

Inflation expectations: Do survey results and interest rates on bonds give the same reading?

The R198 government bond is linked to the consumer price index (CPI) and matures in 2008. The difference between the yield on the conventional R194 government bond, which also matures¹ in 2008, and the real yield on the inflation-linked R198 bond is often used as a proxy for expected inflation. This difference is also referred to as the breakeven inflation rate. In April 2006 the two-year *breakeven inflation rate*, calculated in this way, amounted to 4,7 per cent per annum.

Inflation expectations can also be measured through inflation surveys. In April 2006 the Bureau for Economic Research conducted a survey in which respondents were asked to indicate the average CPI inflation rates which they expected for 2006, 2007 and 2008. Their average responses were 3,9 per cent, 4,5 per cent and 4,5 per cent for the respective years.

Taking into account that the R198 bond matures on 31 March 2008, the expected rate of inflation from the survey over the remaining maturity of the bond was estimated by giving weights of 0,75 to the surveyed average for 2006 (where at the time of the survey three-quarters of the year still lay ahead); 1,00 to the average for 2007; and 0,25 to the average for 2008. This gives an average surveyed expectation of 4,3 per cent per annum – quite close to the breakeven inflation rate.

However, it should be remembered that the breakeven inflation rate established in the bond market is not purely a reflection of expected inflation.

The nominal yield on a conventional bond can be decomposed into a number of elements:

$$\begin{aligned} \text{nominal yield} &= \text{real yield} \\ &+ \text{expected inflation rate} \\ &+ \text{inflation variability risk premium (unexpected inflation risk)} \\ &+ \text{premium (or discount) for other risks}^2 \end{aligned}$$

$$\text{or } y_n = y_r + i_e + i_u + r_o$$

$$\text{It follows that } y_n - y_r = i_e + i_u + r_o$$

The breakeven inflation rate therefore includes, apart from expected inflation, a premium for unexpected inflation risk embedded in the nominal bond yield, as well as a premium or discount for other risks. Since the default risk on both types of government bonds is the same while the liquidity of the nominal bond is higher than that of the index-linked bond, it is likely that r_o is negative.

The small difference between inflation expectations read from the expectations survey and breakeven inflation suggests that i_u and r_o are fairly small or that they largely offset each other.

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¹ The R194 bond actually matures in three equal tranches, in 2007, 2008 and 2009.

² The premium for other risks, r_o , provides for risks such as:

- liquidity risk, the probability that investors will not be able to recover the principal of the bond over a relatively short period without incurring significant costs;
- marketability risk, the probability that the bid/offer spread will widen when selling the bond; and
- default or credit risk, the probability of not receiving the principal at maturity.