DIRECTORATE GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

QE infinity: What risks for the ECB?

IN-DEPTH ANALYSIS

Abstract

There does not seem to be any major technical hurdles to a moderate expansion of the bond purchase programme of the ECB. But the ECB's claim that its QE programme is open-ended and can simply be continued until inflation picks up again is not credible.

Monetary policy is no longer unified in the euro area since the national central banks within the eurosystem are buying different maturities of their own government bonds. Moreover, the unavoidable fiscal implications of a bond-buying programme will also play out at the national level, potentially leading to deep conflicts of interest within the eurosystem if the exit were to coincide with a resurgence of risk premia.

The risks are thus increasing. But they are long term and intangible in nature.

IP/A/ECON/2016-01 February 2016

PE 569.994 EN

This document was requested by the European Parliament's Committee on Economic and Monetary Affairs (ECON)

AUTHORS

Daniel GROS, CEPS

RESPONSIBLE ADMINISTRATOR

Dario PATERNOSTER

EDITORIAL ASSISTANT

Irene Vernacotola

LINGUISTIC VERSIONS

Original: EN

ABOUT THE EDITOR

To contact the Policy Department or to subscribe to its monthly newsletter please write to:
Poldep-Economy-Science@ep.europa.eu

Manuscript completed in February 2016

This document is available on the Internet at:
http://www.europarl.europa.eu/committees/en/econ/monetary-dialogue.html

DISCLAIMER

CONTENTS

LIST OF ABBREVIATIONS

CAC	Collective Action Clause
EAPP	extended' asset purchase programme
ECB	European Central Bank
ESM	European Stability Mechanism
GC	Governing Council (of the Eurosystem)
NCB	National Central Bank
PSPP	Public Sector Purchase Programme
QE	quantitative easing
SMP	Securities Markets Programme
WAM	weighted average maturity

EXECUTIVE SUMMARY

- The ECB announced recently that it would extend its programme to buy government bonds.
- Technically, this was through an extension of the public sector purchase programme (PSPP) of buying sovereign bonds, which is part of the wider overall 'extended' asset purchase programme (EAPP).
- Given the limited supply of German federal government bonds of more than 2 years maturity, the ECB had to make sub-national debt eligible to be able to expand the programme.
- With this extension, and some flexibility of the issue limit, the planned expansion of the EAPP/PSPP should be feasible.
- Further breathing space is provided by the fact that the PSPP has been fixed in terms of the market value of the bonds to be bought each month by the eurosystem. At present most government bonds trade at about 20% above their face value. Given that the supply of eligible bonds is usually measured by their face value, the supply of eligible bonds at market value is about 20% higher than the outstanding face value.
- All in all, there is thus some room for a further modest increase in the PSPP. But a doubling of its size would create increasing problems in terms of the availability of eligible securities and the issue and issuer limits of 25% and 33%, respectively. The PSPP can thus not really be 'open-ended': if inflation remains below the target level well into next year, the ECB will have to invent new instruments and might face a credibility problem. The experience of Japan has shown that even bond purchases at a much larger scale are no guarantee of success.
- Pushing the deposit rate further into negative territory should increase the effectiveness of the bond purchases. But the actual impact of any reduction in the deposit rate would be limited by the fact that banks can just park surplus funds under their required reserves account with the ECB, which would not involve a penalty rate (the interest rate is 'only' zero).
- There are important differences in the maturity structure of the bonds bought by the national central banks under the PSPP. Monetary policy is thus, de facto, no longer unified.
- Central banks of countries with large public debts tend to buy longer maturities. This increases the exposure of the country to future increases in interest rates.
- The main risk of increasing the size of the PSPP is that it will make an exit more difficult. If an eventual exit were to coincide with higher risk premia, it would be difficult to force the national central banks in countries under financial stress to sell large amounts of their own government bonds.

1. INTRODUCTION

With inflation and inflation expectations remaining below its target of "close to but below 2%"), the ECB has announced that it will expand the duration of its asset purchase programme and that it is considering additional expansions.

The continuing weakness of inflation suggests that the impact of the ECB's programme to buy government bonds has so far been, at best, limited. The ECB is thus forced to walk a fine line between acknowledging the limited impact of its QE (quantitative easing) programme so far and the need for further doses of a measure whose impact so far has been so weak.

