Box 4

A DETAILED LOOK AT HICP CHANGES IN JANUARY EACH YEAR AND A COMPARISON WITH DEVELOPMENTS IN OTHER MONTHS

Given the importance of the HICP in defining the ECB's medium-term objective for price stability, its evolution is analysed in detail each month in an attempt to understand the factors behind the most recent changes in prices. It is particularly useful to identify seasonal, temporary and irregular movements and to disentangle them from more underlying developments. In so doing, however, there is always an element of uncertainty. The January releases of inflation figures are particularly challenging, as seasonal factors, for example sales discounting and unprocessed food price developments, can be especially important in relation to overall price developments in the month. Seasonal fluctuations complicate the analysis, particularly as they can be volatile or evolve over time.[1] Furthermore, other factors with a longer-lasting impact also come into play in January, such as government measures (i.e. changes in administered prices and indirect taxes) and price revisions by companies that for various reasons change their prices only infrequently.[2] This box looks in detail at the pattern of price changes suggested by the disaggregated HICP data in order to see if the pattern of price changes in January 2007 is different from previous years or months and if some signs of longer-term tendencies expected to materialise in the course of 2007 can be identified.

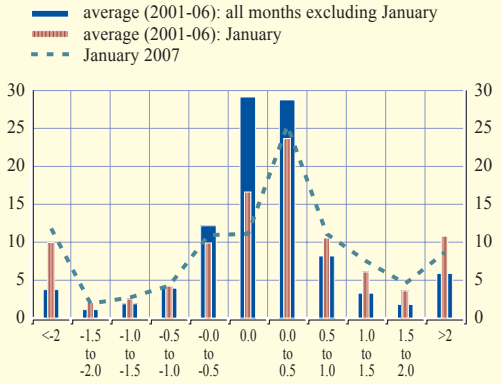
An analysis of detailed HICP data supports the assessment that price changes in January differ notably from other months of the year (see Chart A).[3] Considering first the typical profile of price changes in all months except January over the period 2001-06, Chart A indicates that around 30% of the approximately 1,200 price indices remain unchanged each month, while another 30% increase slightly (by less than 0.5% month on month). A small number (approximately 10%) exhibit large changes, either increasing or decreasing by over 2% in one month. By contrast, in January, the profile of price changes is notably different. Fewer price index series appear to remain unchanged or record small changes (less than 0.5% in absolute terms), while there are significantly more large decreases or increases of over 2% (approximately 20%). The above average number of large declines observed in January appears to be related to the impact of seasonal sales (a similar feature is also observed in July). However, unlike in

1 For more details on the impact of seasonal factors on the HICP, see the box entitled "Seasonal patterns and volatility in the euro area HICP" in the June 2004 issue of the Monthly Bulletin.
2 Work undertaken in the context of the Eurosystem Inflation Persistence Network (IPN) on firms' pricing behaviour has found that January is a key month for firms to both review and change their prices. For further details see the article entitled "Price-setting behaviour in the euro area" in the November 2005 issue of the Monthly Bulletin.
3 Although HICP price data on individual products in the euro area are not available, HICP sub-indices, which are the aggregation of individual product prices, may provide us with some insight into price-setting behaviour. To understand the difference between individual product prices and aggregated price indices consider, for example, the meat price index, which is a sub-component of HICP unprocessed food. The meat index itself is comprised of numerous sub-components (e.g. lamb, beef, chicken), which in turn are the aggregation of price observations of individual specified products in retail outlets in each country.

July, there is also a greater number of price increases above 0.5%. One possible explanation for this could be that administered prices and indirect taxes tend to change in January. However, even when one adjusts for this, a larger number of price increases can still be observed in January compared with the monthly average. This would seem to suggest that more firms may choose January as the month in which to change their prices. This result would have some intuitive backing, as many companies tend to review their situation at the end of the year and this may result in prices being changed at the beginning of the following year.

