

MONITORING THE EXCHANGE RATE PASS-THROUGH TO HICP INFLATION

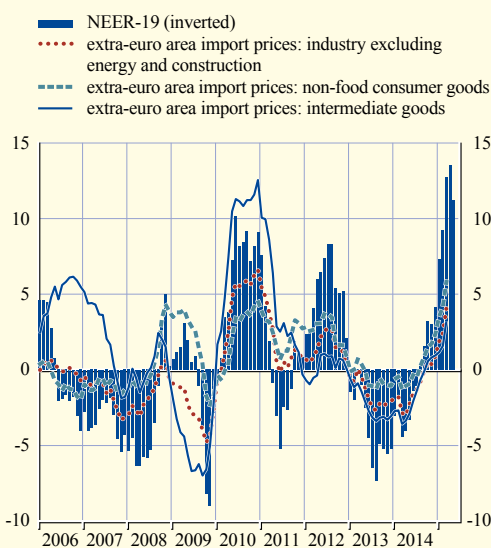
The depreciation of the euro since mid-2014 plays an important role in shaping the current outlook for HICP inflation in the euro area. In nominal effective terms, in May 2015 the exchange rate was about 10% lower than in December 2014 and roughly 15% lower than in March 2014 – the peak of the previous appreciation episode. This box reviews recent developments in import prices and producer prices as part of a typically lagged and incomplete pass-through of exchange rate movements to final consumer prices.

The pass-through of exchange rate changes to HICP inflation can spread via a number of channels. Considering the euro's recent depreciation episode, the first channel is the direct impact on the HICP via the retail chain as imported final consumer goods become more expensive. The second, an indirect channel, reflects higher costs due to more expensive imported inputs feeding through the different stages of domestic intermediate and final goods production. The third one, also an indirect channel, works via those price pressures which ultimately result from the stimulating impulse that a weaker currency has for economic activity and income.

Import prices for both consumer and intermediate goods have increased strongly in recent months. The annual rate of change in extra-euro area import prices for consumer goods excluding food stood at 5.8% in March 2015 (see Chart A). This increase was much larger than that in the prices for imported goods from inside the euro area and, as output price inflation in the global economy has tended to moderate in past months, such comparisons suggest that the

Chart A Import prices for intermediate and consumer goods

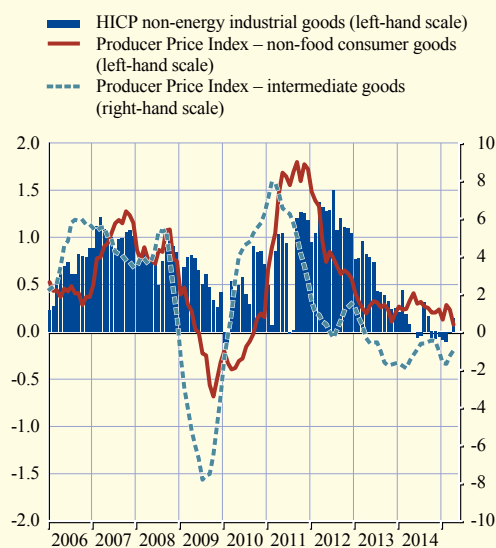
(annual percentage changes)



Sources: Eurostat and ECB calculations.
Note: The latest observations are for May 2015 for the nominal effective exchange rate and March 2015 for import prices.

Chart B Producer prices for intermediate and consumer goods

(annual percentage changes)



Sources: Eurostat and ECB calculations.
Note: The latest observations are for April 2015 (May 2015 for HICP non-energy industrial goods).

upswing in extra-euro area import prices predominantly reflected the strong upward impact of the euro's depreciation that started in spring 2014. The annual rate of change in import prices for intermediate goods has also risen markedly since spring 2014. This is again likely to signal a strong exchange rate impact given that prices of oil and raw materials, which have an important role in the manufacturing of intermediate goods, have tended to decline since then.

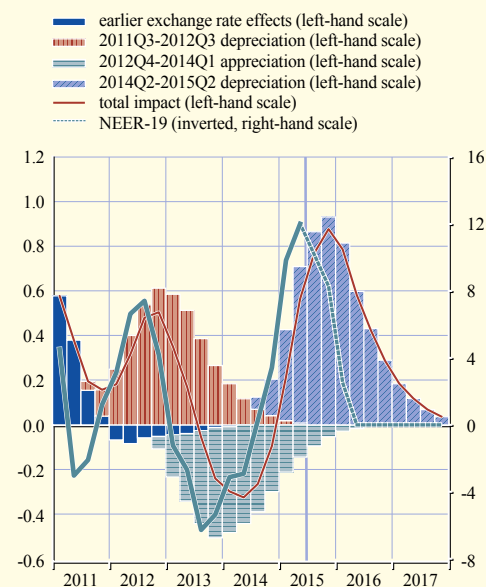
By contrast, industrial producer prices for domestic sales have not yet shown signs of a visible upturn (see Chart B). Producer prices depend not only on prices for imported inputs but also on domestic labour and non-labour cost developments, as well as firms' behaviour in adjusting their margins in response to cost developments. In this context, the importance of foreign inputs tends to decline along the production chain. Consequently, the sensitivity of producer prices to changes in prices for imported inputs tends to be relatively high for intermediate goods industries but more lagged and muted in the case of consumer goods industries.¹ Therefore, for the time being, the observed continued subdued developments in producer prices for domestic sales of consumer goods are consistent with the standard exchange rate pass-through having set in during the earlier stages of the production and pricing chain.

The exchange rate pass-through to HICP inflation should become more noticeable in the coming quarters.

Model evidence suggests that there can be a shift of several quarters between the exchange rate changes and their impact on HICP inflation. This reflects the time it takes for import prices to feed through the different stages of the production and pricing chain and for price pressures to materialise in the domestic economy as a result of exchange rate-induced activity and income effects. Moreover, only around 15% of non-energy industrial goods in the HICP basket are estimated to be directly imported consumer products. Given the delays in pass-through, the movements in exchange rates can generate overlapping upward and downward impacts. For instance, the impacts of the euro's recent depreciation overlap with the lagged disinflationary effects of the euro's appreciation between the end of 2012 and spring 2014. Hence, in the absence of further exchange rate changes, the largest effect of the recent depreciation on inflation may only come to the fore by the end of 2015 (see Chart C).²

Chart C Exchange rate pass-through to HICP inflation

(percentage points; annual percentage changes)



Sources: ECB and ECB calculations.

Notes: Calculations are based on an updated version of the model presented in ECB Working Paper No 243. The latest observation for the nominal effective exchange rate is for the second quarter of 2015. The NEER is assumed to remain at this level until 2017.

1 See Hahn, E., "The impact of exchange rate shocks on sectoral activity and prices in the euro area", *Working Paper Series*, No 796, ECB, August 2007.

2 See Hahn, E., "Pass-through of external shocks to euro area inflation", *Working Paper Series*, No 243, ECB, July 2003. The impulse response functions used in Chart C are based on an updated version of the model provided in the aforementioned study. The responses are comparable with those of other models in terms of magnitude and timing. However, it should be borne in mind that a pass-through at each point in time may be different from average elasticities depending on the type of underlying cause of exchange rate movement.

The pass-through of the euro's depreciation has become clearly visible in strong import price increases. In line with a typically lagged pass-through of exchange rate changes, the impact on producer and consumer prices should become more noticeable in the coming quarters. A delay and dampening of this impact with regard to the ultimate pass-through to consumer prices is a normal feature of the production and pricing chain.