The terms of reference for this study contained the following problem:

> It is always a challenge to exit from a QE programme, but there is also the risk to indefinitely expand a QE programme if it is not considered as sufficiently effective and to cross the line beyond which the credibility of the central bank is at stake.

The present study comes to a conclusion that contradicts the premise of the above passage: There is little risk that the ECB will expand its QE programme indefinitely because the ECB has imposed limits upon itself in terms of the fraction of outstanding bonds it is willing to buy. The credibility of the ECB might be at stake, however, if inflation remains low, and the ECB is approaching the limit of the bonds it can buy.

The author of this study is on record as casting doubt on the effectiveness of QE operations in general and that of the ECB (or rather the eurosystem) in particular (see Gros, 2015 and Gros et al., 2015). However, this study does not deal with the question of the effectiveness of QE, but rather is concerned only with the availability of eligible bonds and the implications for public-debt management.

The remainder of this study is organised as follows. Section 2 provides a brief review of the factors affecting the availability of eligible bonds for the PSPP. Section 3 documents the extent to which the implementation of the QE policy now differs across member countries. Section 4 then uses a standard approach to show that this differentiation also leads to a differentiation in the fiscal implications of QE and the vulnerability of countries with high debt to an exit. Section 5 concludes.

2. LIMITED AVAILABILITY OF ELIGIBLE MEANS THE PSPP CANNOT BE OPEN-ENDED

There has been some discussion about technical limits to the PSPP, relating limits to the supply of eligible bonds from some member countries. Public debt-to-GDP ratios are high throughout most of the euro area, giving the impression of an ample supply of government securities. But several factors reduce the actual supply of securities available for the PSPP: not all government debt is in the form of bonds (notably in Germany, where a significant proportion of state and municipal debt is the form of bank credit) and an important fraction of government securities is in the shorter range of up to 2 years.

The former factor was the explanation why the ECB had to make sub-national debt eligible. The supply of German federal government bonds for the PSPP was simply too limited.

With this extension, the planned expansion of the EAPP/PSPP should be feasible.

The key long-term limitation, however, is that the ECB is loathe to be put in the position to have a blocking minority in case of a default on government bonds with a collective action clause. This will, over time, limit the eurosystem's ability to buy at most one-fourth of the total amount of 'PSPP eligible bonds'. The PSPP thus cannot be 'open-ended'.

Gros (2015) and Gros et al (2015) have already dealt with some of the other factors affecting the supply of 'PSPP eligible' bonds.

An important point that is often overlooked is the fact that the PSPP has been fixed in terms of the market value of the bonds to be bought each month by the eurosystem (€60 billion total, about €40-50 billion in government bonds). At present most government bonds trade at about 20% above their face value because they were issued when interest rates were higher. Given that the supply of eligible bonds is usually measured by their face value, the supply of eligible bonds at market values is about 20% higher than the outstanding face value.

The rule that no bonds with a yield to maturity of less than the deposit rate should be eligible under the PSPP does not make sense since what matters is not the difference between the deposit rate today and the current yield to maturity of a long-term bond, but rather the longer-term average expected deposit rate. This limit is subject to fluctuations in the bond market. It is thus difficult to estimate how important this (self-imposed) limit will be. At present about 13% of all 'PSPP-eligible' bonds have a yield to maturity lower than the deposit rate of minus 30 basis points. The proportion of bonds yielding less than the deposit rate will not necessarily fall if the deposit is lowered further as bond yields might then also ratchet down across the board.

There is some confusion about the issue and issuer limits of 25% and 33%, respectively. Formally, the issue limit has been increased to 33% in general. But the 25% issue limit applies to bonds with Collective Action Clauses (CACs).

The ECB has stated that purchases should:

> not create a situation whereby the Eurosystem would have a blocking minority for the purpose of collective action clauses in which case the issue share limit would remain at 25%.1

Given that the CACs were introduced only in 2013, the bulk of the outstanding bonds are still without a CAC. This will change gradually over time, with a different speed in each country given that the maturity distribution differs enormously. By 2017 (four years after 2013), most government bonds available will have CACs attached, given that the average maturity is in most countries around 6-7 years. This limit will thus become more binding over time.

Recent estimates of the supply of PSPP eligible bonds arrive at up to €1,800 billion, assuming present yields and an issue limit of 33%. Applying an issue limit of 25% would reduce the total supply to €1,350 billion. This is not far from the sum to be reached if the PSPP runs for 25 months. With monthly purchases of €40-50 billion in government bonds, total purchases would amount to about €1,000-1,250 billion.

