

## Box 4

### USING INFORMATION FROM THE WEEKLY OIL BULLETIN TO MONITOR SHORT-TERM ENERGY PRICE DEVELOPMENTS

The recent volatility in oil prices has increased the uncertainty surrounding short-term developments in energy prices and the overall inflation rate. In this context, useful and timely information on short-term energy price movements is provided by the European Commission's weekly Oil Bulletin.<sup>1</sup> This box considers the uses and limitations of data from the Oil Bulletin in monitoring short-term developments in energy prices and overall inflation.

The Oil Bulletin, compiled by the European Commission's Directorate-General Energy and Transport, reports consumer prices of petroleum products. It gives data for all European Union countries, both including and excluding duties and taxes. The Oil Bulletin provides consumer price information for three types of product: two automobile fuels (Euro-super 95 and diesel) and one home heating fuel (heating gas oil).<sup>2</sup> The prices reported for the euro area may be linked to energy prices in the HICP. Euro area prices are aggregated from individual country data using information on national consumption as weights for each of the products.<sup>3</sup> Petroleum product prices are collected at the country level and, with a few exceptions, on a weekly basis.

The Oil Bulletin is useful for a number of reasons. First, it is published weekly, which allows a detailed examination of the pass-through of oil prices into consumer energy prices. Second, it is also very timely: the data which are collected on Monday each week are generally available by Wednesday. Third, unlike energy price data available from commodity markets, such as crude oil prices, the Oil Bulletin data are consumer prices, making them particularly relevant to HICP inflation analysis. Although only "oil" energy prices are available, these cover over 50% of the HICP energy component (see Table A for a breakdown of this component). Even though the Oil Bulletin does not give data for "non-oil" energy sub-components – electricity, gas,

**Table A Weights of euro area HICP energy sub-components**

(in percentages)

	Share in total HICP <sup>1)</sup>	Share in HICP energy <sup>1)</sup>
<b>HICP energy</b>	<b>8.1</b>	<b>100.0</b>
“Oil” energy	4.3	52.7
Liquid fuels	0.6	7.9
Fuels and lubricants for personal transport equipment	3.6	44.8
“Non-oil” energy	3.8	47.3
Electricity	2.0	24.6
Gas	1.3	16.2
Solid fuels	0.1	1.0
Heat energy	0.4	5.5

Source: Eurostat.

1) Weights are for 2004.

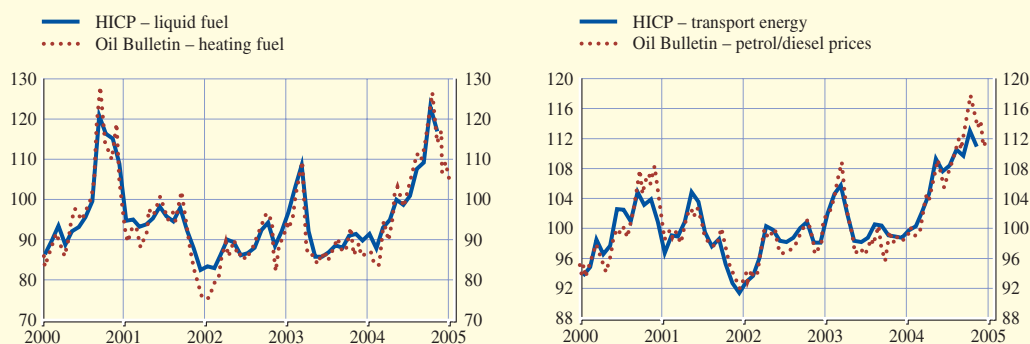
1 Further information on the Oil Bulletin is available on the European Commission's website, at [http://europa.eu.int/comm/energy/oil/bulletin/index\\_en.htm](http://europa.eu.int/comm/energy/oil/bulletin/index_en.htm).

2 Data are also reported on fuel oil prices (excluding VAT), but as these do not directly refer to consumer prices they are not reported here.

3 Euro area aggregates are compiled only when full country coverage is reached.

Chart Oil Bulletin (weekly data) and HICP energy components (monthly data)

(index 2000 = 100)



Sources: Eurostat, European Commission DG Energy and Transport and ECB calculations.

solid fuels and heat energy, which account for slightly under 50% of overall energy – these items do not react in the short-term to oil price developments.<sup>4</sup>

Nonetheless, using the Oil Bulletin data for inferring HICP developments has some limitations. First, mapping the weekly data from the Oil Bulletin to the monthly data from the HICP is not straightforward, as each country collects its HICP data over different time periods in terms of both the number of days over which prices are collected and the time of the month at which they are collected. In this context Eurostat is finalising a proposal to harmonise further the collection periods for HICP data. Second, although both Oil Bulletin data and HICP data refer to pump prices, the former have various different sources, whereas the latter are generally collected directly from the pumps. Third, for prices including tax only a relatively short sample is available for the euro area (from January 2000 to date), although prices excluding tax are available for many countries back to 1994.

Despite these caveats, the data from the Oil Bulletin follow the HICP's "oil" energy sub-components quite closely (see Chart). The left-hand section of the Chart shows the relationship between the liquid fuels sub-component of the HICP (mainly domestic heating fuel) and the heating fuel data from the Oil Bulletin. Some short-term movements and turning-points evident from the latter are smoothed out by the monthly HICP data. The range of movement in home heating fuel prices tends to be larger than that of petrol/diesel prices. This reflects the lower tax content of the heating fuel prices, which means that movements in oil prices tend to have a larger percentage impact on the final prices charged to consumers. The right-hand section of the Chart shows the relationship between the transport energy sub-component (petrol/diesel) of the HICP and the petrol/diesel data from the Oil Bulletin. The degree of fit is slightly lower between these two series. This may perhaps reflect the different distribution channels for home heating fuel and transport fuel and the different ways in which the Oil Bulletin and HICP data are collected.

In addition to the link between Oil Bulletin data and the HICP "oil" energy sub-components, the Oil Bulletin data give some insight into the very short-term dynamics of oil energy prices

<sup>4</sup> For example, the peak correlation between monthly changes in oil prices and the gas and heat energy sub-components of the HICP is with a lag of 10-12 months.

**Table B Comovement of oil prices and Oil Bulletin energy prices**

week(-2)	week(-1)	week(0)	week(1)	week(2)	week(3)	week(4)	week(5)
0.01	0.09	0.45	0.57	0.23	0.12	0.04	-0.01

Source: ECB calculations. Oil prices are in euro. Sample period 2000-2004.

Note: week(1) denotes the correlation between weekly changes in oil prices and changes in energy prices one week later. Week(-1) denotes the correlation between oil price changes and energy price changes one week earlier. Week(0) denotes the contemporaneous correlation.

and the speed of pass-through from oil prices to energy prices faced by consumers. Table B illustrates the correlation between weekly changes in oil prices and energy prices from the Oil Bulletin. It shows that, first, there is no evidence that retailers anticipate oil price increases, as the correlation between energy price changes and oil price changes one or two weeks later is not statistically significant. Second, most of the pass-through appears to take place either contemporaneously (a correlation of 0.45) or within one week (0.57), although there is also some correlation with energy price movements two weeks later (0.23). Thereafter, the correlation is close to zero. This suggests that most movements in oil prices show up very quickly in oil energy prices faced by consumers (within two weeks); the weekly frequency of the Oil Bulletin is therefore very useful for monitoring these developments.

In conclusion, data from the Oil Bulletin provide timely and high-frequency information on short-term developments in consumer energy prices, which is the most volatile component of the HICP. This facilitates the monitoring and analysis of short-term developments in inflation.