CENTRAL BANKS

Monitoring ECB balance sheet expansion

Financial Scenarios / Europe Unit

- The asset purchase programme (both public and private) is going according to the monthly target set of EUR60bn and is clearly biased in favour of buying public sector bonds (78%).
- The initial impact on the financial markets has been larger than expected, not just along the yield curves for bonds and on the exchange rate, but also in terms of its global effects.
- The forcefulness with which the programme was launched, as well as the resolute commitment which the ECB has subsequently reiterated, are key to achieving the desired effects. The recent tightening of financial conditions, via both interest rate rises and the euro's appreciation, is a pointer to how premature and risky it would be to change this message in any way.

ECB monetary expansion measures

a) Asset purchase programme: The asset purchase programme (both public and private) is running according to the target set of EUR60bn a month

In January the ECB announced an ambitious plan of buying up assets to the value of EUR60bn a month, which includes both public and private assets, which will run at least until September 2016 and, at any event, until inflation returns to a suitable path.

The programme is to serve as support for other previous programmes (TLTROs and purchases of private assets, namely asset-backed securities and covered bonds) which have proved insufficient in achieving a substantial expansion of the balance sheet.

In the first two months of the programme (March and April), the ECB bought EUR95.1bn in public sector bonds as part of its Public Sector Purchase Programme (PSPP), EUR24bn under its Covered Bond Purchase Programme (CBPP3) and EUR2.3bn via its Asset-Backed Securities Purchase Programme (ABSPP), thus taking it up to its stated monthly goal of EUR60bn. The ECB is therefore on the way to obtaining its desired balance sheet expansion of some EUR1.1trn by September 2016.

a.1) Public sector purchase programme

The ECB bought bonds issued by supra-national organisations and agencies to the value of EUR11.4bn, which represents 12% of overall bond purchases and means that the ECB has hit the ceiling established for the initial conditions of the programme.

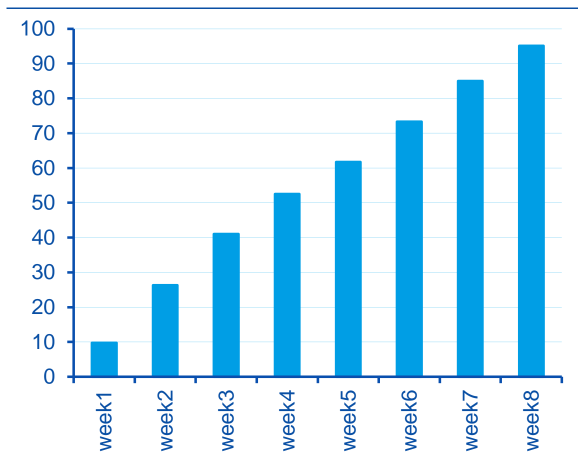
With respect to sovereign bonds, in the first two months EUR83.6bn has been acquired (EUR41.6bn in March and EUR42bn in April) with a country breakdown practically in line with the ECB's capital key and featuring a slight adjustment because of the non-purchase of bonds from Greece, Cyprus and Estonia[1].

1: No Greek bonds have been purchased so as not to exceed the limits imposed by the ECB (which can only buy bonds up to 25% of any issue and up to 33% of the debt securities of any single issuer). In the case of Cyprus, no bonds have been acquired because the fifth review of the bailout programme has still not been finalised and, as regards Estonia, they have not been bought because Estonia does not have any bonds in circulation.

Specifically, the purchases that would ordinarily "fall" to these countries have been divided up among all of the other countries except for Lithuania, Latvia and Malta.

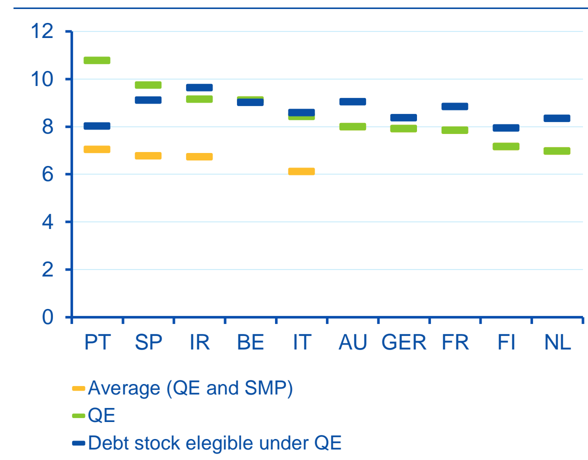
As regards the maturity of the debt securities acquired in the first two months, the average maturity of the purchases was 8.25 years, which is slightly below the average for eurozone bonds that are eligible under QE (9.1 years). By country, the most notably long maturities in the sovereign bond purchasing was among the countries on the periphery, such as Portugal (10.7 years) and Spain (9.73 years) where these were higher values when compared with the maturities on their eligible debt (9.1 years for Spain and 8 years for Portugal). This pattern is partly due to the limitations within the PSPP itself, since, for the peripheral countries, the ECB has bonds that were bought under a previous asset purchase programme (SMP, or Securities Markets Programme) which have far shorter maturities (2-3 years) and thus the purchasing now has been biased towards the longer terms.

