

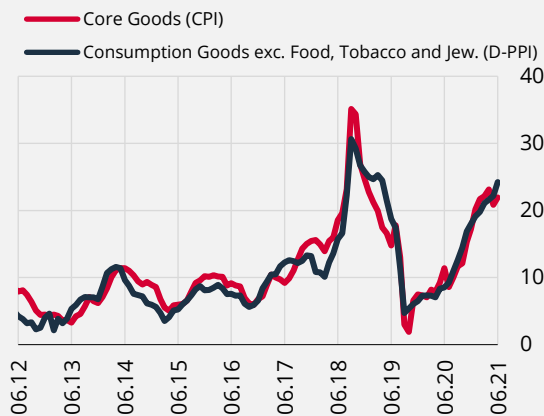
## Box 2.6

### Sectoral Tendencies in the Pass-through from D-PPI to CPI

As the annual producer prices inflation rose to 42.89% in June, the producer prices-led effects on consumer prices became more evident. Model estimates suggest that the pass-through from producer prices to consumer inflation has fluctuated within the 40-45% band over time and currently, the pass-through effect may be slightly lower than historical averages owing to the sliding scale system.<sup>1</sup>

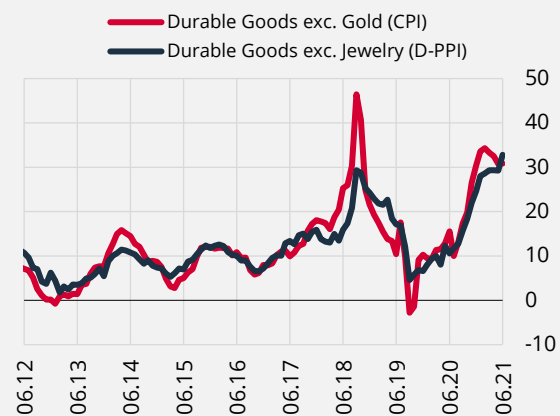
How the pass-through evolves by sub-groups is as crucial as the total extent of the pass-through. While consumer inflation consists of core goods, services, food, energy, alcohol-tobacco and gold, the services sector is not included in the D-PPI by definition. In this context, when developments in producer and consumer prices are analyzed on a sectoral basis, it is observed that producer price increases have already been largely reflected on consumer inflation in core goods-related groups (Chart 1). As for durable consumption goods, although the rise in consumer prices in the first five months of the year exceeded that of producer prices, this trend reversed as of June (Chart 2).

**Chart 1: CPI and D-PPI Related Subgroups: Core Goods** (Annual % Change)



Source: CBRT, Turkstat.

**Chart 2: CPI and D-PPI Related Subgroups: Durable Goods** (Annual % Change)

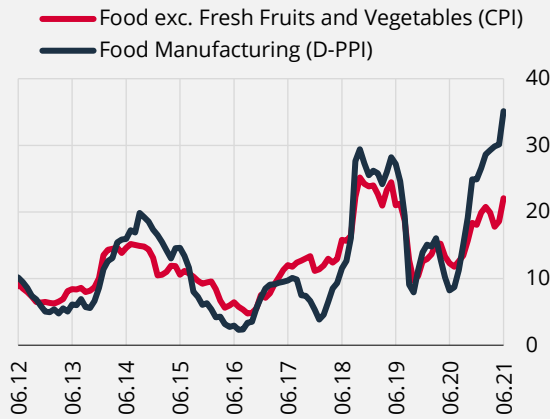


Source: CBRT, Turkstat.

Comparisons of food and energy prices point out that the increase in consumer prices is relatively low for both groups (Chart 3 and Chart 4). For the food component, the gap between producer and consumer inflation has widened significantly, diverging from the historical pattern. The limiting effect of the measures taken by the Food Committee also plays partly a role in this development. For instance, as a result of the actions taken by the Food Committee, the impact of the rise in producer prices in fats and oils on consumer prices was much more limited in last year. The wedge in energy inflation largely reflects the effect of taxes and the sliding scale system. As a matter of fact, there were times in the past when energy price changes on the producer side had a more limited effect on the consumer side (Chart 4). D-PPI compiles sales prices of domestically-produced products excluding taxes, while the CPI compiles final prices including taxes. While an increase in international oil prices by 10 percent affects refined petroleum products of D-PPI at the same rate, its effect on consumer prices is approximately one third due to the tax burden on domestic fuel prices. In addition, due to the currently implemented sliding scale system, the effects of increases in oil prices or the exchange rate are offset by taxes, and hence fuel prices (apart from tax updates) do not show a significant change in the CPI. As a result, in this period, even if the prices of refined petroleum products in producer prices increase at a high rate, their impact on the final consumer remains limited. On the other hand, electricity prices were increased by 15% and natural gas prices by 12% for housing in July. This will have an upward impact on the energy inflation under CPI.