Chart A Distribution of month-on-month changes in HICP price indices

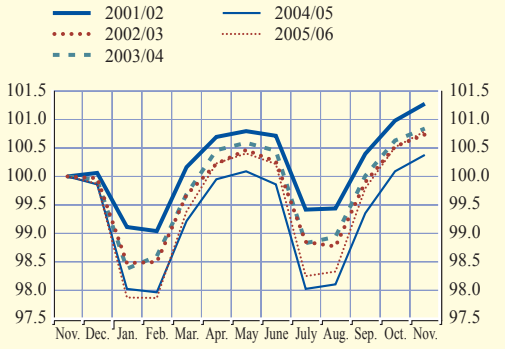
(percentages)



Sources: Eurostat and ECB calculations.
Note: The chart shows the unweighted distribution of month-on-month changes, not seasonally adjusted, in detailed country-level HICP components (i.e. summarising approximately 1,200 price index series).

Chart B Seasonal profile of HICP non-energy industrial goods

(index: November in the earlier year = 100)



Sources: Eurostat and ECB calculations.
Note: The chart illustrates the development of HICP non-energy industrial goods prices over the course of 12 months, taking the November level in the earlier year as the point of reference.

Considering the distribution of price index changes across the broad HICP components (unprocessed food, energy, processed food, non-energy industrial goods and services) confirms that, on average, the pattern of more increases in price indices in January each year than in other months is a widespread phenomenon, as it is observed in each component, with the exception of non-energy industrial goods.

In January 2007 the distribution of price index changes was broadly similar to the average distribution observed in January over the period 2001-06, although slightly more large declines and slightly fewer large increases could be observed. There were also somewhat more increases in the 1%-2% range. Looking in more detail at the HICP main components it appears that the phenomenon of more large declines and fewer large increases is mainly due to developments in both non-energy industrial goods prices and energy prices. Developments in non-energy industrial goods prices relate most probably to deeper seasonal discounting, in particular on prices for clothing and footwear, whereas developments in energy prices reflect recent oil price declines. Looking at individual country developments, there is a clear impact of the change in the standard VAT rate in Germany, with greater than normal increases in price indices observed. However, the impact of increased seasonal discounting is also visible in Germany, with a larger than usual number of price indices declining, particularly for non-energy industrial goods prices.

In the case of non-energy industrial goods it appears that the practice of seasonal discounting predominates in January each year, with approximately 20% of price index series, on average, experiencing a price decline of more than 2%. The pattern of seasonal discounting has become more pronounced in recent years (particularly the sales discounting in January and July and the subsequent rebounds), as can be seen in Chart B. The deepening of the pattern of sales discounting is most evident in the clothing and footwear sectors. In January 2007 clothing and footwear prices declined by approximately 9%, compared with a month-on-month decline of 8% in January 2006. The deepening of sales discounts reflects a combination of factors: statistical (the treatment of sales prices in the HICP), legal (liberalisation of the rules governing sales discounting) and economic (response to demand and competition).

The extent of the seasonal discounting in the month of January does not, however, necessarily provide a clear indication of the profile for the year as a whole. Developments in 2004/05 and 2005/06 provide an illustrative example. Although, there was somewhat deeper discounting in January 2006 compared with January 2005, increases in HICP non-energy industrial goods prices were subsequently stronger in 2006 relative to 2005. However, this relative evolution did not become evident until some months into the year when the extent of the unwinding of the seasonal discounts became clearer. Comparing the seasonal pattern over the years, it is possible to observe some increased volatility in, as well as deepening of, the seasonal discounting pattern, hampering the inference of underlying developments, especially at the beginning of the year.

In summary, although January may be a key month for price changes, understanding developments in this month is more difficult than normal owing to the strong impact of seasonal or one-off factors. This year, despite an observed upward impact on many prices due to the increase in the standard VAT rate in Germany, the distribution of changes in price indices in January in the euro area as a whole was broadly similar to the average observed in previous years. There was also, however, evidence of slightly higher than average large declines in price indices. While some of these were due to energy prices, some also appear to be due to more seasonal discounting in some countries. However, it will take some months before it becomes clearer to what extent these discounts unwind or reflect an ongoing lower level of prices.