Figure 1
PSPP: weekly bond purchases, accumulated since March 9 2015 (EUR bn)



Source: ECB and BBVA Research

Figure 2
PSPP: average maturity of purchased bonds vs. maturity of eligible debt (years)



Source: ECB and BBVA Research

a.2) Private sector asset purchase programme

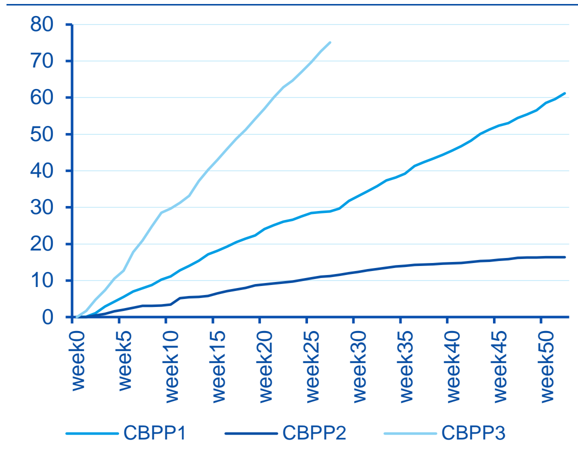
The private sector asset purchase programme, which embraces covered bonds (CBPP3) and asset-backed securities (ABSPP), was begun in October and November 2014 for the two elements respectively and is intended to last for at least two years[2]. From the outset, expectations with respect to the amount of purchasing under both programmes were on the low side, basically because of the limitations that existed in terms of supply. Since the beginning of the financial crisis issues by financial institutions had fallen off substantially, which was particularly true in the case of ABSs, which virtually ceased to exist. Only a few months afterwards, after these low expectations had been confirmed, the ECB found itself forced to extend the programme to public sector bonds.

The ECB is buying up EUR13bn in securities a month, mainly via CBPP3 (over 90%). In April purchases under CBPP3 amounted to EUR11.5bn, whereas those under ABSPP came to EUR1.2bn. So far under this programme, purchases have amounted to EUR75.1bn in covered bonds and EUR5.8bn in asset-backed

2: The ECB had previously carried out two lower-impact covered bond purchase programmes, namely CBPP and CBPP2, which ran for roughly one year and finalised when the sums of EUR60bn and EUR16.4bn respectively had been reached.

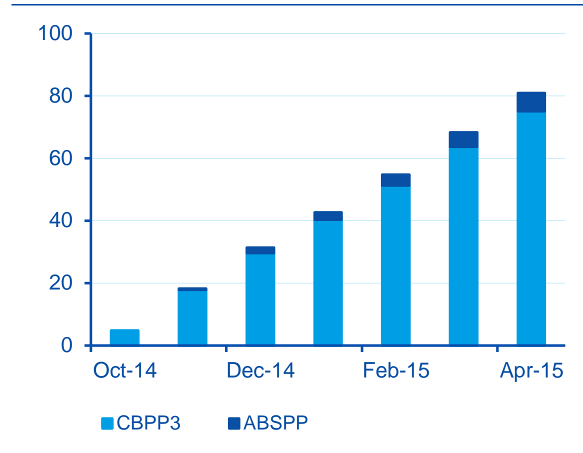
securities. According to the way these programmes (ABSPP[3] and CBPP3) are designed, the ECB can carry out its buying in both the primary and the secondary markets. Under CBPP3, purchases have mainly been made in the secondary market (81%).

Figure 3
CBPPs
Weekly accumulated purchases (EUR bn)



Source: ECB and BBVA Research

Figure 4
CBPP3 and ABSPP
Weekly accumulated purchases (EUR bn)



Source: ECB and BBVA Research

b) Targeted longer-term refinancing operations (TLTROs, aimed at lending)

Within the package of monetary expansion measures which the ECB has set in train over the last year can be found the (eight) liquidity-providing operations with a four-year maturity (TLTROs), which are conditional upon developments in lending to the private sector (excluding mortgage loans for housing). The ECB's initial expectations in relation to the demand for liquidity by the banking system were pitched very high, at up to a cumulative amount of EUR1trn in the eight quarterly auctions scheduled between September 2014 and June 2016. The overall demand for liquidity in the first two auctions, however (EUR212bn, compared to a cap of EUR400bn)[4], was lower than expected and was also unequally spread among jurisdictions, being very much loaded towards the periphery. This is why the ECB lowered its expectations with respect to the capacity of this measure to expand the balance sheet and, as a result, first launched the private sector asset purchase programme and then extended this to public sector assets.

In the third TLTRO[5], staged on 19 March, the take-up was EUR97.8bn, which represents 33% of the full amount available, according to our estimates. This amount is substantially higher than analysts were predicting (EUR40bn on average). There is still no official information on the take-up by country but, according to our sources, estimates are that between the Spanish and the Italian financial systems (Italian institutions are likely to have bid for around EUR35bn), they probably took up around 75% of overall funds from this third auction. Monitoring these auctions is important as a potential sign of a revival of lending into the real economy.

