November 2016

ECB's unconventional monetary policy
Tapering or Extension? Options on the table

In advance of the decision of the European Central Bank (ECB), expected on 8 December 2016, regarding the Asset Purchase Programme (APP, often referred as Quantitative Easing – QE) this note provides an insight to possible policy options for the ECB. It also looks at the ECB's options to address the scarcity of eligible assets; if not addressed, scarcity of eligible assets could put at risk the proper functioning of the APP.

Introduction

The APP is a great example of European added value which has been already delivered – therefore the ECB's 8 December 2016 decision is important – will the ECB succeed in finding a solution which will continue to deliver European added value through the APP?

Continuity in the APP is important in order to address the current problem of prolonged period of low inflation and low growth. Since the beginning of the APP, bank lending rates have gone down substantially since 2014. The borrowing costs of households and companies have dropped to very low levels. Lower borrowing costs (influenced by ECB action) reduce loan-servicing costs, and thus increase the purchasing power of indebted households. Member States have also benefited from the ultra-low (in some cases negative) interest rates in their sovereign debt servicing. This has created extra fiscal space in Member States' finances. According to the European Commission, thanks to the low interest rates and the ECB's monetary policy, euro-area countries saved €50 billion in interest payments on their debt in 2016.

The scarcity of eligible assets poses a problem which needs to be solved in order to keep the programme running smoothly. The markets had expected the ECB's decision on the future of the APP on 20 October 2016 – however a decision was not taken then, with the ECB deciding to keep its monetary policy measures unchanged. President Mario Draghi stated during his press conference: 'In December the Governing Council's assessment will benefit from the new staff macroeconomic projections extending through to 2019 and from the work of the Eurosystem committees on the options to ensure the smooth implementation of our purchase programme until March 2017, or beyond, if necessary.' Consequently market expectations have increased with a view to the ECB's likely decisions on 8 December 2016. Whatever the decision turns out to be, it is likely that market reactions will precede (expectations) and follow (depending on the gap between expected and announced ECB decisions).

Why is the ECB undertaking the APP? The ECB's objective is to maintain price stability, which is akin to a kind of common good, supporting sustainable growth, job generation and sustainable fiscal stance across the whole euro area and beyond. The objective of the APP is to address the risks of too prolonged a period of low inflation. Due to deteriorating global conditions, the ECB has not achieved its price stability target – with inflation being far below the 2 % target. Hence, the ECB is

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fully using its standard monetary policy tools and also using additional, unconventional (including Asset Purchase Programme) tools at unprecedented levels.

A low interest rate environment encourages households and companies to borrow, consume and invest, which boosts domestic demand and should therefore have a positive effect on GDP growth. ECB action has strengthened business sentiment, which is a necessary condition for future investments. The European System of Central Banks and the ECB have been key actors in providing added value to European citizens – monetary policy action in support of growth in employment, investment and consumption. ECB action has undoubtedly also protected the euro area from further exogenous shocks, financial system disturbances and lessened the impact of the UK referendum on EU membership.

Asset Purchase Programme

The Asset Purchase Programme (APP) was launched in September 2014. It consisted initially of the purchase of Asset-Backed Securities[1] (ABSPP) and Covered Bonds[2] (CBPP3) for a monthly total amount of €10 billion with the aim of facilitating credit, boosting investment, and ultimately, supporting economic growth.

In January 2015, the scope of the programme was widened to include Public Sector Purchase Programme (PSPP) in order to buy sovereign bonds[3] from euro-area countries and from supranational European institutions. The monthly total amount of purchased bonds has therefore reached €60 billion (€10 billion from ABSPP+CBPP3 plus €50 billion from the PSPP) and the expiry date of the programme was fixed at September 2016.

Eligibility criteria (ECB internal rules[4]) for the purchase of bonds were defined by the ECB as: 1) remaining maturity between 2-30 years; 2) yield larger than the deposit facility rate; 3) issue limit of 25 % (to avoid a blocking minority in case of a restructuring for a member country) – and an issuer limit of 33 % (so as not to interfere too much with market price formation); 4) denomination in euro; and 5) investment grade rating from at least one rating agency.

Since the beginning of the programme, several changes have been implemented on these criteria.

