

## FOCUS · The bias in market forecasts of interest rate

The European Central Bank (ECB) started lowering interest rates eight years ago<sup>1</sup> and, according to the ECB itself in June, the market does not expect a rise in the benchmark rate (Refi) until 2021. Irrespective of whether our readers believe the Refi rate will remain so low for another five years, below we will analyse why market expectations are wrongly interpreted in so many cases.

The simplest way to calculate the future interest rate expected today by the market is by comparing current interest rates at different maturities. For example, public debt interest rates at 2 and 10 years can provide the implied 8-year interest rate expected within two years. However, the information provided by these implied rates is biased.

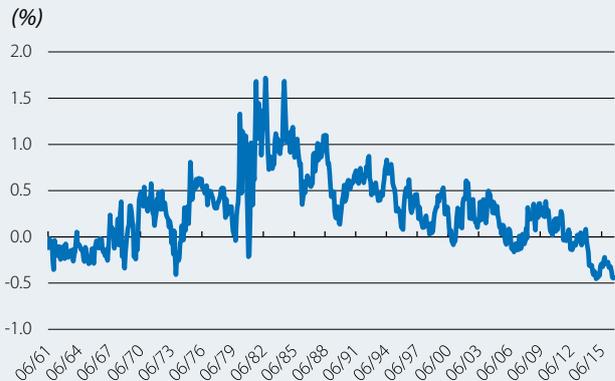
Specifically, the long-term interest rate reflects expectations regarding future rates and also a term premium for the additional risk of committing to a long-term investment (instead of reinvesting continuously with short-term maturities).<sup>2</sup> At present, this term premium is substantially negative in the US (see the first graph); in other words, investors are willing to sacrifice part of the yield they would obtain a priori by reinvesting short-term assets in order to guarantee long-term returns. In addition to indicating a willingness to pay for investing long-term at a fixed rate, a negative term premium also implies that the long-term interest rates observed in the market are a downwardly biased estimate of the market's expectations. As illustrated by the second graph, once adjusted for the term premium, the data show that the market expects significantly higher interest rates. For example, according to the implied curve, in 2020 the 1-year interest rate for a US Treasury bill would be 1.7%. However, when this is adjusted for the term premium, we can see the market actually expects a 2.4% yield.

This bias in estimated implied rates has increased with the implementation of unconventional monetary policies. In particular the large-scale asset purchases carried out by the main central banks of the advanced economies are helping to push down the term premium because they reduce uncertainty regarding future monetary policy and push up demand for long-term public debt.<sup>3</sup> Consequently, while central banks continue to buy up assets on a large scale, the widely used implied rates, which do not adjust for the term premium, will suggest artificially low expected future rates.

In conclusion, although the market is a great processor of data, within the current environment it is particularly important to be careful when interpreting this information.

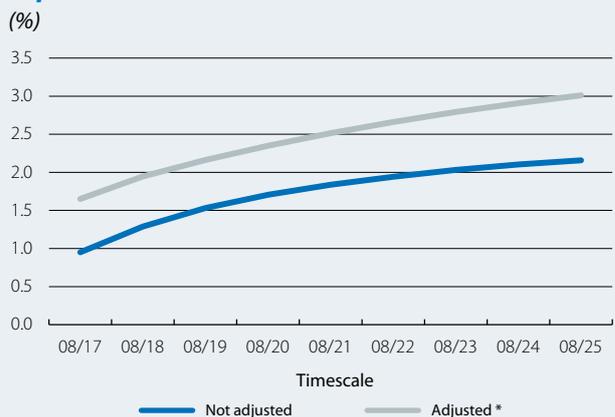
1. Although an attempt was made at normalisation between May and July 2011, this was undone quickly in November the same year.
2. For more information on the term premium, see the Focus «US Treasury term premia: not yet, but likely» in MR12/2014.
3. Other factors responsible are a low perception of risk regarding inflation and strong global demand for safe, liquid assets.

### Term premium for the 1-year interest rate on US Treasury debt \*



Note: \* Estimated according to the method of Adrian, Crump and Moench, 2013, «Pricing the term structure with linear regressions», Journal of Financial Economics, 110.  
Source: CaixaBank Research, based on data from the Federal Reserve.

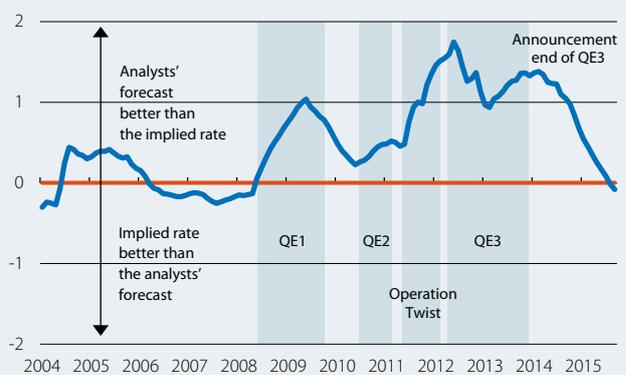
### 1-year US Treasury interest rate: market expectations



Note: \* Forecast having eliminated the term premium.  
Source: CaixaBank Research, based on data from the Federal Reserve.

### Market forecast vs. analysts' forecast: \* Forecast error at 12 months

(Log of the relative error, \*\* moving average of 12 months)



Notes: \* Forecast for 3-month US Treasury bills. \*\* A value higher (lower) than 0 indicates a better (worse) forecast by the analysts compared with the implied rates.  
Source: CaixaBank Research, based on data from Consensus Economics and Bloomberg.