3: The ECB has not provided a breakdown of purchases in the primary and secondary markets for the ABS programme. Nonetheless, given that the European ABS markets closed in October 2008 and have only recently been reopened, the bulk of the ABS purchases under this programme would have been performed in the secondary market.
4: It should be recalled that the take-up in the first two TLTROs was subject to the provision of new lending for the private sector (businesses and families, but residential mortgages are excluded) with an initial allowance equal to 7% of the stock of such outstanding loans. In the first two auctions only 54% (EUR 212.4bn) of the maximum available was taken up (EUR400bn). In the next TLTROs (there are five left), institutions can obtain additional amounts depending on the lending performance from May 2014 to the reference date for the operation vs. the lending in the time between May 2013 and April 2014 (benchmark). In these operations, institutions will be able to bid for up to three times the difference for these.
5: In this auction the prevailing rate for MROs was used, with no additional spread as, in its January meeting, the ECB reduced the interest rate for the six TLTROs that were still outstanding, which implied removing the 10bp spread relative to the MRO rate applied in the first two TLTROs.

Table 1
Monetary expansion measures (EUR bn)

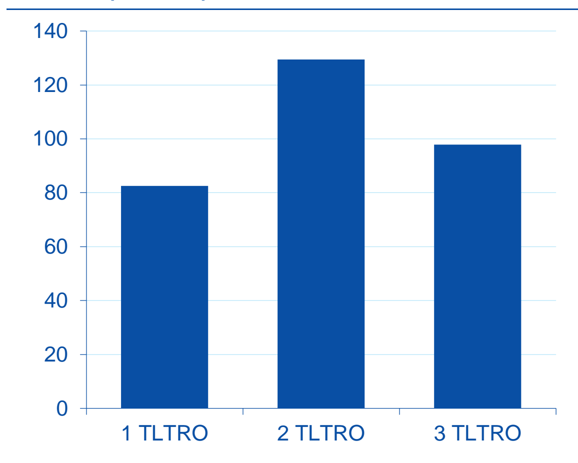
	Sep14	Oct14	Nov14	Dec14	Jan15	Feb15	Mar15	Apr15
TLTRO	82.6			130.0			97.8	
CBPP3		4.8	13.0	11.8	10.6	11.0	12.4	11.5
ABSPP		0.0	0.4	1.0	0.6	1.1	1.2	1.2
PSPP							47.4	47.7

Source: ECB and BBVA Research

c) The Eurosystem's regular open market operations

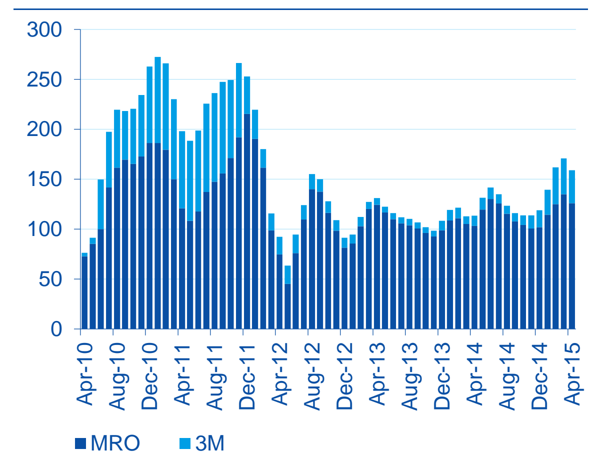
So far this year, the liquidity allotted in the weekly (main refinancing operations, MROs) and monthly auctions (3M LTROs) has on average been marginally above EUR150bn (compared with an average of EUR120bn in 2014). This rise relative to 2014 is mainly because the LTROs with a three-year maturity fell due in January and February, and the institutions have replaced part of the liquidity involved in these operations via these regular operations.

Figure 5
TLTROs (EUR bn)