- In July 2015, national agencies were added to the list of possible purchases, since the original criteria already constrained the implementation of the programme in some countries. In this way, the ECB has also had the possibility to buy securities other than sovereign bonds.
- In September 2015, the issue limit was raised to 33 % for non-CAC bonds.[5]
- In December 2015, the ECB announced 1) the length of the programme was extended to March 2017; 2) regional and local governments bonds were to be included in the eligible assets; 3) the deposit facility rate was lowered from -0.2 % to -0.3 %; 4) the issuer limit for supranational EU institutions was raised to 50 %; and 5) the principal payments deriving from the programme will be reinvested in it.
- in March 2016, corporate bonds[6] of high quality would be considered as eligible assets for the programme (CSPP) and the total amount of APP purchases was increased to €80 billion.

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[1] *Asset-Backed Securities* are financial instruments issued by a company. The repayment is backed by a pool of financial assets of different categories (e.g. loans, credit card receivables), (i.e. the underlying assets) that determine as a pool its combined risk, and therefore its market value and the level of interest payments. The underlying pool of assets of asset-backed securities do not remain on the issuer's balance sheet.

[2] A *Covered Bond* is a bank's debt instrument backed by the cash flows deriving, in general, from mortgages (i.e. cover pool) that remain on the issuer's balance sheet. It is a funding instrument for banks.

[3] Government bond is a debt instrument issued by public authority, generally with periodic interest payments, used to finance country's expenditure.

[4] The ECB self-imposed these criteria in order to have internal rules to follow and to avoid criticism of monetary financing from some member countries (that is forbidden by Article 123 of the Treaty on the Functioning of the European Union).

[5] CAC stands for *Collective Action Clauses*. They allow a super-majority of bondholders to agree to a debt restructuring process that is binding for everyone (the minority must accept debt restructuring according to the majority decision).

[6] Corporate bonds are debt instruments issued by companies in order to finance their activities.

Also in parallel with the APP programme, the ECB decided in March 2016 the following modifications: The deposit facility rate was fixed at -0.4 % and the lending rate was reduced to 0 %.

Table 1: Eurosystem holdings at the end of the month in billions of euros

Month	ABSPP	CBPP3	CSPP	PSPP	APP
October 2016	21.261	197.741	38.144	1134.218	1391.364

Source: ECB

In conclusion, all the measures described above had the aim, and were necessary, both to make the programme more effective and to assure its smooth implementation through the lifetime of the programme.

Far from the inflation target: QE extension?

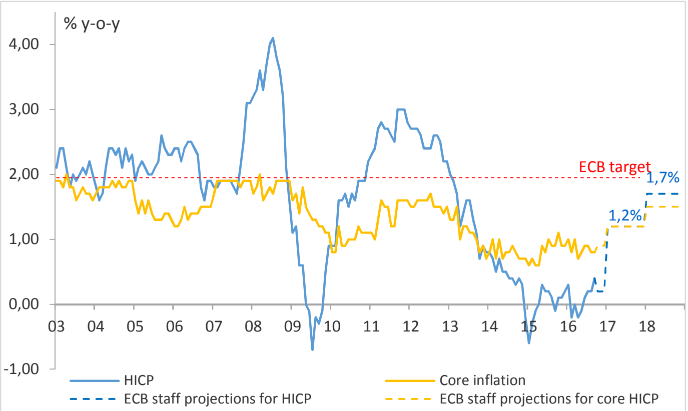
Notwithstanding the increase in the HICP (harmonised index of consumer prices) from 0.2 % year on year (YoY) to 0.4 % YoY registered between August and September 2016, inflation still remains far below the ECB's target. As evident from Figure 1, core inflation (excluding energy, food, alcohol and tobacco) lacks momentum. Moreover, medium- and long-term inflation expectations have started to decrease again (in the last quarter of 2016, 'two years ahead' inflation expectations have dropped from 1.5 % YoY to 1.4 % YoY). Because of a prolonged period of low inflation, the ECB is concerned that inflation expectations might be de-anchored and therefore (rational) households and companies might take decisions, in terms of wages and prices, with a different inflation anchor in mind. A likely consequence of decreasing inflation expectations might be that households and companies will delay some decisions on expenditure and/or investment (because of the lower future prices expected).

