Abstract
On 6 September 2012 the Governing Council of the ECB decided on the technical details of new sovereign bond purchasing operations, called the Outright Monetary Transactions (OMTs). The notes in this compilation evaluate the framework of the OMTs and discuss various aspects of the interventions of the ECB in the sovereign debt markets, e.g. effectiveness and possible alternatives.
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INTRODUCTION

In a press conference on 2 August 2012 Mr Draghi stated that 'the Governing Council extensively discussed the policy options to address the severe malfunctioning in the price formation process in the bond markets of euro area countries. Exceptionally high risk premia are observed in government bond prices in several countries and financial market fragmentation hinders the effective working of monetary policy'. Further he announced that 'the Governing Council [...] may undertake outright open market operations of a size adequate to reach its objectives'.1

On 6 September 2012 the Governing Council of the ECB decided on the technical details of these new operations naming them Outright Monetary Transactions (OMTs). The main features are:2

i) OMTs will be based on 'strict and effective conditionality attached to an appropriate European Financial Stability/European Stability Mechanism (EFSF/ESM) programme.'

ii) The OMTs 'will be considered for future cases of EFSF/ESM macroeconomic adjustment programmes or precautionary programmes [...]. They may also be considered for Member States currently under a macroeconomic adjustment programme when they will be regaining bond market access.' The focus of the transactions will be on the short-end of the yield curve (maturities between one and three years).

iii) Acceptance of 'the same (pari passu) treatment as private or other creditors [...]'.

iv) Full sterilisation of the sovereign bond purchases.

The notes in this compilation discuss various aspects of the interventions of the ECB in the sovereign debt markets, e.g. effectiveness and alternatives.

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NOTE

Abstract

The creation of the EFSF has allowed the crisis to fester and spread. It made sense under the belief that the crisis would be circumscribed to a small number of small countries. This belief was mistaken in the first place and has now been proven wrong. The EFSF/ESM now threatens to delay the unavoidable acceptance by the ECB that is the euro area’s lender of last resort. For the crisis to be brought under control, all public debts will have to be partially but explicitly guaranteed. This can be done by the ECB directly or by the ECB via the EFSF/ESM, once it has been granted a banking license.
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EXECUTIVE SUMMARY

The Outright Monetary Transaction (OMT) programme constitutes a turning point. It is one of several necessary conditions required to bring the euro area crisis to an end.

By breaking the no-bailout clause, all euro area governments have created a new situation, hopefully a temporary one, for which there is no good solution. The chosen response, the creation of the EFSF and then the ESM, is mistaken. It rests on the view that we only need to plug the flows of financing gap while financial markets hold the stocks of public debts. What needs to be dealt with now is the legacy of EUR 8750 billion of accumulated debts. No other institution in the world but the ECB has the means to backstop this stock.

The OMT strategy fundamentally differs from the Securities Markets Programme (SMP) strategy. By committing to guarantee a maximum spread (cap on spreads), or equivalently a minimum price (floor for bond prices), through unlimited purchases, the ECB now deals with debt stocks. The SMP strategy, however, was in the nature of acting on flows because it was explicitly temporary and limited in size. This is why it failed.

In spite of being a most needed and long awaited step, the OMT programme suffers from a number of unwelcome and potentially counter-productive restrictions. This implies that further improvements will be needed. These restrictions may be due to the fact that the OMT programme creates a severe moral hazard problem that the ECB cannot deal with. The first restriction is that OMT will only backstop debts of governments that have beforehand signed a Memorandum of Understanding (MoU). The second restriction is that the ECB retains an ‘exit option’ in the event that a government does not fulfil its commitment. The third restriction is that the ECB has not announced how the spread caps will be chosen. The final restriction is that it will only purchase debts of less than three years of maturity.

