

AVERAGE PRICE INCREASES SINCE THE EURO CASH CHANGEOVER

The introduction of the euro banknotes and coins on 1 January 2002 coincided with widespread concern that the cash changeover could trigger a general increase in prices. However, this contrasted with the general expectation that, in the longer term, the cash changeover would have a dampening impact on prices through greater transparency and competition.¹ Against this background, this box first recalls the movements in inflation perceptions following the cash changeover and then reviews the average price increases in the euro area as a whole over the ten years since the cash changeover.

Inflation perceptions and actual inflation

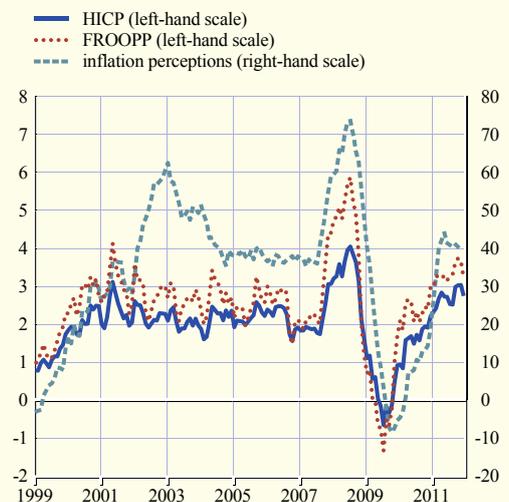
Around the time of the cash changeover, developments in perceived inflation – as measured through the European Commission's Consumer Survey – started to deviate significantly from those in actual HICP inflation

(see Chart A).² It should be noted, however, that the levels of the two series cannot be compared directly, as the measure of perceived inflation is based on qualitative information on the direction of change in price developments rather than on the level of inflation.³ Nevertheless, there was a clear deviation in the trends of the two indicators, which lasted for around a year. Thereafter, the deviation diminished again, as perceptions were corrected downwards. In the period since mid-2004, perceived and actual inflation have moved in a more synchronous manner.

The deviation in developments in perceived inflation and actual inflation around the time of the cash changeover was especially evident with regard to prices for goods and services that consumers buy more frequently and which may thus have a stronger bearing on inflation perceptions (see Chart A). Such purchases are known as “frequent out-of-pocket purchases” (FROOPP) and include all food and most energy items in the HICP, but exclude, for instance, rents and insurance. It can be seen that movements in inflation perceptions have been more highly correlated with the FROOPP index than with the HICP. Given the relatively higher weight of food and energy in the FROOPP index than in the HICP,⁴ and the fact that the euro area has been

Chart A HICP inflation, FROOPP inflation and perceived inflation

(annual percentage changes; percentage balances)



Sources: European Commission and ECB calculations.
Note: FROOPP refers to “frequent out-of-pocket purchases”.

1 See the box entitled “Euro cash changeover not expected to have a significant impact on consumer prices at the aggregate level”, *Monthly Bulletin*, ECB, January 2002.

2 For further information, see the box entitled “Recent developments in consumers’ inflation perceptions”, *Monthly Bulletin*, ECB, July 2002; and the box entitled “Recent developments in perceived and actual inflation”, *Monthly Bulletin*, ECB, October 2002.

3 See the box entitled “The European Commission Survey of consumers’ inflation perceptions”, *Monthly Bulletin*, ECB, May 2007.

4 Taken together, food and energy have a weight of 29.7% in the HICP. The weight of selected sub-components related to food and energy in the FROOPP index is 53%.

hit by a number of adverse shocks⁵ in these two price components, FROOPP inflation has, on average, been both more volatile and higher than overall HICP inflation over the past ten years. This was particularly the case in the period of severe international commodity price shocks in 2007-08.⁶

Average price increases in individual HICP components

Overall, the average rate of increase in the euro area HICP since the cash changeover has been 2.1%. However, there have been significant differences in the trends of certain categories since 2002. Charts B and C illustrate this very clearly.

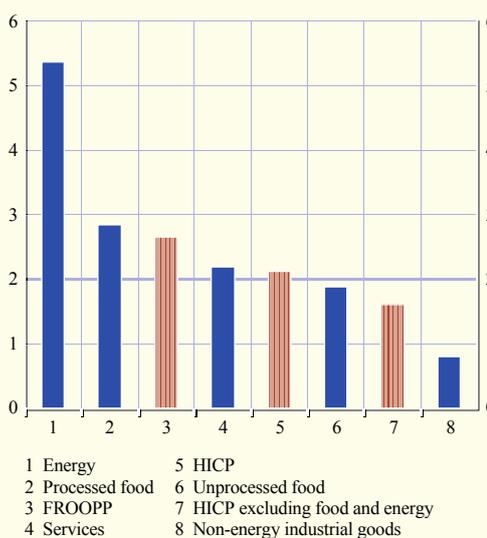
The number of adverse upward shocks to food and energy prices is reflected in the much higher average annual rates of increase in these two components than in the others. For the energy component as a whole, the average annual rate of increase since the cash changeover has been 5.4%, whereas for the liquid fuels sub-component, for instance, it has been 9.6%.

Processed food prices have increased, on average, by 2.8% per annum, to a large extent reflecting an average annual rate of increase of 6% in tobacco prices, which was due mainly to tax hikes. Unprocessed food prices rose, on average, by 1.9% per annum (fish 2.4%, fruit 2.2%, meat 1.8% and vegetables 1.4%).

