

Box 3

RECENT DEVELOPMENTS IN LONG-TERM INFLATION EXPECTATIONS

Attention has focused recently on developments in long-term inflation expectation indicators. These are of interest as they may provide insight into economic agents' assessment of longer-term price developments. These opinions may impact on wage and price-setting behaviour. Thus, longer-term inflation expectations inconsistent with the ECB's definition of price stability would be a cause for concern.

This box describes information concerning long-term inflation expectations from a number of different sources. In particular, survey measures of expectations from forecasters of euro area developments (the euro area Survey of Professional Forecasters (SPF), Consensus Economics and the Euro Zone Barometer) are considered alongside developments in the break-even inflation rate extracted from nominal and index-linked bonds.

Chart A presents long-term inflation expectations from different surveys of forecasters as well as the evolution of the ten-year break-even inflation rate for the euro area, which is calculated as the difference between the yields on ten-year nominal and index-linked government bonds.¹ It should be noted that the periods referred to in the various surveys differ, as does the time period

¹ For further information on the break-even inflation rate, see the box entitled "Deriving long-term euro area inflation expectations from index-linked bonds issued by the French Treasury" in the February 2002 issue of the Monthly Bulletin.

Chart A Long-term inflation expectations from surveys of forecasters and the break-even inflation rate

(annual percentage changes)

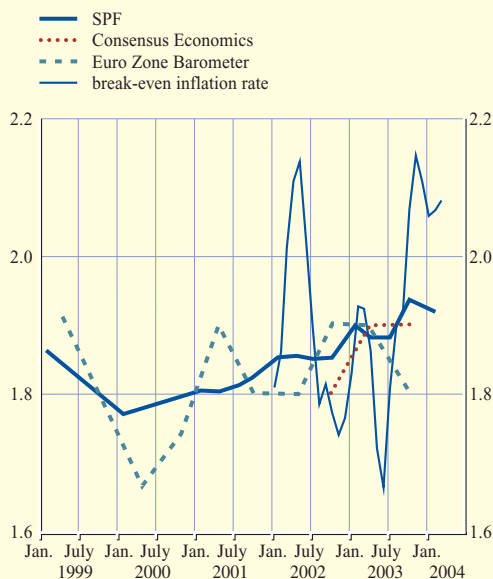
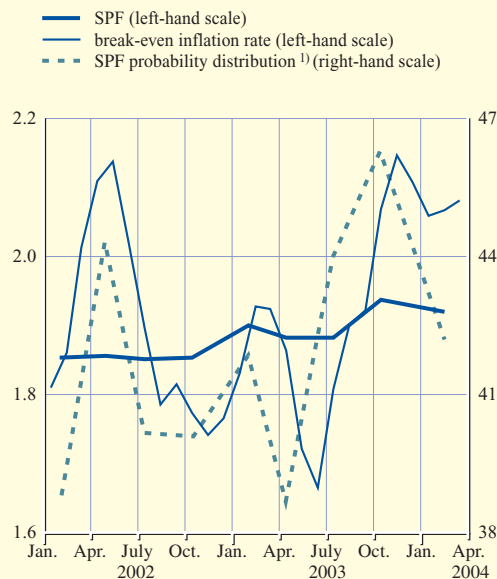


Chart B Long-term inflation expectations from the SPF (forecasts and probability distribution) and the break-even inflation rate

(annual percentage changes, percentages)



Sources: ECB, French Treasury, Consensus Economics and MJEconomics (Euro Zone Barometer).

Note: The SPF refers to expectations five years ahead, Consensus Economics to those six to ten years ahead and the Euro Zone Barometer to those four years ahead, while the break-even inflation rate covers a period of approximately ten years. The latter is calculated as the difference between the yields on ten-year nominal and index-linked government bonds.

1) Probability associated with an inflation outcome five years ahead at 2% or above.

covered by the break-even inflation rate. The SPF refers to expectations five years ahead, Consensus Economics to those six to ten years ahead and the Euro Zone Barometer to those four years ahead, while the break-even inflation rate covers a period of approximately ten years.

Notwithstanding the different time periods referred to in the surveys, survey-based expectations have been broadly similar over the past three years, fluctuating within a relatively narrow band of around 1.8% to 1.9%. The break-even inflation rate has been more volatile. However, it is important to note that the break-even inflation rate may reflect factors other than expected long-term inflation rates.² These factors, some of which may be time-varying, include a positive premium related to inflation uncertainty, a negative premium related to the higher liquidity of the nominal bonds used to calculate the break-even inflation rate, maturity differences, tax issues and technical market factors. In addition, forecasters are usually asked in surveys for their expectations of overall HICP inflation, whereas the break-even inflation rate is linked to the HICP excluding tobacco. However, over longer-term horizons this difference in coverage should have only a limited impact.

In the SPF respondents are asked not just for their specific point forecast of inflation but also for the probability distribution underlying the forecast. This probability distribution is expressed as percentages falling within specific intervals. The probability distribution resulting

² For a detailed discussion of factors other than long-term inflation expectations that may affect the break-even inflation rate, see the box entitled "Recent developments in the market for index-linked bonds in the euro area" in the December 2003 issue of the Monthly Bulletin.

from the aggregation of responses thus helps to assess how, on average, survey participants gauge the risk of the actual outcome being above or below the most likely range. Comparing the probability distribution over time also makes it possible to consider any possible change in the perceived risks or uncertainty.

Chart B presents the point forecast of longer-term inflation as well as the probability associated with a longer-term inflation outcome being 2% or higher. The probability associated with the outcome being at 2% or above was chosen as it represents an outcome inconsistent with the definition of price stability over the medium term. This chart suggests that movements in the ten-year break-even inflation rate may be related to those in the probability of inflation being at 2% or above. For example, in the second quarter of 2003 both the break-even inflation rate and the probability associated by SPF respondents with an outcome at 2% or above declined, although the longer-term point forecast remained broadly unchanged. Similarly, the increase in the break-even inflation rate in the second half of 2003 was paralleled by an increase in the probability associated with an outcome at 2% or above, although the point forecast increased by considerably less. More recently, there has been some decline in the break-even inflation rate as well as in the probability reported by SPF respondents in the first quarter of 2004 associated with an outcome at 2% or above.

One may therefore conclude that recent movements in the break-even inflation rate were more influenced by changes in inflation uncertainty and less by changes in average long-run inflation expectations. This underscores the need to cross-check across a range of indicators when assessing developments in long-term inflation expectations.