While the OMT programme represents a significant step forward, alone it will not stop the crisis. Governments must also challenge the policies that they have adopted so far. The banking union is necessary for the ECB to be able to act as lender of last resort to governments. This requires a single regulator, a single supervisor and a single resolution authority. With OMT, the ECB is becoming lender of last resort, a source of moral hazard that requires full treatment. The objective is to make sure that the debt build-up of the last decades will not occur ever again. Like OMT, The Fiscal Compact stands to represent a major step forward, but it must be improved.
1. **INTRODUCTION: A LOGICAL ERROR**

The May 2010 decision to bail Greece out, presented as a ‘special and unique’ case, has deeply transformed the monetary union. Since then, more countries have had to be bailed out (Ireland, Portugal, Cyprus) and the list is set to expand. Recognising that they had opened a Pandora box, the political leaders first created the ‘strictly temporary’ European Financial Stability Facility (EFSF) with a lending capacity of EUR 250 billion. Then they realized that the EFSF was far too temporary and they created the permanent European Stability Mechanism (ESM) whose lending capacity is set to rise to EUR 500 billion.

As long as the crisis only affects small countries, the EFSF/ESM approach may have been seen as realistic. The somewhat outdated Table 1, which presents the latest Commission forecasts, shows that the cumulated debts of the countries officially in programmes already exceeds the hoped-for future resources of the ESM. Adding Spain and Italy, the potential amount of debts in crisis exceeds EUR 3500 billion.

**Table 1: Public debts (EUR billion) – Forecasts of May 2012**

<table>
<thead>
<tr>
<th>Country</th>
<th>National debt</th>
<th>Cumulated crisis countries</th>
<th>Cumulated potential crisis countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>2</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Malta</td>
<td>5</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>9</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Cyprus</td>
<td>14</td>
<td>218</td>
<td>218</td>
</tr>
<tr>
<td>Slovenia</td>
<td>19</td>
<td>408</td>
<td>408</td>
</tr>
<tr>
<td>Slovakia</td>
<td>36</td>
<td>734</td>
<td>734</td>
</tr>
<tr>
<td>Finland</td>
<td>100</td>
<td>1596</td>
<td>1596</td>
</tr>
<tr>
<td>Ireland</td>
<td>185</td>
<td>190</td>
<td>190</td>
</tr>
<tr>
<td>Portugal</td>
<td>230</td>
<td>379</td>
<td>379</td>
</tr>
<tr>
<td>Austria</td>
<td>327</td>
<td>425</td>
<td>425</td>
</tr>
<tr>
<td>Greece</td>
<td>862</td>
<td>1596</td>
<td>1596</td>
</tr>
<tr>
<td>Belgium</td>
<td>1846</td>
<td>3560</td>
<td>3560</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1964</td>
<td>2161</td>
<td>2161</td>
</tr>
<tr>
<td>Germany</td>
<td>8751</td>
<td>8751</td>
<td>8751</td>
</tr>
</tbody>
</table>

*Source: AMECO on line, European Commission.*

It is essential to understand why these numbers matter. Officials often claim to deal with the financing needs of crisis governments over the next year or two – this is what the IMF calls the ‘financing gap’. The reasoning is that a government is safe as long as it has secured the corresponding resources, including from official lenders. This is a mistaken and misleading way of reasoning because it ignores how financial markets operate.

**Financial markets** – broadly defined as all investors, including financial institutions and individual savers – **hold debt stocks**, i.e. the public debts that have not been purchased by official institutions. As a result, the value of each government debt must be such that markets are willing to hold all of the existing stock. If markets are concerned that the debt will not be repaid in full, demand diminishes and the price has to decline to bring the value of the debt stock down to demand. Another principle of finance is that when prices decline below the par value (the nominal value of the debt when it was issued), the interest rate
must increase to compensate debt holders for the expected reduction on the value of the
debt stock. The relentless increases in interest rate spreads simply mirror the declining
value of debt stocks as estimated by the markets.

Why, then, is the official reasoning focused on the flow of refinancing needs flawed? Because official lending designed to match the gap for a few years do not reduce the stock; in fact official lending increases the stock. Official lending only helps, therefore, if markets regain confidence that the stock will be repaid some time in the future. For that to be the case, the markets need to be reassured that the deficits will become surpluses. If they are not, plugging the financing gap does not provide any relief, and may actually worsen market expectations. This is why large-scale purchases of public debts by the EFSF and the ECB have constantly failed to reduce the interest rate spreads. This is also why the financial markets constantly ask for economic growth because they know that deficits cannot be closed when the economy is in recession. Put differently, plugging the financing gap prolongs or deepens the crisis and invariably leads to the loss of market access.
2. **RATIONALE FOR THE OMT**