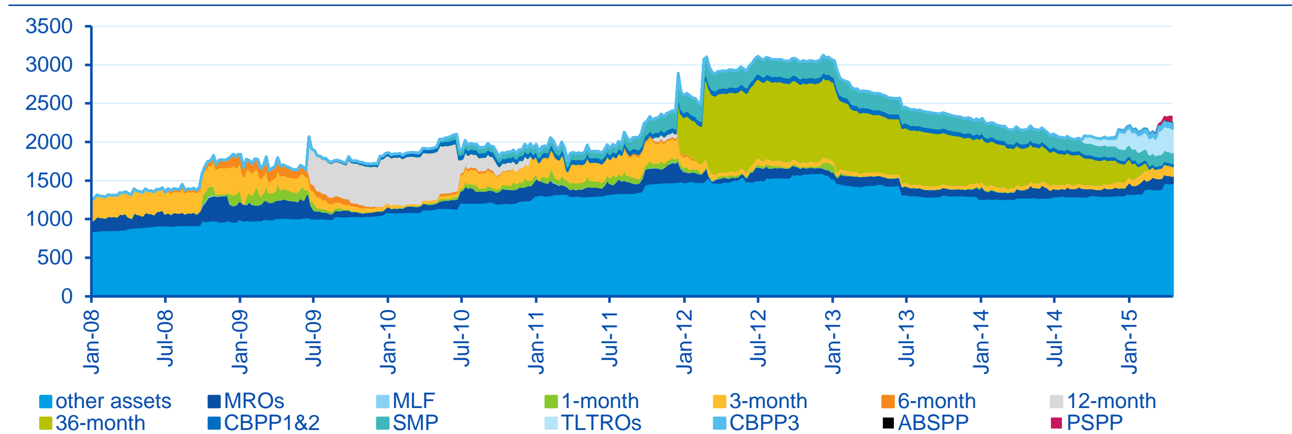
Source: ECB and BBVA Research

Figure 6
3M LTRO and MRO (3 month moving average, EUR bn)



Source: Bloomberg and BBVA Research

Figure 7
ECB balance (EUR bn)



Source: ECB, Bloomberg and BBVA Research

Impact on assets

a) Impact on sovereign debt interest rates

These ultra-expansive monetary policy measures have given rise to an unusual situation as a result of having been taken in an environment in which interest rates were already very low: the appearance of negative interest rates and the extension of these into different market segments, ranging from the money market to the sovereign debt curve, as well as other geographical areas. To be precise, nearly one third of European debt has at some time shown negative rates.

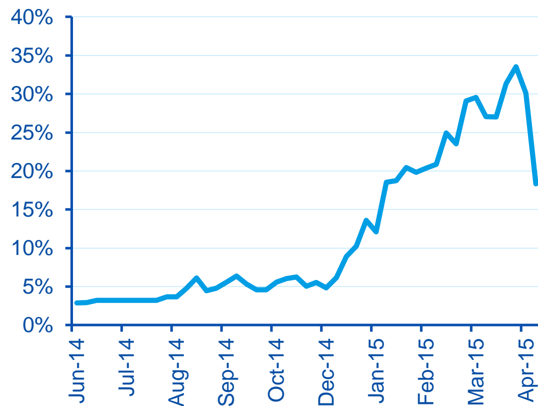
After the start of the ECB buying programme, and although expectations over the programme had already led to a fall in interest rates, the downward pressure on rates continued to a considerable extent, both as regards different countries and different maturities along the curve. The ECB purchase programme has, as was only to be expected, encouraged greater risk-taking and a lengthening of the time horizon of investor portfolios. Thus, interest rates came down more heavily at the long end of the yield curve and curve slopes (2-10 years) flattened out significantly. The design of the ECB bond purchase programme has also worked in favour of this flattening trend, as it involves buying bonds with maturities of up to 30 years.

Less predictable was the sharp fall in the interest rates of debt in core countries, such as Germany, after the programme had started. One of the factors which help to explain this phenomenon is the shortage of supply relative to growing demand for these securities (the scarce ones) from certain investors to satisfy regulatory requirements (institutional investors and, increasingly, banks). Over the last week, however, there has been a very aggressive upsurge in interest rates across all countries (rather larger on the periphery), particularly at the long end of the curve. After this sudden shift, long-term interest rates are actually now above levels prior to the programme's announcement, further reversing the fall in the last three months. As a result, the percentage of European debt securities priced in the market at levels reflecting negative rates has come down substantially, and currently stands under 20%.

There has also been an equally surprising indirect effect of the ECB programme in international markets. The initial reduction of European interest rates has pulled down interest rates in other jurisdictions, including the United States, where 10-year rates stayed anchored under 2%. Moreover, since the beginning of the

year, several Nordic countries have implemented various monetary loosening policies and certain emerging economies (with latitude to make monetary conditions more accommodative) have cut interest rates.

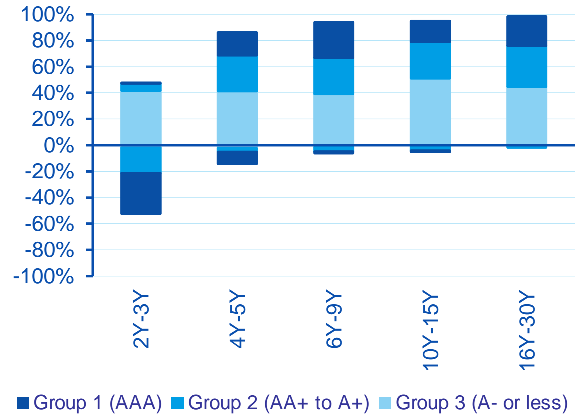
Figure 8
Percentage of sovereign debt* (eurozone) with negative yield over total debt



