

## RECENT DEVELOPMENTS IN CONSUMERS' INFLATION PERCEPTIONS AND EXPECTATIONS IN THE EURO AREA

Survey-based measures of consumers' inflation perceptions and expectations have risen sharply in the euro area in recent months. This box assesses these developments, considers the driving factors behind the increases and outlines the possible implications.

### The European Commission's Consumer Survey

Consumers' opinions on inflation developments in the euro area are collected on a monthly basis by the European Commission as part of its Consumer Survey. Responses to the survey are of a qualitative nature, and an aggregate measure of consumers' opinions is summarised as a "balance statistic", which weights together the frequency of responses in different categories.<sup>1</sup> According to these measures, consumers' qualitative perceptions of inflation over the previous 12 months have increased significantly in recent months, reaching levels last seen in January 2004 (see Chart A). Consumers' qualitative expectations of inflation developments in the next 12 months also increased sharply in August and September. In October, they were below the September value, but remained at the high levels recorded at the end of 2006. It is notable that sharp, simultaneous increases in both perceptions and expectations had not been observed since the euro cash changeover in January 2002. Indeed, the two series had been negatively correlated over the period since the cash changeover.

By definition, balance statistics only provide qualitative information on the directional change of consumers' inflation perceptions and expectations; they give no indication of the magnitude of the perceived and expected rates of inflation. As they are fundamentally different in nature from HICP inflation, a direct comparison among these indicators cannot be made. However, the qualitative responses of the Consumer Survey can be mapped into quantitative estimates of the perceived and expected inflation rates, which can be directly compared with the HICP. Various approaches have been proposed to perform the mapping.<sup>2</sup> As an illustration, this box uses a methodology based on the probability approach.<sup>3</sup> The methodology is subject to a number of caveats. In particular, the quantified indicators may be sensitive to the technical assumptions underlying the mapping. Moreover, it is inconceivable that the average survey respondent gathers and processes the same quantity of information as is incorporated in the HICP. Furthermore, while survey respondents are specifically asked to assess developments in "consumer prices", no explicit reference is made to any particular price index.

Historically, there has been a close and relatively straightforward relationship between the evolution of quantified inflation perceptions and expectations from the Consumer Survey and developments in the actual HICP in the euro area (see Chart B). An exception, however, was the period of the cash changeover, when consumers' inflation perceptions and expectations

1 For a discussion of euro area consumer price-related survey data, see the box entitled "Consumers' inflation perceptions: still at odds with official statistics?" in the April 2005 issue of the Monthly Bulletin. See also the article entitled "Measured inflation and inflation perceptions in the euro area" in the May 2007 issue of the Monthly Bulletin.

2 A review of the main techniques can be found in E. D'Elia, "Using the results of qualitative surveys in quantitative analysis", Istituto di Studi e Analisi Economica (ISAE), Working Paper No 56, September 2005.

3 The methodological details of the technique can be found in M. Forsells and G. Kenny, "The rationality of consumers' inflation expectations: survey-based evidence for the euro area", ECB Working Paper No 163, 2002.

**Chart A Euro area consumers' qualitative inflation perceptions and expectations**

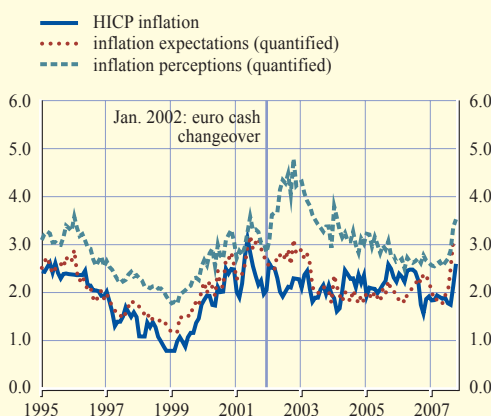
(percentage balance; seasonally adjusted)



Source: European Commission Business and Consumer Surveys.

**Chart B HICP inflation and consumers' quantified inflation perceptions and expectations**

(annual percentage changes)



Sources: European Commission Business and Consumer Surveys, Eurostat and ECB staff calculations.  
Note: HICP inflation in October 2007 refers to Eurostat's flash estimate.

diverged from the HICP. Focusing on recent developments, while HICP inflation recorded a sharp increase only in September, the measures of perceived and expected inflation have risen sharply since August. According to the quantitative measures, in October 2007 both perceived and expected inflation stood at levels which were above the actual rate of HICP inflation. However, such comparisons should be made with great caution, given their sensitivity to the assumptions made in quantifying the qualitative data.

### Possible factors behind the rise in consumers' inflation perceptions and expectations

It has been argued that consumers may attach higher importance to the price developments of goods and services that they buy more frequently. According to this view, these items have a stronger impact on consumers' inflation sentiment than would be warranted by the amount of money actually spent on them. One measure of such expenditures is an "out-of-pocket" index, which, at current weights, represents around 40% of the overall euro area HICP.<sup>4</sup> However, "out-of-pocket" expenditures have correlated with inflation perceptions and expectations in a broadly similar way to the overall HICP recently, suggesting that they have little more power than the overall HICP to explain consumer perceptions (see Chart C). A similar conclusion holds for energy prices.