With regard to services prices, the average annual rate of increase since the cash changeover has stood at 2.2%, i.e. broadly in line with average HICP inflation. The services component covers, for example, the price of a meal in a restaurant, a haircut or a cinema ticket, which, at the time of the cash changeover, were perceived to have increased significantly. However, on average over the ten years since then, the price increases have not been exceptional. For instance, prices in the category “hairdressing salons and personal grooming establishments” have risen, on average, by 2.2% per annum and prices in the category “restaurants, cafes and the like” have increased, on average, by 2.8% per annum, with the latter having also been indirectly affected by hikes in processed food prices. Finally, the average annual rate of inflation in the non-energy industrial goods component has been only 0.8%, owing mainly to the substantial fall in the prices of Information and Communication Technology (ICT) goods on the back of rapid

Chart B HICP and its main components

(average annual rate of increase between December 2001 and December 2011)



Sources: Eurostat and ECB calculations.

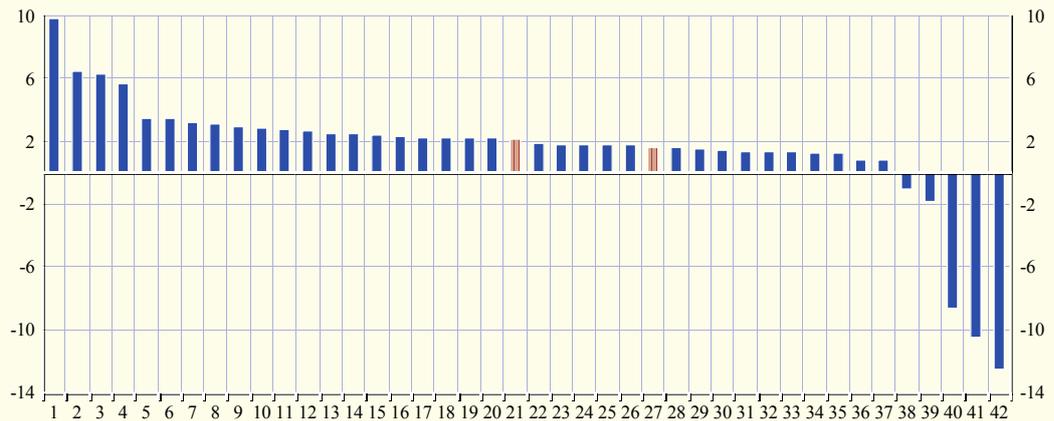
Notes: The main HICP components are energy, processed food, services, unprocessed food and non-energy industrial goods. Frequent out-of-pocket purchases (FROOPP) and the HICP excluding food and energy are included for reference only.

5 For an overview of the clustering of shocks to HICP inflation, see the box entitled “The clustering of shocks to HICP inflation since the start of Stage Three of EMU”, *Monthly Bulletin*, ECB, June 2002.

6 See the box entitled “The implications of external price pressures for euro area HICP inflation”, *Monthly Bulletin*, ECB, October 2011.

Chart C Selected HICP categories

(average annual rate of increase between December 2001 and December 2011)



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|---|--|
| 1 Liquid fuels | 22 Cultural services |
| 2 Jewellery, clocks and watches | 23 Actual rentals paid by tenants |
| 3 Tobacco | 24 Meat |
| 4 Fuels and lubricants for personal transport equipment | 25 Glassware, tableware and household utensils |
| 5 Passenger transport by railway | 26 Postal services |
| 6 Maintenance and repair of personal transport | 27 HICP excluding food and energy |
| 7 Hospital services | 28 Wine |
| 8 Education | 29 Beer |
| 9 Recreational and sporting services | 30 Furniture and furnishings |
| 10 Restaurants, cafés and the like | 31 Vegetables |
| 11 Newspapers and periodicals | 32 Package holidays |
| 12 Bread and cereals | 33 Books |
| 13 Dental services | 34 Shoes and footwear |
| 14 Coffee, tea and cocoa | 35 Pharmaceutical products |
| 15 Fish | 36 Motor cars |
| 16 Canteens | 37 Garments |
| 17 Cleaning, repair and hire of clothing | 38 Games, toys and hobbies |
| 18 Fruit | 39 Telephone and telefax equipment and services |
| 19 Hairdressing salons and personal grooming establishments | 40 Equipment for the recording and reproduction of sounds and pictures |
| 20 Passenger transport by air | 41 Photographic and cinematographic equipment and optical instruments |
| 21 HICP | 42 Information processing equipment |

Sources: Eurostat and ECB calculations.

technological progress in this field. For instance, prices for information processing equipment have decreased by 12.5% per annum and those for photographic and cinematographic equipment and optical instruments by 10.5% per annum. By contrast, the average annual rate of increase in the prices of jewellery, clocks and watches has stood at 6.4%, largely as a result of the surge in commodity prices, in particular gold, over the last few years.

Overall, the euro area has seen very large differences in the developments of prices for individual goods and services since the cash changeover. One clear development has been the upward impact of energy and food prices resulting from international commodity price shocks, alongside the dampening impact of the prices of ICT goods resulting from technological progress in that field. At the same time, services prices have developed broadly in line with average HICP inflation.