*Eligible under PSPP

Source: Bloomberg and BBVA Research

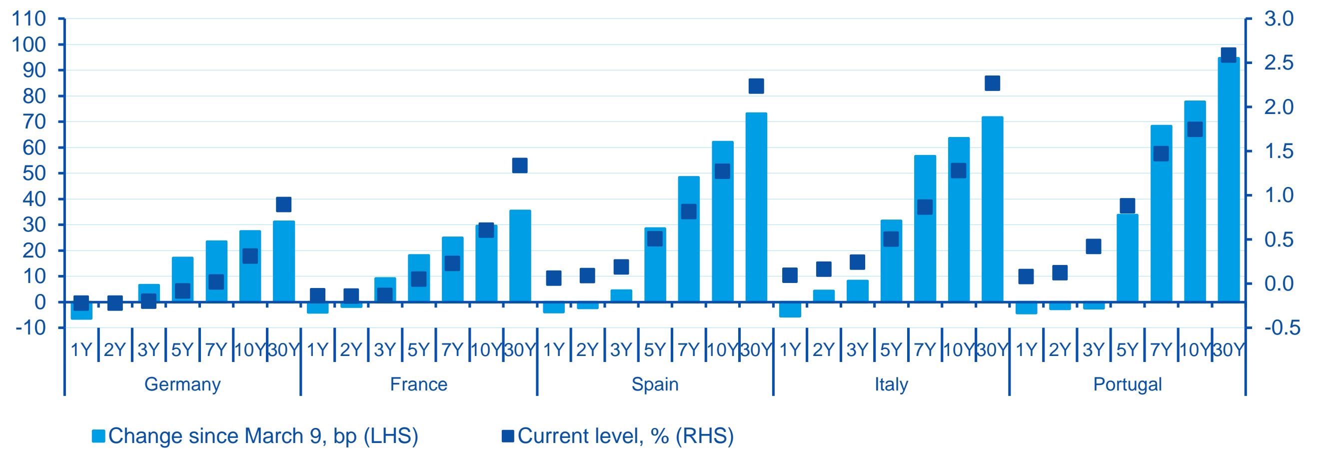
Figure 9
Percentage of sovereign debt* (eurozone) with positive/negative yields, by country rating



* Eligible under PSPP

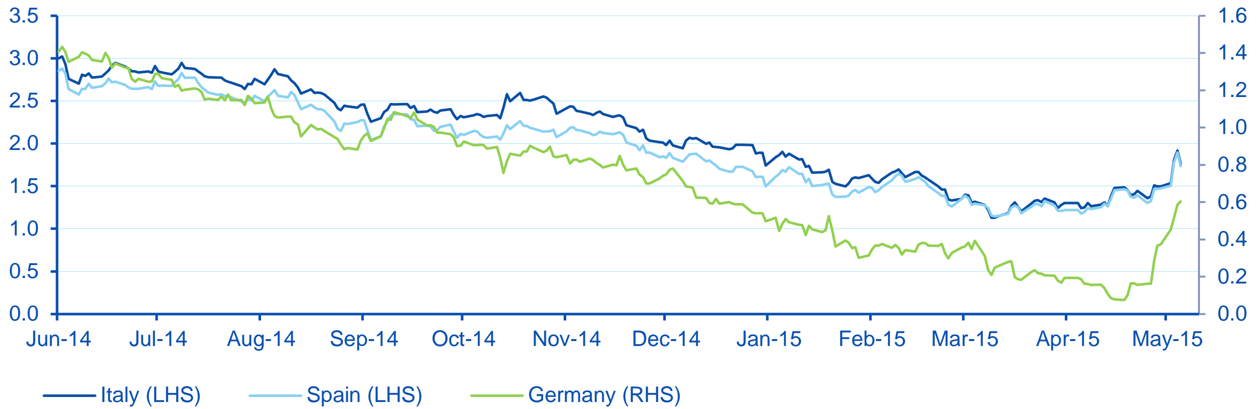
Source: Bloomberg and BBVA Research

Figure 10
Eurozone: sovereign bond curves: Actual level (%) and change since QE's start



Source: Bloomberg and BBVA Research

Figure 11
10Y bond yields (%)

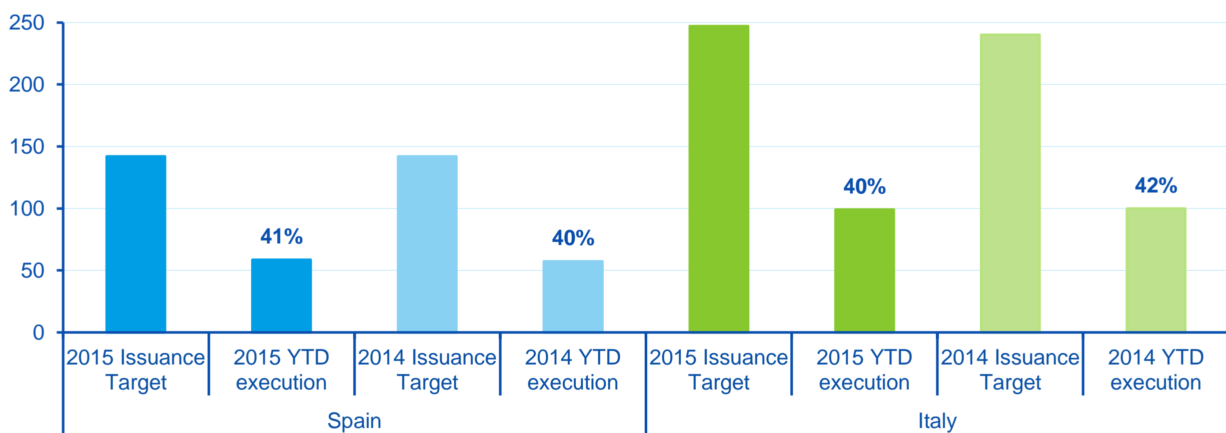


Source: Bloomberg and BBVA Research

Sovereign bond issuance: the countries on the periphery are issuing at a high tempo