The two limits - issue and issuer - are quite different in nature. The basic rationale of the issuer limit is a hard legal constraint (the ECB should not dominate the price of government bonds as this would constitute 'monetary financing'). However, the 33 % limit is arbitrary. It is impossible to say at what percentage the PSPP dominates the market for the bonds of a particular country. At any rate, the purpose of the PSPP is actually to influence the long term interest rates, and thus by implications also the price of long term government bonds. The dividing line between monetary policy and monetary financing is thus the difference between 'influencing' long terms rates and dominating the market and thus determining rates. It is not possible to establish a clear dividing line. But the ECB should avoid entering too deeply into the grey zone.

The issue limit has a precise numerical value, but it is based on a political consideration. When needed the ECB might breach the 25 % limit on CAC bonds but specify that it will never agree to any restructuring. But this would put the Eurosystem potentially in a politically very awkward position should the need for a restricting arise. Moreover, such a position would contradict the general aim of making government debt easier to restructure so that future rescue operations would require less funding from the ESM.

As mentioned above, purchases are at market value while the supply of bonds is usually counted at face value. Moreover, ongoing fiscal deficits would increase the supply again for the part financed by bonds with a maturity of over 2 years. But the projected deficits for the next two years would imply an additional bond supply of around €200-300 billion.

There is no point in making detailed calculations for the likely supply of PSPP eligible bonds by 2017 as market conditions and eligibility criteria change frequently.

[1] Part of the confusion has been created by the ECB's website, which mentions the CACs, but only en passant (see http://www.ecb.europa.eu/mopo/implement/omt/html/pspp-qa.en.html). At the start of the PSPP, the issue share limit was set at 25%, to be reviewed after six months. (Article 5(1) of the decision of 4 March 2015 states that "the limit will initially be set at 25%, for the first six months of purchases and subsequently reviewed by the Governing Council"). On 3 September 2015, the Governing Council decided to increase it to 33%, subject to a case-by-case verification that it would not create a situation whereby the Eurosystem would have a blocking minority for the purpose of collective action clauses in which case the issue share limit would remain at 25%. The issue limit refers to the maximum share of a single PSPP-eligible security that the Eurosystem is prepared to hold. The issuer limit refers to the maximum share of an issuer's outstanding securities that the ECB is prepared to buy. The issuer limit of 33% is a means to safeguard market functioning and price formation as well as to mitigate the risk of the ECB becoming a dominant creditor of euro area governments. To this end, the 33% limit is applied to the universe of eligible assets in the 2 to 30-year range of residual maturity. Both limits also cover existing Eurosystem holdings of PSPP-eligible bonds in the context of the Securities Markets Programme and any other portfolios owned by Eurosystem central banks.

Moreover, while there might be in aggregate enough PSPP-eligible bonds available, shortages might arise in one key country, namely Germany. (Already today the supply of government bonds is insufficient for significant operations in Estonia, whose central bank has been buying mostly bonds of international institutions.) As mentioned above, the key reason why the Governing Council decided to extend the PSPP to sub-national debt was that, in Germany, the Länder account for a significant share of overall government debt.

But the general conclusion seems clear: there is some room for a further modest increase in the PSPP even beyond March 2017 (the ECB would not have announced this extension if it had not been certain of the availability of eligible bonds). But an extension much beyond that date, e.g. doubling its original size, would create increasing problems in terms of the availability of eligible securities.

This creates a credibility problem: The PSPP cannot really be as open-ended as promised at the start by the President of the ECB in 2015:

They (these purchases) are intended to be carried out until the end of September 2016 and will, in any case, be conducted until we see a sustained adjustment in the path of inflation which is consistent with our aim of achieving inflation rates below, but close to, 2% over the medium term (https://www.ecb.europa.eu/press/pressconf/2015/html/is150305.en.html).

If inflation remains below the target level well into next year, the ECB will have to invent new instruments or have to abandon its issue limit.

The experience of Japan has shown that even bond purchases at a much larger scale are no guarantee of success in terms of higher inflation and inflation expectations.

Pushing the deposit rate further into negative territory should increase the effectiveness of the bond purchases. But the actual impact of any reduction in the deposit rate would be limited by the fact that banks can simply park surplus funds under their required reserves account with the ECB, which does not involve a penalty rate (the interest rate is 'only' zero).