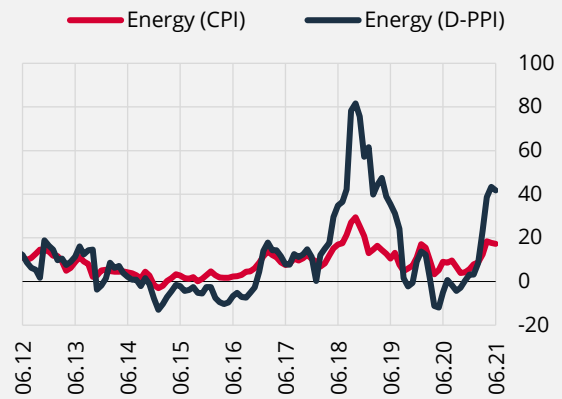
<sup>1</sup> For further information refer to Inflation Report 2021-II, Zoom-in 2.6: How is the course of the pass-through from producer inflation to consumer inflation?

**Chart 3: CPI and D-PPI Related Subgroups: Food (Annual % Change)**



Source: CBRT, Turkstat.

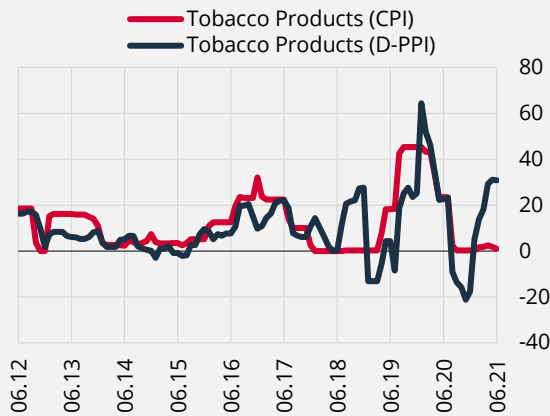
**Chart 4: CPI and D-PPI Related Subgroups: Energy (Annual % Change)**



Source: CBRT, Turkstat.

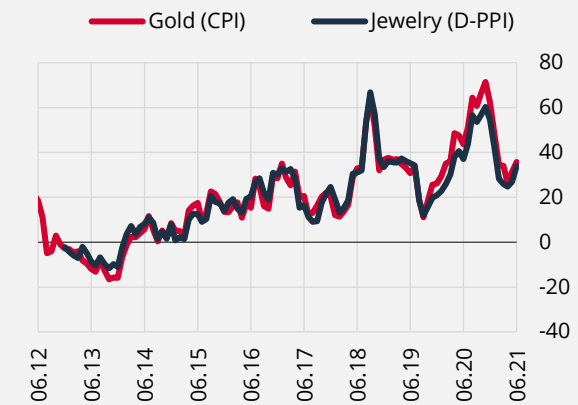
Producer and consumer inflation dynamics in tobacco products vary significantly too and this can be attributed to the fact that the D-PPI is compiled excluding taxes, as in the fuel sector (Graph 5). In tobacco products, the producer price constitutes a very low portion of the final retail price, and so the tax burden has a significant share in the final prices. Sometimes, the impact of pressures originating from producer prices on consumer prices can be curbed by changes made in the tax amount or tax composition (such as the specific and ad-valorem SCT rate changes). Thus, changes in producer prices may be reflected to consumer prices at a lower rate. In the gold/jewelry groups, producer and consumer prices follow similar trends based on the share of the added value created in the total value added (Chart 6).

**Chart 5: CPI and D-PPI Related Subgroups: Tobacco Products (Annual % Change)**



Source: CBRT, Turkstat.

**Chart 6: CPI and D-PPI Related Subgroups: Gold (Annual % Change)**



Source: CBRT, Turkstat.

While sectoral analyses point out that producer price developments in certain groups (such as core goods, durable consumption goods, and gold) have been already largely reflected on consumer prices; pass-through from producer prices to consumer prices in the current period are more subdued because of the use of tax policies in groups such as petroleum and tobacco products. Consumer prices also increased in energy items such as electricity and natural gas as of July, whereas the developments regarding the food inflation are monitored closely.