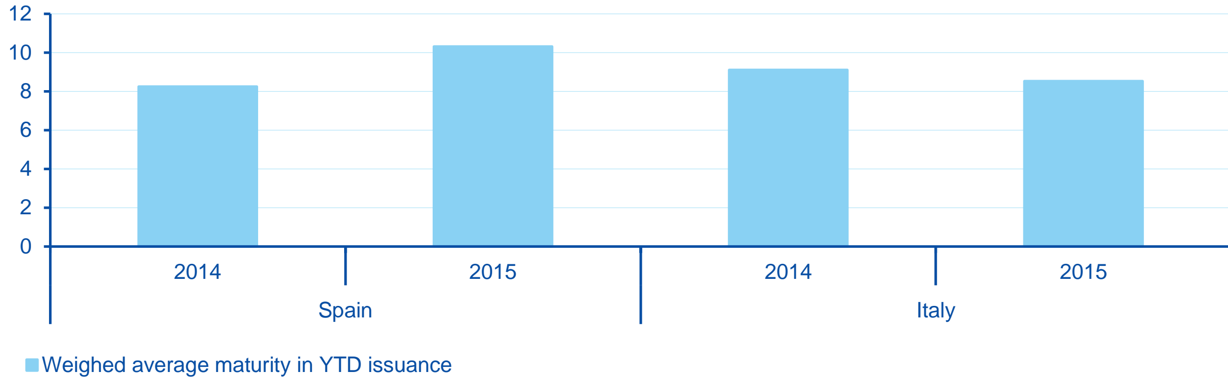
In aggregate terms, the sovereign bond purchase programme does not seem to have significantly altered acceleration of the implementation of financing activity among the member states in the eurozone. Year to date, governments have carried out medium- and long-term gross bond issues totalling EUR305bn, which represents 33% of total gross bond issues planned for 2015, compared to 40-45% for the same period the previous year. It has, however, allowed the countries on the periphery to keep up a high level of issuance, in line with the level last year (which was greatly boosted by the sharply downward path of risk premiums in all of the periphery countries). In the case of Spain and Italy (figure 8), issuance as of April represent 40% of the overall gross issuance target over the year (EUR142bn in Spain and EUR247bn in Italy). What is more, in Spain there has been a lengthening of the maturity on new issues, meaning that the average weighted maturity for gross bond issues carried out this year is over 10 years, compared with an average last year of eight years. In the case of Italy the average life of bonds issued this year is slightly shorter than it was in 2014 (8.5 years vs. 9 years).

Figure 12
Spain and Italy: Gross sovereign bond issuance until April (EUR bn and % of the year gross issuance target)



Source: National treasuries and BBVA Research

Figure 13
Spain and Italy: Average maturity of new issuances



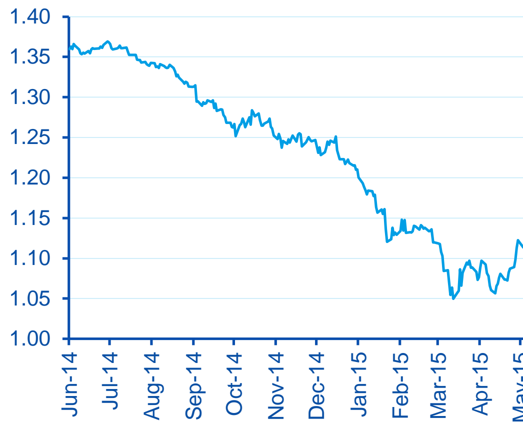
Source: National treasuries and BBVA Research

b) Impact on the exchange rate

Although every new statement on monetary measures has triggered a debate on its immediate impact on inflation (i.e. the purchasing power of currencies), there is no doubt that the successive QE programmes of the Fed and now the ECB have had a direct effect on the value of their respective currencies relative to others. It should be noted that no QE has been intended to depreciate that country's currency (which would be contrary to the terms of international accords). This is why QE has generally referred to the buying up of domestic rather than foreign financial assets (purchasing the latter would involve building up international reserves). Yet, as may be seen from figure 15, the correlation between the EURUSD and the relative scale of the balance sheets at central banks (Fed vs. the ECB) is very significant and one which remains even after controlling for other important variables (real and financial).