Since March 2015, about €500 billion of government bonds have been bought by the eurosystem, but the deposit facility has increased only by less than half that amount. This was possible partly because of an increase in 'required reserves' account, which now stands at over €400 billion, of which only €113 billion are 'required'.[2]

[2] See https://www.ecb.europa.eu/press/pr/date/2014/html/pr140605_3.en.html

3. NATIONAL DIFFERENTION IN IMPLEMENTATION

One of the key decisions accompanying the launch of the PSPP was that 80% of the bond purchases under this programme should be undertaken by the national central banks in the Eurosystem. Moreover, NCBs are expected to buy the bonds of their own government, and any profits or losses on these securities will remain on the books of the NCB that bought them. This constitutes was an important departure from the general rule under which all profits and losses resulting from 'ordinary' monetary policy operations are shared within the Eurosystem. Normally all profits and losses on these 'ordinary' operations are pooled in the so-called 'monetary income' of the Eurosystem, which is then shared among the NCBs according to the capital key (with a small share going to the ECB, which in turn is again owned by the NCBs).

The data suggest that this decentralisation has led to a situation in which each country (or rather each NCB) conducts its own QE programme, only broadly coordinated across the Eurosystem under the guidance of the Governing Council.

The principal evidence of this Balkanisation of the common monetary policy is that the weighted average (residual) maturity (WAM) of the bonds bought by the NCBs under the PSPP shows large cross-country differences. The WAM of the PSPP holdings of the Bundesbank is only about 7 years, whereas that of the Banca d'Italia is about 9.3 years (see Figure 1 below). It is interesting to note that the differences in the maturity distribution have considerably widened after the first two months.[3]

This means that de facto monetary policy is no longer unified in the euro area. The way the PSPP has been implemented does not seem to be compatible with the original ECB decision:

The purchases of eligible marketable debt instruments by the Eurosystem under the PSPP should be implemented in a decentralized manner, giving due regard to market price formation and market functioning considerations, and coordinated by the ECB, thereby safeguarding the singleness of the Eurosystem's monetary policy

(http://www.ecb.europa.eu/ecb/legal/pdf/en_dec_ecb_2015_10_f_.sign.pdf).

In principle, the ECB was supposed to conduct a unified monetary policy under which the short-term interest rate would be identical throughout the euro area. During the acute phase of the euro crisis, the unity of monetary policy appeared to have been destroyed by the risk premia, even on short-term rates. This meant that banks and government in different countries faced different short-term borrowing costs. But the policy was still unified in the sense that the terms under which 'normal' monetary policy instruments were implemented were the same across the euro area. This is no longer the case for the 80% allocated to NCBs under the PSPP.

QE is supposed to work by forcing the private sector to reduce its holdings of longer-term paper. What matters for the portfolio balance of the private sector is not just the amount of bonds, but also their average maturity. Greenwood et al. (2014) measure the impact of QE in the US by the amount of 'ten-year equivalent' bonds withdrawn or, more simply, just the product of the amount of bonds times their WAM. Under this measure, one could argue that the purchases of the Banca d'Italia should have a much stronger impact on the Italian financial market than those of the Bundesbank since the WAM of the purchases of the Banca d'Italia is about one-third longer than that of the Bundesbank (9.3 versus 7 years). Portugal represents an even more striking case with a WAM of its PSPP holdings of over 10 years.

[3] The ECB's own position on this point is not clear as can be seen from the FAQ sheet on the ECB's website: http://www.ecb.europa.eu/mopo/implement/omt/html/pspp-qa.en.html. How will you weigh different maturity buckets for your purchases? "The intention is to be market-neutral. The Eurosystem wants to create as little distortion as possible. At the same time, this will not be a strict target and flexibility will be applied, also taking into account the relative values of bonds and the liquidity of the different maturity segments."

