

## 5 What accounts for the recent decoupling between the euro area GDP deflator and the HICP excluding energy and food?

**The GDP deflator can be seen as a broad indicator of underlying domestic price developments.** There are some differences between the GDP deflator and the frequently used measure of HICP excluding energy and food regarding their concept and aim.<sup>26</sup> Nevertheless, there has generally been a notable degree of co-movement between the longer-term developments of the two indicators. For the euro area, the average annual rate of increase in the past 15 years has been of relatively similar magnitude. Over the short to medium term, however, somewhat larger deviations between the two indicators are not uncommon, and the past two years are an example of a gap opening up: annual growth in the GDP deflator has increased more noticeably and has been rising since mid-2014, while HICP inflation excluding energy and food has edged up much less (see Chart A). This box explores the recent “decoupling” by looking specifically at factors that have accounted for the pick-up in the growth rate of the GDP deflator.

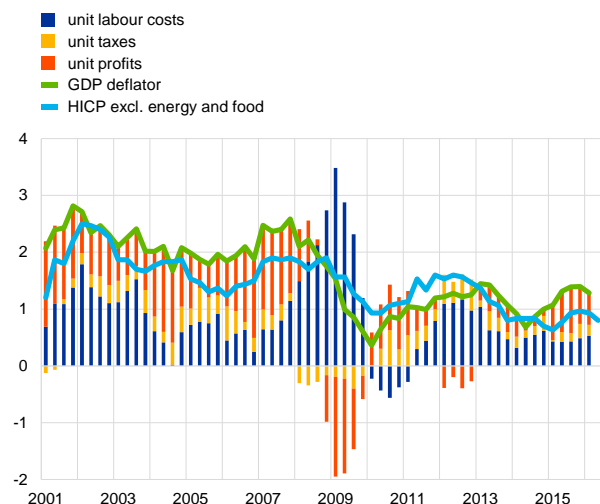
**Developments in profit margins have been the main factor behind the recent acceleration in the euro area GDP deflator.** A breakdown of growth in the GDP deflator into income components shows that almost all of the increase since mid-2014 is accounted for by higher contributions from profits (gross operating surplus) per unit of output, here referred to as profit margins. The contributions from unit labour costs and unit indirect taxes (net of subsidies) have on balance been roughly unchanged. Profit margin developments in the euro area are strongly procyclical and their recent strengthening is in line with the ongoing recovery in real GDP growth (see Chart B). Favourable developments in economic activity support profit margins as the improvements in income and demand facilitate price increases, and as the associated pick-up in productivity and the typically delayed response of wages to the cyclical upturn dampen unit labour costs. However, the impact of the economic cycle via profits should be a factor behind the developments in both the GDP deflator and the HICP excluding energy and food, suggesting that the recent decoupling reflects other factors.

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<sup>26</sup> The main conceptual differences between the two indicators result from the fact that the HICP excluding energy and food refers to the prices of goods and services consumed by households, while the GDP deflator is more encompassing and captures the prices of all final products produced by the domestic economy. Looking at the GDP deflator from the expenditure side, it thus includes prices for private consumption, government consumption, capital formation and exports less those for imports. While prices for imported goods and services are not included in the GDP deflator, they are included in the HICP excluding energy and food (with the exception of the direct effect from energy and food prices). At the same time, the prices of exported goods and services are included in the GDP deflator, but obviously not in the HICP excluding energy and food.

**Chart A****GDP deflator and HICP excluding energy and food**

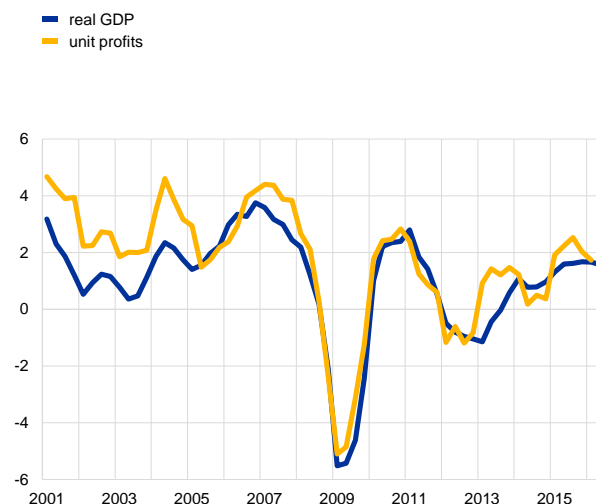
(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB calculations.

**Chart B****Real GDP and unit profits**

(annual percentage changes)



Sources: Eurostat and ECB calculations.

