

Box 7

RECENT DEVELOPMENTS IN SELECTED MEASURES OF UNDERLYING INFLATION FOR THE EURO AREA

The ECB's objective is defined in terms of headline HICP. Nevertheless, it can be useful to monitor other measures of price increases in order to identify and illustrate longer-term price trends, as well as the nature and sources of the forces driving overall price dynamics. To this end, a number of measures of "underlying", or "core", inflation have been proposed in the economic literature.¹ Exclusion-based measures of underlying inflation, a frequently cited set of such indicators, can be classified into two main types: permanent exclusion-based measures (which always exclude the same items, such as the HICP excluding unprocessed food and energy) and statistical exclusion-based measures (which exclude outliers at any given point in time, such as trimmed mean measures).² This box reviews and assesses recent developments in several of these specific measures of underlying inflation.

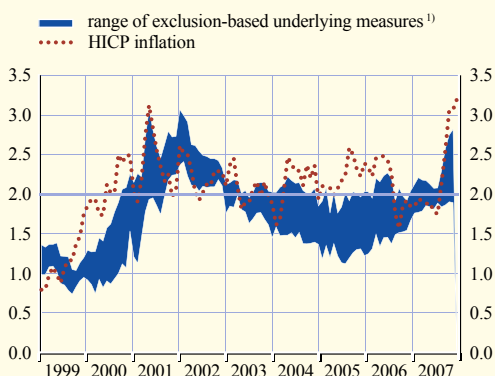
In January 2008 exclusion-based measures of underlying inflation stood at levels that were below the rate of increase in overall HICP inflation (see Chart A and the table). At the same time, after having increased over the course of 2007, most measures currently stand at elevated levels that are above 2.0%. The only exception is the measure of HICP inflation excluding food and energy, which stood at 1.7% in January 2008 and has remained below 2.0% throughout 2007, although it too has increased from its average rate in 2006. The more subdued rates of increase seen in this indicator compared with developments in other permanent exclusion-based measures

1 The concept of underlying inflation, while intuitively appealing as a way to identify and illustrate longer-term price trends and the nature and sources of the forces driving headline price dynamics, has proven to be an elusive concept in practical applications. For a detailed analysis, see the article entitled "Measures of underlying inflation in the euro area" in the July 2001 issue of the Monthly Bulletin.

2 Permanent exclusion-based measures involve the systematic exclusion of selected HICP components whereas statistical exclusion-based measures exclude the smallest and largest price changes at any given point in time.

Chart A Evolution of selected measures of euro area HICP inflation

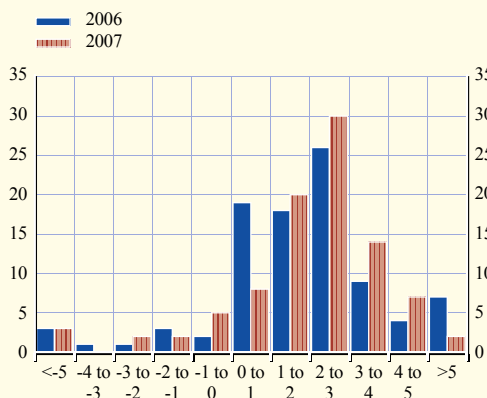
(annual percentage changes; monthly data)



Sources: Eurostat and ECB calculations.
1) See the note to the table.

Chart B Frequency distribution of HICP items

(annual percentage changes)



Sources: Eurostat and ECB calculations.
Note: The chart shows the unweighted frequency distribution of the annual price changes in the 93 HICP items for both 2006 and 2007.

of underlying inflation, such as the HICP excluding unprocessed food and energy, highlight the strong contribution from processed food prices, particularly in the period since September 2007. The general rise in indicators of underlying inflation is also evident in all statistical exclusion-based measures. Indeed, reflecting the fact that such indicators exclude both positive and negative outliers, they currently lie in a range that is somewhat above the permanent exclusion-based measures which, at present, tend to exclude only items making an above average contribution to overall HICP inflation.

The breadth of this recent increase in indicators of underlying inflation can also be inferred from an examination of the frequency distribution of price increases over the past two years, which shows a general shift to the right in the distribution of price increases in HICP items in 2007 relative to 2006 (see Chart B). While some of this increase may be attributable to the January 2007 rise in VAT in Germany, which affected a large range of items in the HICP, it

Euro area HICP inflation and selected measures of underlying inflation

(annual percentage changes; monthly data)

	2006	2007	2007 Sep.	2007 Oct.	2007 Nov.	2007 Dec.	2008 Jan.	2008 Feb.
HICP inflation ¹⁾	2.2	2.1	2.1	2.6	3.1	3.1	3.2	3.2
Selected measures of underlying inflation								
Permanent exclusion-based measures								
HICP excluding energy	1.6	2.1	2.0	2.2	2.3	2.4	2.4	
HICP excluding unprocessed food and energy	1.5	2.0	2.0	2.1	2.3	2.3	2.3	
HICP excluding food and energy	1.4	1.9	1.8	1.9	1.9	1.9	1.7	
Statistical exclusion-based measures								
Trimmed mean (10%)	2.0	2.2	2.2	2.6	2.7	2.8	3.0	
Trimmed mean (32%)	1.9	2.2	2.3	2.4	2.5	2.5	2.5	
Weighted median	2.0	2.2	2.2	2.4	2.5	2.5	2.4	

Sources: Eurostat and ECB calculations.
Note: Statistical exclusion-based measures exclude a stipulated portion of percentage changes in prices that rank among the smallest or largest changes for the month (in numerical terms); for example, the 10% trimmed mean excludes the smallest 5% and largest 5% of price changes from the weighted distribution of HICP items.
1) HICP inflation in February 2008 refers to Eurostat's flash estimate.

may also be related to a broad-based increase in the largest HICP components, namely services and non-energy industrial goods. This general pattern may be linked to the indirect effects of past commodity price increases, while also signalling other forces related to the relatively strong economic upswing seen in 2007.

In interpreting these indicators, it should be borne in mind that measures of underlying inflation – whether taken individually or as a group – neither provide a structural view of inflationary pressures nor incorporate forward-looking information beyond that embedded in the 93 HICP items and, as such, need to be cross-checked with other available data. Nevertheless, the parallel rise in many of these indicators needs to be monitored carefully.