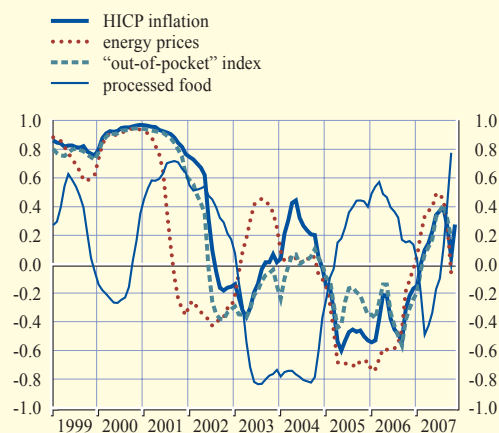
Developments in food prices – and within this, in processed food prices – appear to have had a more direct bearing on consumers' inflation perceptions and expectations recently. Processed food prices have risen sharply in recent months, and these increases have been very closely followed by rises in consumers' inflation sentiment (see Chart D).<sup>5</sup> Historically, food prices

4 Although no data are available on the frequency of purchase or means of payment for the HICP basket, an approximation of price changes of frequently purchased goods and services in the HICP has been compiled by ECB staff based on a judgemental approach and includes non-durable goods and daily consumer services, such as food, beverages, tobacco, non-durable household goods, transport services, oil, postal services, hotels, restaurants, cafés and hairdressing. See also the box entitled "Recent developments in euro area inflation perceptions" in the October 2003 issue of the Monthly Bulletin.

5 See the box entitled "Recent food price developments in world markets and the euro area" in the September 2007 issue of the Monthly Bulletin.

**Chart C Correlation between quantified inflation perceptions and measures of actual inflation**

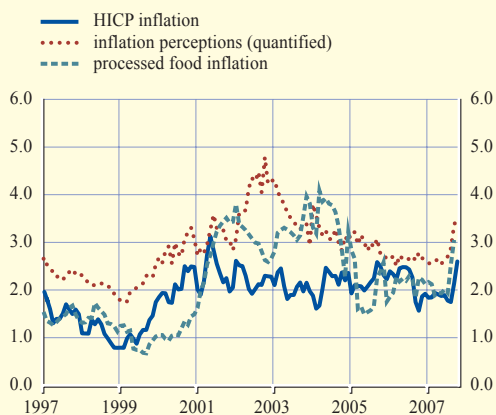
(correlation coefficient over a rolling sample of 24 months)



Sources: European Commission Business and Consumer Surveys, Eurostat and ECB staff calculations.  
 Note: HICP inflation in October 2007 refers to Eurostat's flash estimate.

**Chart D Comparison of inflation perceptions, HICP and processed food inflation**

(annual percentage changes)



Sources: European Commission Business and Consumer Surveys, Eurostat and ECB staff calculations.  
 Note: HICP inflation in October 2007 refers to Eurostat's flash estimate.

have also correlated with inflation perceptions much more strongly than the “out-of-pocket” index and the HICP. The processed food component represents only around 12% of the HICP basket, and increases in this component have not necessarily led to similar increases in inflation perceptions in the past. However, the impact on perceptions might have been magnified at the current juncture by the extensive media coverage of these price increases in some countries.

### Implications

The increase in inflation perceptions and expectations related to food prices can affect the euro area economy through different channels. The increase in food price inflation has been cited as a reason for the fall in consumer confidence in recent months. Indeed, although incoming data on employment have continued to be favourable, consumers' sentiment about their personal financial and economic situation has deteriorated somewhat over recent months, which is reported to be associated with recent and expected food price increases.

From a central bank point of view, it is important to monitor whether the increase in inflation perceptions has the potential to have longer-lasting effects on inflation expectations. Private households' inflation expectations from the Consumer Survey can be cross-checked with other information derived from professional forecasters. On balance, survey-based longer-term inflation expectations remained stable at 2.0% according to the October Euro Zone Barometer and at 1.9% according to the October Consensus Economics. In the latest ECB Survey of Professional Forecasters (SPF), they fell back to 1.9% (see Box 5). These expected rates are broadly consistent with the ECB's definition of price stability. However, break-even inflation rates from inflation-linked bonds and swaps in the euro area have increased since early September, suggesting that inflation expectations or inflation risk premia have risen in financial

markets. Moreover, the probability reported by SPF respondents of inflation five years ahead being above 2% also rose somewhat in the latest SPF.

Looking ahead, food prices – which have been an important driver of consumers' inflation sentiment recently – are likely to continue to rise in the coming months, as suggested for example by the upsurge in price intentions in the manufacturing of food, beverages and tobacco in the latest European Commission Business Survey. At present, however, prices from available futures markets suggest some easing of the upward pressure on global food prices in the course of 2008. This notwithstanding, the currently strongly rising food prices may lead to a further worsening of consumers' inflation sentiment in the coming months, and may pose an upside risk to inflation. Hence, monetary policy-makers need to monitor carefully all the available measures of the public's inflation expectations. It is essential that any spillover of the current rise in inflation rates to inflation expectations be avoided in the longer run.

The rise in food prices relates in part to strong increases in the demand for agricultural products at the global level. The Governing Council of the ECB is of the opinion that, against the background of a marked increase in international food commodity prices, further liberalisation and reforms in the EU agricultural markets would help to enhance their efficiency and benefit European consumers through lower prices. The successful conclusion of the Doha round of world trade negotiations should also help to improve the functioning of global trade in general and of agricultural markets in Europe and worldwide.