Even if it is difficult to evaluate the impact of the APP programme, some studies[7] recently showed its positive effects in terms of inflation, output and employment deriving from the QE programmes. The ECB stated on 20 October 2016 over all ECB measures (conventional and unconventional) that 'measures taken from 2014 to March 2016 have generated additional inflation, cumulative inflation over the 2016-2018 period of 1.4 percentage points, and 1.3 pp of additional growth'. The logic is the following: ECB action, including QE produces a reduction in interest rate spreads, which, in turn, reduces credit rationing and increases investment and ultimately boosts output growth. Visible effects deriving from the APP can be seen indeed in terms of interest rates (Figure 2) and exchange rates. However, concerning inflation it is obvious that factors other than the ECB action have influenced the inflation level. In this respect, it appears relevant to mention the recent OPEC decision on a cut in oil production, which might in the future affect price levels (through direct and indirect effects[8]), and in particular inflation expectations.[9]

A further extension of the APP seems a concrete possibility that must be taken into account. Mario Draghi has stated that the APP will continue 'until we see a sustained convergence towards our objective of a rate of inflation which is below but close to 2 percent'.

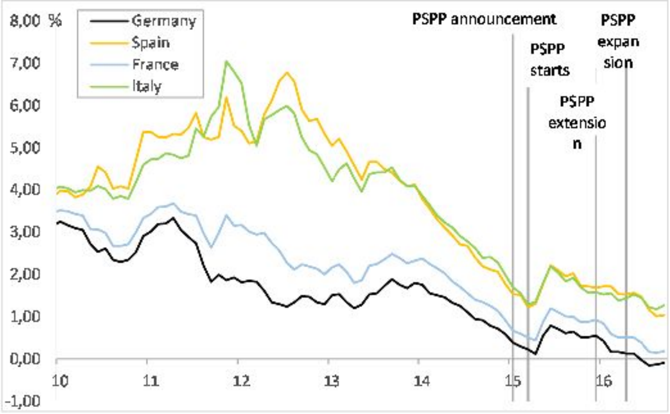
[7] Vailante (2015): The 'Visible Hand' of the ECB's Quantitative Easing; Demertzis and Wolff (2016): The effectiveness of the European Central Bank's asset purchase programme.
[8] Darvas (2016): Has ECB QE lifted inflation?.
[9] Badel and Mc Gillicuddy (2015): Oil Prices and Inflation Expectations: Is There a Link?; Darvas Z. and Huttl Pia (2016): Oil prices and inflation expectations.

Figure 1: Inflation rate



Source: Eurostat, ECB, EPRS

Figure 2: 10-year government bond yields



Source : Eurostat, EPRS

How to extend QE?

The market consensus expects an extension of the QE programme (currently running until the end of March 2017). This would lead to scarcity of assets eligible for the APP. According to recent studies,[10] the amount of assets eligible for the purchasing programme is decreasing rapidly in some countries (e.g. Bund scarcity may appear *ceteris paribus* at the beginning of next year) and the situation will be aggravated if the ECB decides to extend the APP. There is indeed a trade-off that must be taken into account between an extension in the length of the programme and the pool of assets eligible for such purchases. This poses a problem for how to extend QE. As Mario Draghi stated during the September 2016 press conference: 'the Governing Council tasked the relevant committees to evaluate the options that ensure a smooth implementation of our purchase programme'. The next sections outlines the options (or combinations thereof) available to the ECB in order to extend or enlarge the APP.

OPTION 1: Moving away from the capital key

One solution, which is technically easy, but politically complicated, would be for the ECB to address the scarcity of assets by moving away from a purchasing system according to the ECB's capital key in favour of a redistribution mechanism across National Central Banks (NCB). This would imply that, if one NCB is not able to buy all the planned amount of bonds from its own country according to the ECB's capital key, its remaining quota would be redistributed across the other NCBs.

According to some estimates, removal of the capital key would increase the pool of eligible bonds by around €620 billion. Moreover, such a change might also produce some efficiency gains. A reduction in the purchases of German Bunds would steepen the yield curve (increasing the gap between short- and long-term interest rates) in Germany, thereby producing positive effects for German banks and life insurers (i.e. reducing financial stability risk). Moreover, the most indebted euro-area countries would be better off through a reduction in sovereign spreads that would give them more fiscal space. To sum up, this change would address the scarcity problem in two ways: 1) through reduced purchases of German Bunds, and 2) via a likely increase in German yields since demand would decrease.

However, this change would imply considerable political risk since the ECB's capital key has so far been essential to ensure proportionality of the ECB's APP programme to the ECB's capital contributions. A move away might be considered a form of monetary financing. Apart from political and legal questions, this also involves moral hazard problems (lessened incentive to implement structural reforms). As Jens Weidmann, President of the Bundesbank said recently: 'If we grant special terms and conditions to individual countries or focus more strongly on very highly indebted countries, we are blurring the lines between monetary policy and fiscal policy more and more.'

[10] Claeys and Mandra (2015): European Central Bank Quantitative Easing: the Detailed Manual.