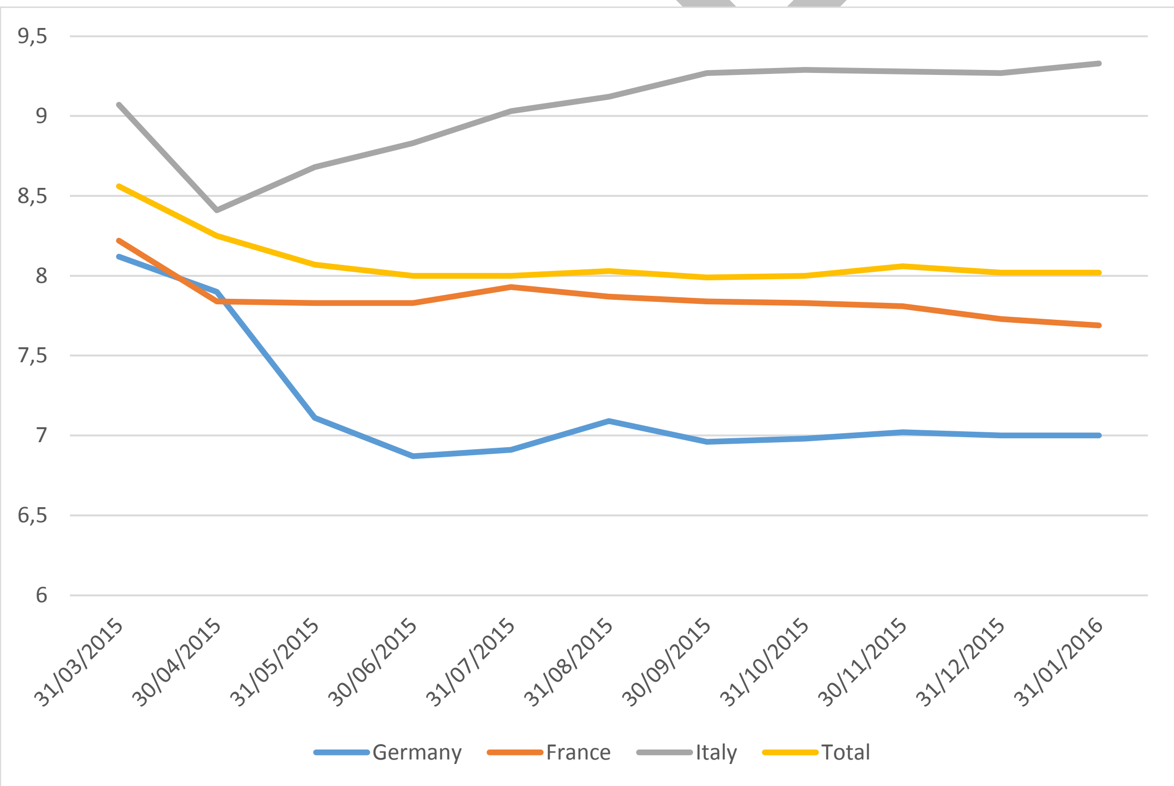
At first sight, it is surprising that the WAM of the purchases of the Bundesbank is so low since the German curve has negative yields until about 7 years and the yield on five-year paper is at present (January 2016) equal to minus 25 bps.

The difference in maturities bought by different NCBs cannot be explained by the differences in the maturity structure of the outstanding debt. As shown in Figure 2 below, the average maturity of the outstanding government debt (in the 2-30 years range) is about 8.2-8.5 years, for all three large euro-area countries (Germany, France and Italy).

The average maturity of all outstanding government bonds is much lower, and indeed lower than the WAM of PSPP purchases. This implies that all NCBs are thus buying bonds with a WAM larger than the outstanding stock. While this is unavoidable, given that only securities with a remaining maturity of more than 2 years are eligible under the PSPP, it also raises concerns.

