

Box 5

RECENT DEVELOPMENTS IN CONSUMERS' AND PROFESSIONALS' INFLATION EXPECTATIONS IN THE EURO AREA

When conducting monetary policy that is oriented towards price stability it is important to monitor inflation expectations as they can affect the wage and price setting process, as well as give an indication of the degree to which the objective of price stability is incorporated in private agents' decisions. While inflation expectations cannot be observed directly, approximate measures can be derived in different ways. One method is to survey a sample of consumers or professional forecasters. In the past three years, euro area annual headline inflation has experienced very wide swings. In an initial upswing, the annual growth rate of HICP, driven mainly by increases in commodity prices, started to rise in September 2007, reaching a peak at slightly above 4% in July 2008. This was followed by a downswing in the annual rate of HICP inflation, led by a fall in commodity prices and accelerated by the effects of the financial crisis. Affected largely by base effects, headline HICP changes entered into negative territory in June 2009, reached a trough in July and regained positive territory in November 2009. This box describes the reactions of consumers' and professionals' inflation expectations to these developments, highlighting the fact that, while they have adjusted substantially their short-term outlook for prices, their long-term inflation expectations have remained stable.

The only measure for consumers' inflation expectations for the euro area is produced by the European Commission. As part of its Consumer Survey, consumers' opinions on inflation developments in the euro area are collected every month. The responses given are of a qualitative nature and aggregate answers are presented as a "balance statistic", which weighs together the frequency of responses in different categories.¹ These measures provide information on the directional change in both consumers' perceptions of inflation developments over the past twelve months and their expectations for inflation developments over the next twelve months. Even if balance statistics give no indication of the magnitude of perceived and expected inflation, it is possible to map the qualitative responses of the Consumer Survey into quantitative estimates of perceived and expected inflation, so that they can be assessed against the background of actual HICP developments. While there are various approaches to performing the mapping – each approach with its own caveats – as an illustration, this box uses a methodology based on the probability approach.²

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 D'Elia, E., "Using the results of qualitative surveys in quantitative analysis", *Working Paper*, No 56, Istituto di Studi e Analisi Economica (ISAE), September 2005. The methodological details of the technique used here can be found in Forsells, M. and Kenny, G., "The rationality of consumers' inflation expectations: survey-based evidence for the euro area", *Working Paper Series*, No 163, ECB, 2002. For a discussion of the caveats in the approach illustrated here see the box entitled "Recent Developments in consumers' inflation perceptions and expectations in the euro area" in the November 2007 issue of the Monthly Bulletin.

Chart A shows that, in recent years, there has been a relatively close relationship between the evolution of the quantified perceptions and expectations of inflation from the Consumer Survey and the developments in the HICP in the euro area. Indeed, the start of the increase in 2007, the peak in mid-2008 and the trough in 2009 in the quantified perceptions and expectations of consumers all coincided with the developments in the HICP during the same period. This shows that these shorter-term surveys are highly dependent on realised data.

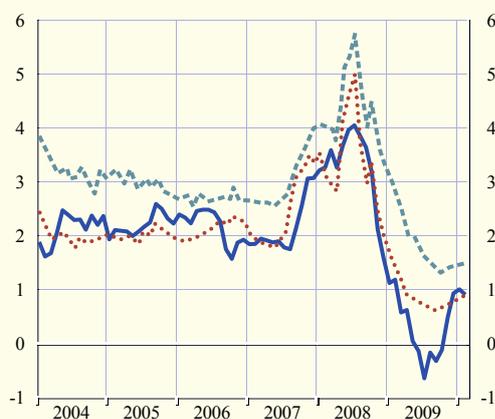
While there are no consumer surveys on long-term expectations for the euro area, these expectations can be derived from surveys of professional forecasters. The inflation expectations of professional forecasters – such as the expectations measured in the ECB’s Survey of Professional Forecasters or by Consensus Economics – show that the longer the time horizon for expectations, the less dependent they are on current and past outcomes. Indeed, the five years ahead and six to ten years ahead inflation expectations, of the ECB’s Survey of Professional Forecasters and Consensus Economics respectively, have maintained a strong resilience during the commodity-driven inflation developments of recent years. In fact, they have consistently remained at or slightly below 2%, which indicates the successful anchoring of long-term inflation expectations in the euro area. They have also not been affected by the movements in short-term inflation forecasts contained in the same survey (see Chart B). This confirms an empirical finding by the Deutsche Bundesbank (2006) that suggests that, in recent years, the link between long-term and short-term inflation expectations has broken down and, contrary to what has been observed in earlier periods, there is no longer any statistically significant relationship between the two measures.³

