward pressures on annual inflation in the rest of the year. This downward effect is particularly noticeable during May and June, mainly due to unprocessed food prices. Following the sharp depreciation in the Turkish Lira in 2018, prices of core goods increased significantly. It is therefore expected that core goods-driven base effects, recorded in the June-September period in particular, will pull annual inflation down. Similarly, the base effect driven by the energy group will put downward pressure on annual inflation until November. Due to temporary tax cuts and the slowing economic activity, the consumer prices registered a decline in the last two months of 2018. Therefore, base effects will push inflation up in November and December 2019. In sum, while the inflation is expected to be pushed significantly downwards by the base effects in June, August and September, an opposite effect is expected to be observed in November.

To sum up, understanding the contribution of base effects to annual consumer inflation is important in order to accurately evaluate the trend of inflation. Since base effects are expected to make a significant downward contribution to annual consumer inflation in certain months of 2019, keeping a close eye on the underlying trend of inflation becomes even more important. Therefore, rather than the decline in inflation to be observed due to the base effects, the outlook in underlying trend of inflation, depending on inflation expectations, exchange rate, import prices, aggregate demand conditions and food prices outlook will be closely followed.