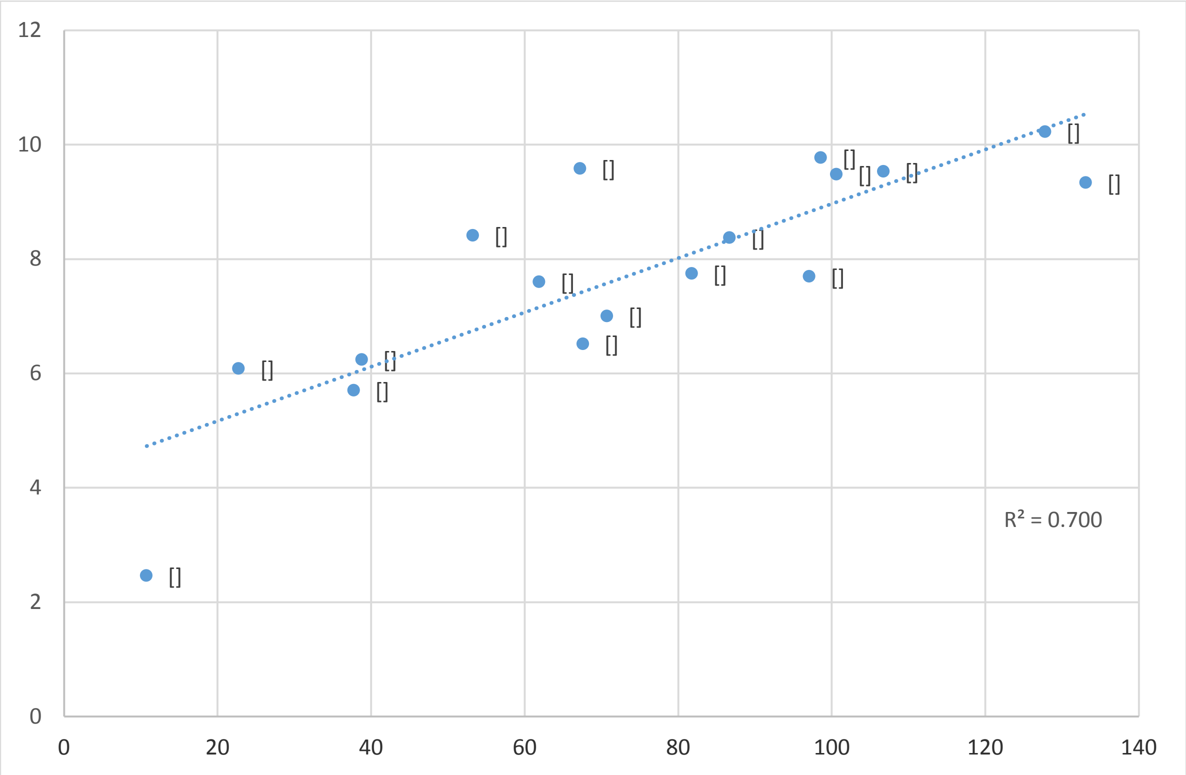
Looking at the WAM of the purchases across countries shown in Figure 2 below, it seems that the NCBs of countries with a high public debt (as a ratio to GDP) also buy longer maturities. This implies that the national central banks of those countries facing a danger of a resurgence of risk premia are buying more at the longer end. This increases future refinancing risks especially for those countries least able to afford it.

Figure 1. Eurosystem holdings under PSPP (in %, y-axis) **– Weighted average maturity** (time, x-axis)



***Source**:* Own elaboration on ECB data.

Figure 2. Gross debt to GDP (in %, x-axis) **and weighted average maturity of holdings under PSPP** (in year, y-axis)



Note: Cyprus omitted.
***Source*:** Own elaboration on ECB and IMF data.

4. FISCAL IMPLICATIONS

It is a widely accepted principle that for fiscal purposes one can consolidate the central bank and the Treasury, at least for the 'standard' case of a country that has its own currency (see also Gros et al., 2015, which develops the basic idea discussed here). In this case, any gains or losses of the central bank are transferred over time to the (national) Treasury. Monetary and fiscal policy thus cannot be kept completely separate when the (national) central bank intervenes in the public-sector debt market.

Within the euro area, profits and losses of national central banks are usually pooled in the monetary income of the eurosystem and redistributed to the constituent NCBs, according to the capital key, which determines the shares of each country in the ECB. The NCBs then sooner or later, transmit most of their profits to their national Treasuries.

This procedure only applies, however, to ordinary monetary policy operations. Apparently the public sector purchase programme (PSPP) was not regarded as a 'normal' monetary policy operation since it was decided that 80% of the asset purchases would be taken by the NCBs under their own responsibility. The reason for this was obviously that the NCBs from creditor countries, such as Germany or the Netherlands, were worried that they might have to share in the losses if there was a default on the bonds bought under this programme. Moreover, these purchases, which remain only on the books of the individual NCBs, will have to be exclusively for national bonds.

The fact that 80% of the purchases under the PSPP will be undertaken by NCBs means that most of the purchases under the PSPP/EAPP will mainly have the effect of shortening the duration of the existing national public debt. The deposits of (commercial) banks with the NCB represent effectively public debt with a zero duration (these deposits can be withdrawn daily). When the Bundesbank buys a German government bond with a residual maturity of 7 years, it reduces the maturity of that part of the German public debt from 7 years to zero (one day, to be precise).