3 Deutsche Bundesbank (2006), “How informative survey data on private sector inflation expectations are for monetary policymakers”, *Monthly Bulletin*, October, pp. 15-27.

Chart A HICP inflation and consumers’ quantified inflation perceptions and expectations

(annual percentage changes)

- HICP inflation
- inflation expectations (quantified)
- inflation perceptions (quantified)

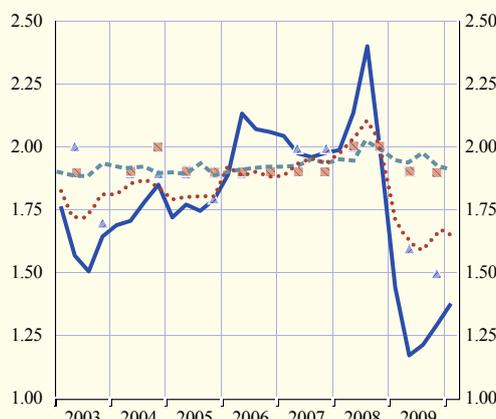


Sources: European Commission Business and Consumer Surveys, Eurostat and ECB staff calculations.

Chart B Short and long-term inflation expectations from professional forecasters

(annual percentage changes)

- SPF one year ahead
- SPF two years ahead
- SPF five years ahead
- ▲ Consensus two years ahead
- Consensus six to ten years ahead



Sources: ECB and Consensus Economics.

Further evidence in support of this is provided by studies analysing the degree to which long-term inflation expectations are anchored, as derived from financial data. There is compelling empirical evidence that market-based inflation expectations for the euro area and other industrialised economies are generally unresponsive to macroeconomic news, a sign that they tend to remain unperturbed when the economic environment changes.⁴ In fact, the stability of long-run inflation expectations can be seen as an important indicator for the credibility of the ECB's monetary policy orientation towards maintaining price stability over the medium term.

The resilience of longer-term inflation expectations in the euro area supports the conjecture that a precise quantitative definition of price stability, which is an important element of the ECB's monetary policy strategy, helps to anchor inflation expectations at levels consistent with the central bank's objective and reduces their sensitivity to past inflation and other macroeconomic news.⁵ This suggests that even if inflation fluctuates, private agents tend to adjust their long-term inflation expectations by very little. Indeed, the very fact that longer-run indicators of inflation expectations have hardly moved in reaction to a high volatility in short-term inflation or inflation forecasts, shows how well medium to longer-term expectations have been anchored by the aim of the ECB's Governing Council to maintain inflation rates at levels close to, but below, 2% in the medium term.

4 Gürkaynak, R., Levin, A. and Swanson, E., "Does inflation targeting anchor long-run inflation expectations? Evidence from long-term bond yields in the US, UK and Sweden", Federal Reserve Bank of San Francisco, *Working Paper*, No 2006-09, 2006. Ehrmann et al., "Convergence and Anchoring of Yield Curves in the Euro Area", *Working Paper Series*, No 817, ECB, 2007.

5 Levin, A.T., Natalucci, F.M. and Piger, J.M., "Explicit inflation objectives and macroeconomic outcomes", *Working Paper Series*, No 383, ECB, 2004. See also Johnson, D., "The effect of inflation targeting on the behaviour of expected inflation: evidence from an 11 country panel", *Journal of Monetary Economics* 49, 2002, pp. 1521-1538.