Nevertheless, the recent ruling of the German Federal Constitutional Court (GCC) on Outright Monetary Transactions (OMT) purchases opens a possibility in this direction, which seems more compliant for 'targeted purchases' of sovereign assets. If OMT is considered as a monetary policy intervention then the APP, with another redistribution mechanism, could also be considered a monetary policy intervention. Moreover, in recent months (especially before the summer), a move away from the capital key seems already to have happened since the ECB used a certain degree of flexibility in order to buy more peripheral debt and with higher intensity.[11]

A way of making this change politically acceptable might be to establish only a temporary deviation from the capital key rule, according to needs; thus, if there are not enough Bunds available for purchase, the ECB could buy bonds elsewhere. Otherwise, it might be possible to decide to distribute principal payments, deriving from the programme, according to the capital key. However, the OMT has been criticised by some, on the basis that, "the direction of OMT is selective buying of government bonds, and this is a transgression by the ECB into monetary financing'.[12] Consequently, it is highly likely that any decision to deviate from the capital key would be challenged in the GCC.

OPTION 2: Reduction or removal of the discount facility rate

A removal of the discount facility as a floor would be a substantial decision. This change could potentially produce losses for the ECB, thus implying considerable political risk. In this situation, the shareholders (i.e. NCBs, and ultimately national governments) might need to recapitalise the ECB. Alternatively, the ECB might issue its own liabilities, forcing the private sector to accept more money which could lead in the end to a future increase in the price level (macroeconomic risk). Moreover, this measure might incentivise risk-taking, thereby feeding potential speculative bubbles.

According to some studies,[13] this strategy would make eligible around €1 trillion of bonds (of which €473 billion of Bunds) with a maturity of between 2-5 years (without considering the other eligibility criteria); therefore, it should solve the scarcity problem. Moreover, a removal of the deposit facility as a floor might produce a significant increase in the demand for bonds with shorter maturities, and a consequent reduction in the demand for bonds with longer maturities producing an increase in their yields (steepening of yield curves).

Another option might just be to lower this floor. Reducing this rate would lower the yield structure, as happened with the reduction implemented in December 2015 (thus mitigating the positive effects in terms of number of new bonds eligible) and it might increase the financial stability risk because of the impact of negative rates on banks. According to the Financial Times, Credit Suisse has estimated that a reduction in the deposit facility would make around €390 billion of bonds eligible.

OPTION 3: Larger pool of eligible assets

A core issue is the identification of the right financial instruments to purchase considering the fact that many assets would be too risky or controversial for the ECB's balance sheet. One option might be to buy bank assets (other than high quality asset-backed securities (ABS)) or liabilities (other than covered bonds).[14] In such a case there would be a high political and competition risk since these purchases might be perceived as solvency support for the financial sector or as a way to address the Non-Performing Loans (NPLs)[15] problem of individual financial institutions.

Another option might be to buy equities. In this case, however, it would be very difficult to select the companies and to be transparent and equal in selection across sectors and countries. Similarly, it would be a very risky option since it would imply the sharing of companies' business risk.

[11] ECB, More details on the public sector purchase programme (PSPP) - Questions & answers, 2016.

[12] Central Banking Journal, interview of Otmar Issing, 13.10.2016

[13] BNP Paribas, Ahead of ECB September meeting: Bearish risks, 2016.

[14] The recent change in the collateral eligibility criteria for unsecured bank bonds decided in October 2016 can be considered a step in this direction.

[15] A loan is defined as an NPL if the debtor does not pay its creditor within 90 days of the due date. Basically, after this period the likelihood of non-payment is high and therefore the debt should be marked as NPL.

In general, this strategy would imply risks that could affect the ECB balance sheet negatively, making potential losses more likely (with the same potential consequences as described above). Moreover, evidence[16] shows that, in recent years, banks, in particular banks in peripheral countries, have used the accommodative monetary policy to distribute a large part of their earnings to shareholders instead of increasing lending or their own capital. This undermines the ECB's aim to boost the credit-multiplier mechanism.

OPTION 4: Larger issue/issuer limits

According to recent studies,[17] in the case of an APP extension, the ECB will soon reach the 33 % issue limit for some countries (such as Germany). One option might be to waive the issue limit, only for AAA bonds, thus allowing for larger purchases, for example of German Bunds.