The extension of the PSPP means that the reduction in the effective WAM and thus also the duration of government debt will be substantial.[4] If the PSPP leads national central banks in the euro area to buy the maximum of 25% of the bonds (with a maturity above 2 years) the average WAM of the (publicly traded) government would be reduced by 1.75 year (=7/4) years for Germany and 2.25 years (=9/4) for Italy. The WAM of the outstanding bonds with a maturity above 2 years is about 8 years, as mentioned above. The PSPP could thus lead to a substantial reduction of the WAM of that part of public debt.[5]

The public debt management agencies of the euro area countries could of course avoid this reduction in effective maturity by issuing more long term debt. But so far there is little sign of this happening. A reduction in the WAM of this size will make high-debt countries like Italy substantially more exposed to increased risk premia when the PSPP has to be reversed.

One of the reasons why the crisis of 2011/2 had little impact on the effective cost of public debt for Italy was that the average remaining maturity of Italian public debt was rather high at this point. The Italian Treasury was able to point out to markets that government finances were relatively little affected by the high risk premia at the time (up to 400 to 500 basis points).

[4] For more detail on this fiscal aspect, see Gros et al., 2015. At the current level of interest rates changes in maturity and duration are very close to each other.

[5] The reduction in the WAM of the entire public debt outstanding would of course be lower since the existing short term debt (with remaining maturities below 2 years) would not be affected. But what matters in a crisis is mainly the proportion of longer term debt, which provides protection against sudden changes in market conditions. It is the reduction on the longer terms debt held by the public which should be a cause for concern.

Purchases under the PSPP would reach 25 % of the outstanding public of highly indebted countries only if the program were to be extended much beyond the present envisaged end-date of March 2017. For the time being the purchases are pro-rata ECB shares (which are based equally on GDP and population shares). This implies that the reduction in WAM operated by, for example, the Banca d' Italia is much higher if related to GDP than that which results from the purchases of the Bundesbank. But the same is not necessarily the case if one relates the reduction in WAM or duration to the overall stock of public debt outstanding.

The relative impact of PSPP purchases on the domestic debt market for Portugal would show a greater relative impact because the ECB share of purchases of Portuguese bonds is considerably above share of Portugal in the euro area GDP and its GDP per capita is much below the euro area average. The market for public debt of Portugal is thus the one most deeply affected by the PSPP.

The case of countries with very little public debt (Luxembourg and the Baltic countries) has so far attracted little attention because these countries are relatively small and their NCBs have been willing to buy the bonds of international institutions. But it is clear that these countries will benefit least, in terms of lower debt service costs, from the PSPP.

Bonds purchased under QE do not necessarily have to be sold when QE ends and the central bank wants to increase rates again. The Federal Reserve has for the time being excluded any substantial sales of the bonds it bought under its various QE programmes. But conditions in the euro area might be different. The same reasoning which led to the PSPP programme (namely, that a large balance sheet is equivalent to a more accommodative stance) might then induce the Governing Council to conclude that a reduction of the balance sheet of the eurosystem becomes appropriate once inflation has returned to the ECB's target.

If the Banca d' Italia would then be forced to sell the bonds it had bought under the PSPP, it might make substantial losses if risk premia had returned. These losses would effectively have to be borne by the Italian Treasury as the Banca d' Italia had effectively behaved like a public-debt management agency for the Italian Treasury. This had been the case in Italy for a long time until the famous 'divorzio' of the 1980s, which relieved the Banca d' Italia from the duty to support the market for government bonds.[6]

As an aside, one should note that the fact that the 80% of the bond-buying executed by NCBs on their own profit and loss account can be consolidated with the national public debt also implies that there is no economic justification for the 25% limit on each issue, which the ECB has set for the programme. The rationale for this limit was that the ECB (or rather the Eurosystem) should not have a blocking minority in case a government goes into default. Since 2013, all government bonds issued by eurozone members have collective action clauses (CACs), under which a super majority of bond-holders (75%) can decide to accept an offer of rescheduling or a hair-cut on the nominal value in case of a default. If the Eurosystem held more than 25% of any one bond issue, it could obstruct such a restructuring, which it would be obliged to do since, according to many, accepting a restructuring of its bond holdings would constitute 'monetary financing' of a government.

However, this legal reasoning does not make sense from an economic point of view. Whether or not a national central bank agrees to a restructuring of the debt of its own government makes no difference for the consolidated fiscal accounts of the country, as one can consolidate the NCB with the national Treasury.

