CENTRAL BANKS

Transmission of monetary policy in the euro zone, monitoring via a synthetic indicator

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The transmission of monetary policy is a key element which the ECB monitors in order to assess how the monetary policies it has set in motion are being transferred to the real economy. The smooth functioning of this mechanism is a necessary condition for achieving the ECB's ultimate objective of price stability.

The framework: an impaired monetary policy transmission mechanism

The financial recession brought with it a considerable deterioration in the monetary policy transmission mechanism. The ECB has decided to tackle the challenge posed by its repair, setting in motion a series of measures, as it has done to address other kinds of contingencies[1] – as explained in two previous notes (see[2]) – that jeopardised achievement of the monetary authority's objective. This note focuses on the impairment of the transmission of monetary policy as a consequence of, *inter alia*, financial fragmentation in the region.

For the ECB, unlike other central banks, this has been a very particular contingency that it has had to contend with in the past few years. On top of the international recession came the sovereign debt crisis, which also fed back into banking risk and had a serious impact on the euro zone as a whole, although its adverse effects varied considerably in line with the significant dissimilarities among member states. In particular, the sovereign debt crisis in the euro zone led to increased financial fragmentation in the region, highlighting great disparities among financial markets depending on their geographical location. At times of peak tension in the sovereign debt crisis, the very viability of the euro came into question, leading to fears of a break-up which in turn fuelled capital flight from peripheral to core euro zone countries. As a result, financing terms for issuers of debt, whether public such as national treasuries or private such as banks and corporates, deteriorated considerably and unevenly across the region. This geographical disparity was amplified by feedback from the vicious circle of sovereign and banking risk. In this environment, banks from peripheral countries faced serious difficulties in funding themselves in the markets, both wholesale and retail, whereas the core countries were able to issue bank debt with attractive yields while at the same time taking in deposits from peripheral countries. The high degree of divergence among bank financing conditions was reflected in the growing disparity among interest rates charged by euro zone financial institutions for retail lending. Specifically, banks' funding costs remained persistently high in some countries in spite of the ECB's rate cuts, which in turn translated into comparatively adverse financing conditions for households and businesses in these countries. In short, segmented or fragmented markets which impeded the normal transmission of monetary policy and therefore attainment of the ECB's objective. In order to address this

[1] ECB president Mario Draghi, in a speech on 24 April 2014 (see), explained the ECB's reactive function, pointing to three contingencies that would warrant a reaction from the ECB and the kinds of tools that would be used to address each of these contingencies.

[2] Inflation expectations in the euro zone, monitoring based on synthetic indicators (see) and financial conditions in the euro zone, monitoring based on a synthetic indicator (see).

extreme situation, in the summer of 2012 the launch of the banking union[3] was approved, paving the way for the ECB to adopt the Outright Monetary Transactions (OMT) programme to buy up sovereign debt, thus eliminating the risk of a euro break-up.

An indicator has therefore been constructed from a number of different variables in order to assess how the monetary policy transmission mechanism is working in the euro zone. This indicator will enable us to draw conclusions as to the need or otherwise for the ECB to take additional measures or to consider withdrawing them when the time comes, allowing us to anticipate shifts in direction of monetary policy.

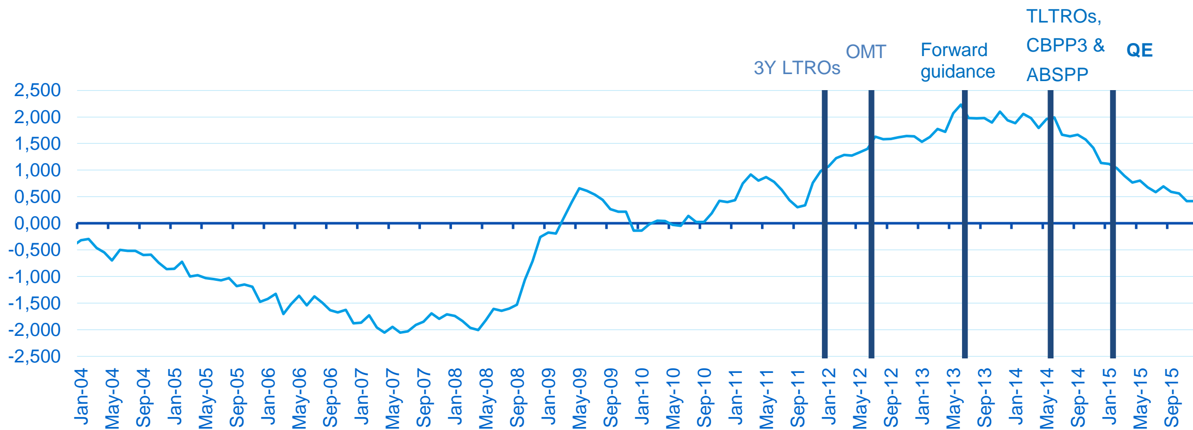
The indicator: synthetic indicator for the transmission of monetary policy

Over the course of the financial crisis, monetary policy has played, and continues to play, a fundamental role, pursuing among other objectives the repair of the monetary policy transmission mechanism, which as previously remarked has been impaired, largely by the growing fragmentation of the financial markets. In doing so, the ECB has resorted to a number of non-conventional measures in addition to standard monetary policy. Since the onset of the crisis, and in particular with the role of lender of last resort via (i) injections of liquidity at 3 years (long-term refinancing operations or LTROs) to redirect lending towards segments in which financial intermediation was no longer working and, in particular, with (ii) the announcement of OMTs, the ECB has managed to improve the transmission of its monetary policy by eliminating the risk of a euro break-up and thus, to a certain extent, financial fragmentation in the region. Following the announcement of this programme in mid-2012, fragmentation in the financial markets reduced significantly; however, considerable disparities persisted among interest rates charged by different lenders, indicating that in spite of these improvements, transmission of monetary policy to the markets most affected by the crisis was still very limited.

Therefore, in an attempt to continue improving the transmission mechanism, in mid-2014 the ECB implemented a number of additional measures (i) TLTRO (targeted longer-term refinancing operations) and (ii) the ABS (asset-backed securities) buying and third covered bond purchase programmes. Thanks to these measures, interest rates on credit transactions fell substantially in the peripheral EU countries, converging with those of the core economies. These countries' banks have also regained access to financing in the wholesale markets on similar terms to those prevailing before the debt crisis. The indicator constructed (Graph 1) shows that the monetary policy transmission mechanism, which had virtually disintegrated following the debt crisis, has improved significantly in the past year and a half, although it cannot be said to have been repaired completely.

[3] BBVA Research. 14/32 Working Document. A banking union for Europe: making a virtue of necessity (see)

Graph 1
Synthetic indicator for monitoring the transmission of monetary policy*.
Standard deviations from the mean



Values above zero: deterioration of the monetary policy transmission mechanism
Source: Bloomberg and BBVA Research

Appendix: Construction of the indicator

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

To combine these different variables, we calculate the z-score of each, and then the first principal component of these z-scores (data since January 2004 for all variables).

Variables included in the indicator:

- Euro zone interest rates for transactions of between 1 and 5 years for amounts under €1 million relative to the ECB main refinancing rate (monthly data).
- Coefficient of variation of interest rates in Germany, France, Spain and Italy for transactions of between 1 and 5 years for amounts under €1 million (monthly data).

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