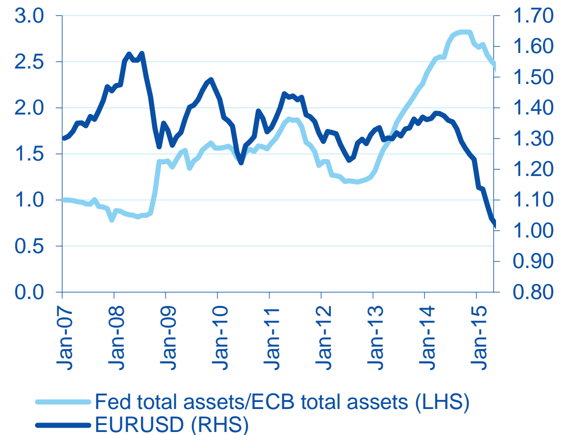
Thus, as a result of a mix of growing expectations of QE by the ECB and potential Fed rate hikes, the EUR went into a slide in the second half of 2014, falling below 1.30 (the level we hold to represent long-term equilibrium) in the final quarter of the year, and following on this downward course until it bottomed out at 1.05 in March 2015. That said, the scale on which the EUR continued to depreciate after the announcement of the purchase programme certainly represented a surprise which surpassed any similar situation before it: whereas the powerful QE by the Fed had been associated with a fall for the USD which took it past USD1.40 to the EUR (in other words an appreciation for the EUR of around 10% above the equilibrium level), the expectations and statements in relation to the balance sheets of both the Fed and the ECB now seem to be putting pressure on the exchange rate to move towards parity (a depreciation for the EUR of almost 30% below equilibrium!). In the current scenario of monetary policy divergence, where the Fed is making a return to conventional policies and the ECB is pursuing QE, the debate over the magnitude, volatility and duration of the depreciation of the EUR is very much open. Having touched 1.05 in March, in the last few weeks the EUR has flipped up to 1.12, following the mixed bag of negative (positive) surprises for the US economy (eurozone), narrowing of the rate spread (on account of the sharp rise in European rates in the last week) and the delayed expectations regarding the start of the Fed rate hikes. Despite this recent movement, there is still room for the EUR to weaken further, once the timing of the expected Fed rate rise is clarified (September, according to our central scenario).

Figure 14
EURUSD



Source: Bloomberg and BBVA Research

Figure 15
EURUSD and monetary policy (Fed/ECB)



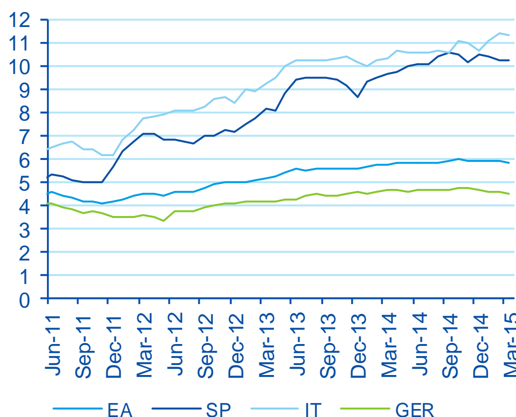
Source: Bloomberg and BBVA Research

Holdings of sovereign bonds by financial institutions

Among the most prominent holders of sovereign bonds in the eurozone are the financial institutions, and there is significant home bias as regards the percentage of own-country sovereign debt held. To be precise, the exposure of peripheral financial institutions to sovereign debt has risen considerably in the last three years. The behavioural pattern of accumulating home-country sovereign bonds has been particularly prevalent among the institutions of periphery countries. When the debt crisis took a turn for the worse in late 2011, and the ECB had to bring in three-year LTROs, the financial institutions with liquidity of that type, in particular those in Spain and Italy, built up substantial quantities of home-country debt.

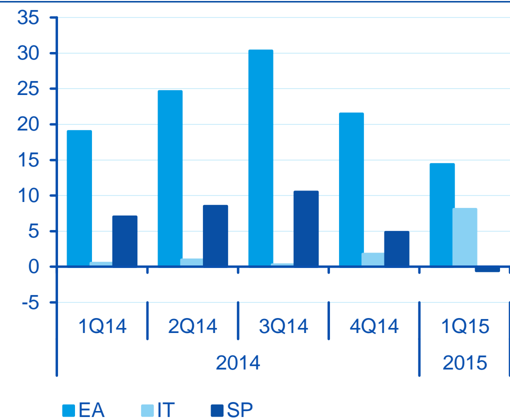
According to the data published by the ECB on holdings of eurozone sovereign bonds by financial institutions in March (the ECB already bought sovereign bonds that month), the institutions are not off-loading sovereign bonds to any substantial extent. For the eurozone as a whole, the financial institutions cut their sovereign bond books by EUR8.1bn, headed up by France, Belgium and Italy, while in Spain bond-holdings have climbed by EUR3.9bn.

Figure 16
Holdings of sovereign bonds by financial institutions over total banking assets (%)



Source: ECB and BBVA Research

Figure 17
Holdings of sovereign bonds by financial institution (quarterly average, EUR bn)



Source: ECB and BBVA Research

Are the ECB measures working?