**Profit margins as captured in the GDP deflator have most likely recently also reflected changes in the terms of trade.** This is suggested by a comparison of the decomposition of the GDP deflator on the income side with that on the expenditure side, where the former includes the profit margin and the latter includes the (relative) prices for exports and imports, i.e. the terms of trade. Changes in these terms may have recently reflected different factors. First, the depreciation of the effective exchange rate of the euro seen in mid-2014 could have benefited euro area exporters' profit margins if they priced their products to the market, i.e. kept their export prices unchanged in the foreign currency. Second, the sharp fall in oil and other commodity prices in mid-2014 could have benefited euro area producers' profit margins if they did not fully pass on the associated lower import and input prices to selling prices. Such an impact is suggested by the notable co-movement between the respective contributions of profit margins and the terms of trade to the growth rate of the GDP deflator in the past few years (see Chart C), while before cyclical developments appear to have dominated profit margin developments, as illustrated in Chart B.

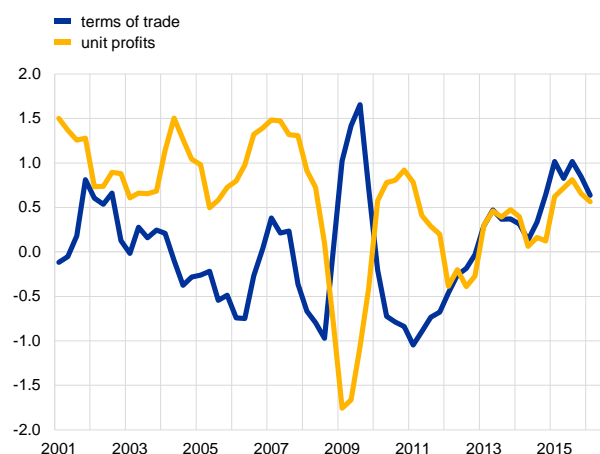
**The impact of input prices on profit margins helps to explain the recent gap between growth in the GDP deflator and that in the HICP excluding energy and food.** The large fall in the price of oil reduced the price of inputs and intermediate consumption in production. Since intermediate consumption is not included in GDP, the change in oil input prices will not be directly mapped into the GDP deflator. At the same time, if the fall in oil input prices is at least partly passed on to selling prices as measured by final consumer prices, HICP inflation excluding energy and food may decline. By contrast, if the fall in oil input prices is not passed on to selling prices, HICP inflation excluding energy and food remains constant, whereas the GDP deflator increases (via higher profit margins). Chart D shows that the recent large differences between the growth rates of the two indicators coincided with the strong

changes in the oil price such that this may explain the pattern of decoupling observed in 2015.

**Chart C**

**Unit profits and terms of trade**

(percentage point contributions)

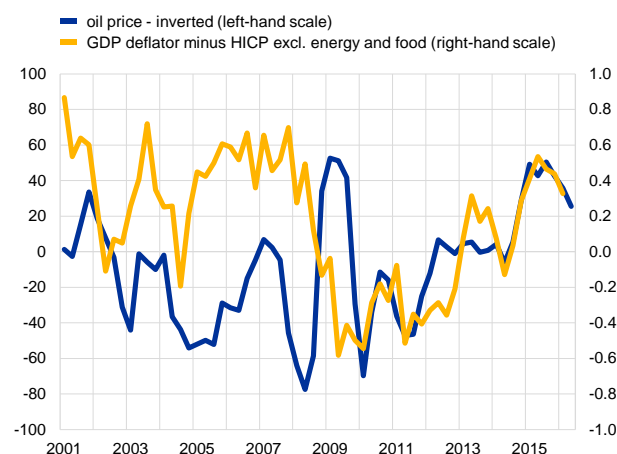


Sources: Eurostat and ECB calculations.  
Note: "Terms of trade" refers to the relative price of exports to that of imports.

**Chart D**

**Differences between the GDP deflator and the HICP excluding energy and food and changes in oil prices**

(annual percentage changes; percentage points)



Sources: Bloomberg, Eurostat and ECB calculations.  
Note: Brent crude oil price in US dollars.

**Looking ahead, the expected fading of the oil price effect should contribute to a re-coupling of developments in the GDP deflator and the HICP excluding energy and food.** On the basis of the current futures curve, the strong favourable impact of oil prices on developments in profit margins is likely to fade out and exert a dampening impact on the growth in the GDP deflator in the near term, as is already visible in the data for the first quarter of 2016. At the same time, everything else being equal, HICP inflation excluding energy and food would be expected to pick up as the dampening indirect effects from the past fall in oil prices unwind. Once the oil price effect has faded, the two indicators of underlying inflation should see some re-coupling and both increase as the economic recovery plays a more prominent role again as a common driver.