CENTRAL BANKS

Inflation expectations in the euro area, monitoring based on synthetic indicators

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Monitoring inflation using various different indicators over different time horizons is becoming key to evaluating whether the unconventional measures set in train by the ECB are meeting their objective and therefore leading to the re-anchoring of medium-term inflation at levels that are consistent with the ECB's mandate. On the other hand, should this not be the case, such indicators could offer clues as to the monetary policy decisions which the central bank might take in the future.

The setting: worsening medium-term inflation expectations and QE (quantitative easing).

Since the middle of 2014, the ECB has been implementing a toolbox of unconventional measures to cater for different types of eventualities which have threatened the euro area's recovery and therefore the achievement of the monetary authority's objectives. Such eventualities can basically be sorted into three categories[1]: i) tightening of financial conditions; ii) deterioration of monetary policy transmission, and iii) de-anchoring of medium-term inflation expectations.

With regard to the third potential risk, this note seeks to make an all-inclusive assessment of different indicators from which some kind of pointer can be drawn with regard to euro area inflation expectations. Based on such a pointer, we will be able to draw conclusions that will allow us to gauge the risks to achieving the ECB's objective (keeping inflation at slightly under 2%) and therefore the need for the central bank to take new measures or, when the time is right, to consider withdrawing them.

In April 2014, ECB president Mario Draghi said that among the tools at his disposal to combat such a contingency might be implementing a public sector securities purchase programme (QE) of the kind previously put into practice by other central banks such as the Federal Reserve and the Bank of England. At the annual meeting of central banks which took place in August 2014 in Jackson Hole, Mario Draghi explicitly recognised that medium-term inflation expectations had started to de-anchor. Faced with a lack of improvement in this area, at its January monetary policy meeting the ECB announced an ambitious asset purchase programme set at EUR60bn a month, to include both private and public assets (national and supranational). According to the central bank, the programme is to run until at least September 2016, leaving the door open for it to be continued (it is open-ended) should inflation not come back onto the right course. The ECB justified the programme by pointing to the persistence of lower-than-expected inflation, indicating that the monetary policy had lacked sufficient flexibility up to then to tackle the risk of an overly long period of low inflation. Moreover, at its October monetary policy meeting the ECB stated that it will review monetary policy in December, given that inflation's convergence towards the target level has slowed down compared to what was envisaged when the purchase programme was rolled out.

[1] On 24 April 2014, ECB president Mario Draghi clarified the ECB's response role in a speech (view here), pointing out three contingencies which the central bank would have to act against and the type of tools that would be used to deal with each one of them.

Against this backdrop, given that the present securities purchase programme (as well as any potential modification of it) will be directly bound in with the course of inflation, we go on to present a synthetic inflation monitor for the euro area. This monitor will enable evaluation of whether inflation is moving back to levels consistent with the ECB mandate and consequently to anticipate the future steps and measures which the central bank might take.

The indicators: composite synthetic indicators to monitor inflation

In this note, we evaluate euro area inflation expectations by constructing three inflation indicators over different time horizons: short-term, medium-term and long-term, including elements ranging from “real” indices such as headline and core inflation or the GDP deflator to expectations over different time horizons (2, 5 and 10 years from alternative sources and surveys and priced in by the markets)[2]. All of these indicators can summarise the inflation expectations that are so influential in monetary policy decisions.

As our indicators consistently show, implementation of QE has achieved its objective of halting the deterioration that had been setting in without let-up since the end of 2012.

Thus, since the asset purchase programme was activated, all the indicators have begun to converge on their historical mean and moved off the lows that were reached early on in the year. Nonetheless, this recovery eased up in August and September, due to the fact that euro area inflation expectations have deteriorated, in particular on the back of the oil price fall. However, the deterioration in these indicators stabilised in October. The long-term indicator, which is a key anchor variable for the ECB, has taken a moderate turn for the worse in the past three months, mainly due to the deterioration of inflation expectations that have been priced in by the market, and gauges such as the 5y5y inflation swap, which have been especially volatile in the past three months, being tied to commodity prices. On the other hand, short- and medium-term indicators have converged on their mean more rapidly, and have deteriorated less than their long-term counterpart. In this context, the ECB’s concern is understandable, given that the improvement of indicators has slowed down, above all the long-term expectations indicator.

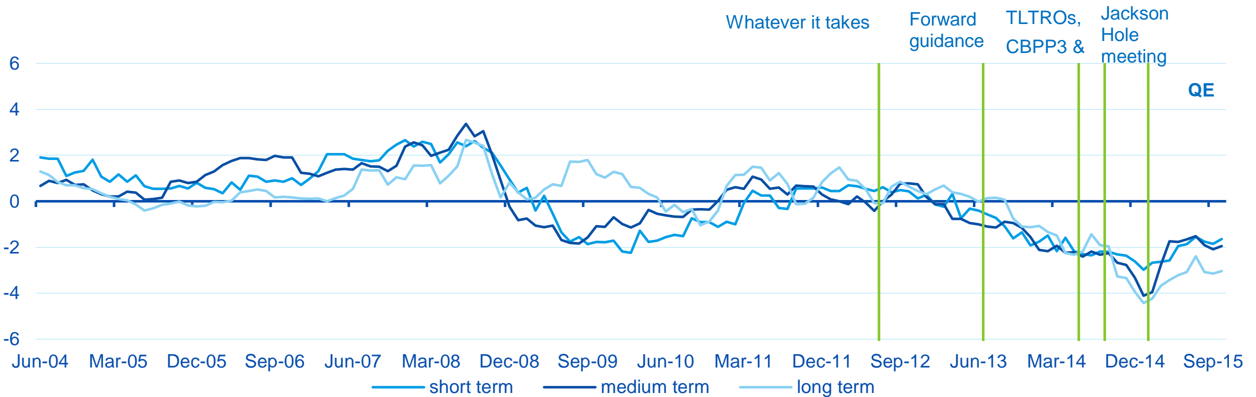
Should the deterioration of global growth expectations continue (and remain a drag on commodity price movements) and therefore these indicators again potentially go beyond two or three deviations below their mean, this could complicate achieving the ECB’s target. We therefore think that from now on monitoring these variables will be key to anticipating any developments in monetary policy and evaluating the likelihood of an extension of QE.

2 A composite synthetic indicator has been constructed that encompasses short, medium and long-term indicators.

Figure 1
Composite synthetic indicator to monitor inflation
Standard deviations from the mean

Source: Bloomberg and BBVA Research

Figure 2
Synthetic indicators to monitor inflation
Standard deviations from the mean



Source: Bloomberg and BBVA Research

Annex: construction of the indicators

These indicators are constructed using principal component analysis, a statistical method which analyses the factors responsible for the co-movement of several variables. We assume that there is a principal factor influencing co-movement of this kind, and an index is created by extracting this factor (the first principal component).

To combine these different variables in each sub-index, a Z-score is calculated for each one and then the first principal component of these Z-scores (data from June 2004 for all the variables).

Variables included in the short-term indicator:

- Headline inflation (monthly data)
- Core inflation (monthly data)
- The GDP deflator (quarterly data)

In the medium-term indicator:

- The ECB's inflation forecasts two years out (quarterly data)
- The two-year inflation swap (monthly daily data average)
- Inflation two years ahead, published by the *Survey of Professional Forecasters* (quarterly)

In the long-term indicator:

- The five-year inflation swap (monthly daily data average)
- The long-term inflation swap published by the *Survey of Professional Forecasters* (quarterly)
- The 5y5y forward inflation swap (monthly daily data average)

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