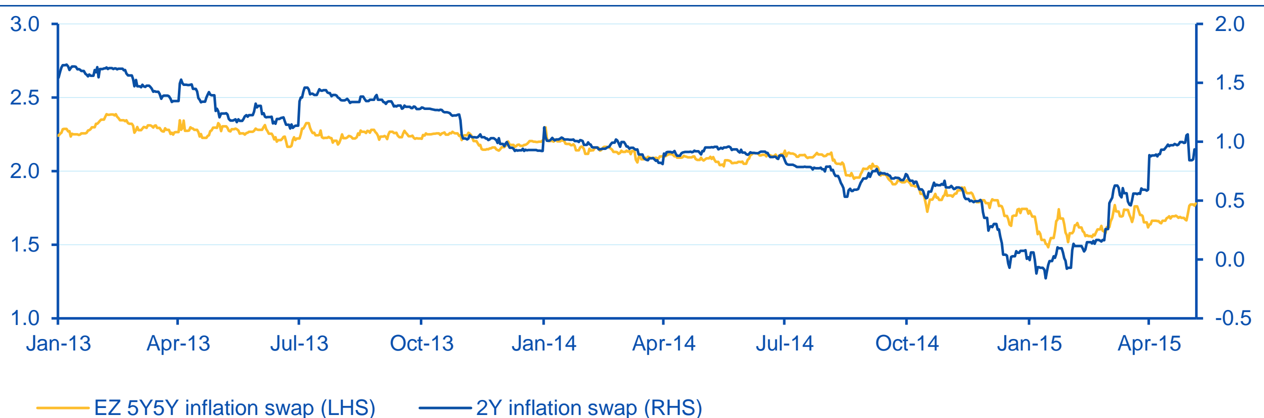
The ultimate aim of the ECB's unconventional measures (TLTROs and ABS, CB and public sector bond purchases) is to return inflation to a course that is compatible with its target level.

The announcement on QE by the ECB has been one of the main factors which has supported activity in recent months, together with the lower oil price, and it also adds stability to the prospects of the consolidation of recovery in Europe, while it has clearly served to reduce the risk of deflation in the short term and lifted expectations of medium-term inflation.

Although it is hard to determine and isolate the impact of these measures through all the possible channels, the most visible in the current context are the depreciation of the EUR and the signalling effect (which enhances the strategy of forward guidance). As is mentioned above, the EUR has depreciated sharply against the USD (and in effective terms) from a level of slightly below 1.40 in March/April 2014 to one of below 1.05, while it is expected to stand at an average of 1.04 in 2015 and 1.07 in 2016. According to our models, a depreciation of the EUR of around 30% could have a positive impact on GDP growth of around 1pp and push inflation up by over 1%. On the other hand, the most recent research into the impact of these types of measures in the United Kingdom and the United States estimates that the impact of asset purchases worth 1% of GDP could have had an effect of around 0.1pp and 0.4pp on both GDP and inflation respectively. It nonetheless seems reasonable to expect a smaller impact on the eurozone as a whole, given that implementation has come a lot later and considering the importance of the banking system in financing the economy. Our forecasts envisage a relatively modest recovery which will gain traction over this year, and then grow 1.6% in 2015 and 2.2% in 2016.

As for inflation expectations discounted by the market, it can be seen that the downward trend has come to a halt and a turning point can also be made out in the indicators, which is far more clearly discernible among those for the shorter term (inflation expectations two years out implied by inflation swaps have bounced from negative levels up to around 1%) than those for the long term. Despite this, medium-term expectations are still below 2% and part of the recovery relates directly to the recent rally in oil prices.

Figure 18
Implicit inflation expectations in the eurozone.



Source: Bloomberg and BBVA Research

With regard to our forecasts for eurozone inflation, we estimate that in YoY terms it will remain very low during Q2 and Q3 and it will not be until Q4 when a bigger upturn is noted, reaching around 0.8-0.9% YoY in December, due to the base effect and impact of energy price movements. On the other hand, core inflation is likely to hold relatively stable in the coming months. On average, we forecast inflation of 0.1% in 2015, rallying to 1.3% in 2016, this being revised up a fraction (+0.3pp) following the measures announced by the

ECB, which are somewhat bolder than we expected three months ago. The risk of deflation has thus dissipated to a certain extent, although the ECB target is not likely to be reached until the second half of 2017.

Bottom line: our assessment of the first two months of sovereign bond purchases by the ECB is bullish. The central bank has met its monthly buying target and the initial impact on financial markets has been bigger than expected, to a large extent because of the vehemence with which the programme was launched and the subsequent messages demonstrating a strong commitment to it until it achieves its desired aim. Opening the window to speculation over possible early tapering by the ECB is not only premature but it is also risky, given the persistent downside risks for both growth and inflation. In fact the recent tightening of monetary conditions arising from the rises in long-term interest rates and the appreciation of the EUR, as well as the possible knock-on effect that could be generated by the Fed in the immediate future, should contribute to the ECB reasserting its message of commitment.

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