Another option might be to increase the issue limit, at least for non-CAC bonds, from 33 % up to a maximum of 50 % (as the ECB already did for supranational bonds).[18] This could be considered the simplest option to implement since it is just a technical change, and all the more so as the 33 % limit does not seem to be based on a specific factor (for non-CAC bonds). Based on BNP Paribas[19] estimates, this change might free up €633 billion at euro-area level without considering other eligibility criteria. A 50 % limit would enlarge the Bunds available by around €57 billion (however this would most likely necessitate a change of the discount facility rate in order to make Bunds available under discount facility rules) therefore making feasible an additional 5-6 months of the programme (under the current monthly pace).

A likely negative consequence would be the establishment of a big market player (the ECB) in the euro-area bond markets, which might distort market price formation. Moreover, extending the issue limit to 50 % for non-CAC bonds would imply larger purchases of these kind of bonds. Since they have a longer maturity[20] than CAC bonds, this would produce a lengthening of the average maturity of bonds purchased by the ECB with the final consequence of more flattening pressure on the yield curve.

Finally, such a change might reduce the differences in terms of yields between CAC and non-CAC bonds. The presence of CAC makes debt easier to restructure (because it is sufficient that a super-majority agrees on a restructuring proposal) and therefore creditors ask for higher yield in order to be compensated for such a risk (i.e. to suffer a haircut on their assets). Non-CAC bonds have the opposite situation (they are more difficult to restructure) thus implying lower yields. An increase in the limit to 50 % would expand the demand for non-CAC bonds, further reducing their yields.

OPTION 5: Working through expectations

In its communications, the ECB might let the markets believe that there will be no future adjustment in the APP (Draghi recently claimed that inflation might be back on target in 2018/2019). This should produce an increase in bond yields making some bonds eligible again for purchase. To give an example, the non-decision at the ECB meeting of September disappointed markets and produced an increase in bond yields (13 bp for the 10-year Bund yield in the days following the press conference). Something similar happened recently in October when, according to a Bloomberg Report, 'the ECB was said to build a consensus on QE tapering'. This could be understood as an attempt by the ECB to create negative expectations in order to surprise markets and get a better result (as it did with the bigger-than-expected APP extension in March 2016). On several occasions, President Draghi has tried to shift attention from feasible future ECB policies towards euro-area governments' future policies (President Draghi: 'Actions by national governments are needed to unleash growth', 26 September 2016).

[16] Deutsche Bank, The ECB must change course, 2016.
[17] Claeys and Mandra (2015): European Central Bank Quantitative Easing: the Detailed Manual.
[18] With a value higher than 50 % would be difficult to claim that it does not interfere with market price formation.
[19] BNP Paribas, ECB PSPP: How to loosen the reins?, 2016.
[20] As reported by BNP Paribas, ECB PSPP: How to loosen the reins?, 2016, and by Eurobank Research in Global Economic & Market Outlook, September 2016.

However, another mechanism might be feasible. The markets might indeed believe that QE is coming towards an end and that a risk-off mode might appear, thereby implying a flight to quality assets and a consequent mitigation of the increase in yields of safe assets.

Conclusions

At the last Governing Council meeting, neither a QE extension nor the beginning of a tapering was discussed. Nonetheless, markets are now expecting a further extension to be decided at the coming Governing Council meeting.

In its last introductory statement, the ECB reiterated that it remains 'committed to preserving the very substantial degree of monetary accommodation which is necessary to secure a sustained convergence of inflation towards levels below, but close to, 2 % over the medium term'.

Although the ECB expects inflation to gradually pick up in the coming months due to base effects, it still lacks the momentum to further increase to levels in line with its mandate. The new staff projections, to be released in December, should indeed confirm this trend.

In the event of a QE extension, the ECB may decide to implement a combination of the above mentioned options, noting that some of them are much more controversial than others (especially moving away from capital key).

At the same time, the ECB is likely to continue making it clear that it will not implement monetary policy easing forever, potentially laying the ground for a future announcement of tapering. The latter will be a very sensitive issue to handle in order to avoid a strong market reaction which could have a substantial impact on the economic recovery through a likely sharp general increase in interest rates, non-symmetric rise in sovereign debt yields and consequently reduced fiscal space available,[21] yet crucial to sustain the recovery.

The ECB communication will be key in the coming weeks in order to steer market expectations smoothly.

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[21] On 22 May 2013 U.S. Federal Reserve Chairman Ben Bernanke stated in testimony in U.S. Congress that FED may taper its bond buying programme. This statement led to a market turmoil, i.e. bonds sold off sharply in the wake of Bernanke's first mention of tapering, while stocks began to exhibit higher volatility than they had previously.