[6] In 1981 the Bank of Italy was "divorced" from the Italian Treasury and no longer forced to buy bonds left over from Italy's debt auctions. It started the era of independence of the Bank of Italy, but also of high interest rates to encourage people to purchase bonds. This followed a period during which real interest rates were used to be negative and inflation double digit.

5. CONCLUSIONS

In early 2015, the ECB embarked on the secondary markets public sector asset purchase programme. The aim was to achieve a "sustained adjustment in the path of inflation" towards the target of below, but close to 2%. Almost one year into the programme there is little sign that this goal is about to be achieved. The ECB has already increased the expected length of the PSPP and the question thus arises whether there are enough PSPP eligible bonds available to continue much beyond the target date of March 2017.

Detailed calculations are difficult since market conditions change often, and the ECB could further change its eligibility criteria. Most calculations indicate that there is no immediate threat of a scarcity of eligible bonds. But the Collective Action Clauses (CACs) incorporated in euro-area bonds since 2013 give 25% of the bond holders a blocking minority. Since the ECB wants to avoid at all costs being put in a situation where it constitutes the blocking minority itself, it cannot acquire more than a quarter of all eligible bonds outstanding. This could represent a hard limit, which, at the present pace of purchases, could be reached in less than two years.

All in all, one can conclude that a moderate expansion of the ECB's bond-purchase programme is possible. But the claim of the ECB that its PSPP programme is open-ended, and can simply be continued until inflation picks up again, is not credible.

National central banks have taken considerable leeway in terms of the maturity of their own national government bonds they are buying under the PSPP. The 'singleness' of the monetary policy is thus no longer ensured. The fact that central banks from countries with higher debt-to-GDP ratios have bought longer maturities is a ground for concern since this increases the vulnerability of these countries to a return of risk premia.

Most monetary policy decisions have some fiscal implications, but usually they are just a side effect. This changes when a central bank buys government bonds on a large scale (and with the avowed intent to reduce interest rates). The 'no-risk' sharing on the 80% of the purchases under the PSPP has effectively nationalised the fiscal consequences of QE in the euro area. As all national treasuries benefit from the bond-buying, there is little opposition today. But this will change when the time comes to exit QE and then to reverse policy.

A priori there is little one can object to if central banks buy large amounts of government (or indeed other) bonds during a period when inflation is too low and is expected to remain so for a long time. The underlying assumption is that central banks will be able to sell these bonds with the same ease with which they bought them. However, this might not be the case.

Moreover, when the time comes to sell, the maturity of the bonds bought originally will matter. The longer the maturity of the bonds that central banks might have to throw on the market, at some point in the future, the larger their exposure to changing market conditions. This applies of course in particular to countries where risk premia could return quickly given that public debt remains elevated. Risk premia might never return, however, and the bonds purchased under the PSPP might remain on the balance sheet of the eurosystem until they run off gradually. But this is not certain.

In short, there is a clear danger that deep conflicts of interest will arise within the Governing Council when the attainment of the goal of price stability will warrant the unwinding of the purchases undertaken today.

REFERENCES

- Greenwood, R., S. Hanson, J. Rudolph and L. Summers (2014), "Government Debt Management at the Zero Lower Bound", Hutchins Center on Fiscal and Monetary Policy at Brookings, Working Paper No. 5, Brookings Institution, Washington, D.C. http://www.brookings.edu/~/media/research/files/papers/2014/09/30_government_debt_management_zlb/30_government_debt_management_zlb.pdf
- Gros, Daniel, Cinzia Alcidi and Willem Pieter De Groen (2015) "Lessons from Quantitative Easing: Much ado about so little?", paper prepared the European Parliament's Committee on Economic and Monetary Affairs, March. https://polcms.secure.europarl.europa.eu/cmsdata/upload/0b4cec1a-235c-4097-94c6-5b40a8543c27/CEPS_QE_FINAL_.pdf
- Gros, D. (2015) QE 'euro-style': Betting the bank on deflation? Paper prepared the European Parliament's Committee on Economic and Monetary Affairs, June 2015, https://polcms.secure.europarl.europa.eu/cmsdata/upload/b83faa84-0dea-4288-8ac7-086ca04a7b0f/CEPS_Bonds_Purchase_MD_June2015_FINAL.PDF