The only way to eliminate the spreads is to eliminate the threat of default or, at least, to set a credible ceiling to the size of an eventual default. Such an objective can only be achieved by guaranteeing, entirely or partially, the whole stock of debt. The numbers displayed in Table 1 imply that the EFSF/ESM solution is totally illusory, even before we worry about big debt countries such as Spain and Italy, not to mention France. Worse, as a dwindling number of ‘healthy’ countries undertake to bail out a rising number of crisis countries, their own fiscal health becomes increasingly dubious. If the crisis is allowed to linger, it is bound to spread all the way to the last, healthiest country. Proper crisis management must recognize the worst case scenario: it is the total of euro area public debts that have to be guaranteed, i.e. close to EUR 9000 billion, which amounts to more than four times the GDP of Germany.

At this stage, it becomes obvious that policy responses cannot be based on the EFSF/ESM approach. Even with IMF’s help – whose total lending capacity is some USD 250 billion –, the euro area countries simply do not have the resources to prevent the crisis from spreading and engulfing the whole monetary union. The only place in the world where thousands of millions of euros can be found is the ECB. This is why the ECB holds the crucial key to the end.

One could object that previous ECB actions under the Securities Markets Programme (SMP), totalling more than the EFSF purchases, have failed to quiet things down. In fact, the SMP serves as an illustration of the logical error described above. Each intervention under the SMP has been explicitly presented as ‘temporary and unique’. In other words, the ECB has framed its interventions within the flow view of debt financing. This error has had predictable effects. Given their sizes, these interventions have provided a temporary lull in market pressure because it allowed worried debt-holders to offload to the ECB the bonds that they wanted to get rid of. Since the SMP ruled out a stock guarantee, however, the markets did not change their assessment of the ability of governments to honour their debts. Worse, the senior creditor status claimed by the EBC implied that private debt-holders would bear the whole burden of an eventual default. This is why every SMP intervention has been followed by a temporary easing of interest spreads, itself followed by a strong increase in spreads as soon as the intervention stopped, as seen from Figure 1. In short, the SMP strategy was self-defeating.
The logic of the new Outright Monetary Transactions (OMTs) is in conformity with the stock view of financial markets. The ECB now addresses its interventions to the price (or interest rate level) and commits to unlimited interventions. This means that it stands ready to partially guarantee all the corresponding public debt. In addition, by dropping its claim as senior creditor, the ECB has made it clear that it intends to protect the private debt-holders. The markets perfectly well understand that the EBC has the means to backstop public debts. The result of the August 2012 announcement is unmistakable in Figure 1.

**Figure 1:** Ten-year spreads on Spanish bonds (basis points)

3. WEAK ASPECTS OF THE OMT PROGRAMME

The OMT programme represents a major turning point in the on-going crisis. The ECB has abandoned the flow approach of the SMP and adopted the correct stock approach. Yet, as announced, the programme suffers from a number of weaknesses, which imply that further improvements will be needed. Clearly, the paradigm change is facing political difficulties fed by a misunderstanding of the nature of the crisis. This may be the reason for these limits. At the same time, OMT create a severe moral hazard problem that the ECB cannot deal with, which may be another reason why it is imposing a number of restrictions to the programme.

3.1. Conditionality

The OMT will only backstop debts of governments that have beforehand signed a Memorandum of Understanding (MoU), either for a Troika programme or for the lighter flexible lending programme. In addition, the ECB retains an ‘exit option’, by stating that it will remove its guarantee in the event that a government does not fulfil its commitment. The idea is that ECB support does not come easily can be seen as essential to ensure that in the future member governments will not come to see monetary financing as a normal procedure. Indeed, critics are right to stress this procedure entails a massive moral hazard. This fundamental issue is examined below and appropriate policy responses are suggested. Here, conditionality is considered as a contribution to the effectiveness of the OMT programme.

The success of the programme will depend on whether governments regain – or maintain – market access. As noted above, markets assess the ability of a government to honour its debt. Key to this evaluation is economic growth. The current Troika programmes heavily emphasize fiscal austerity and much of the spreading recession can be directly caused by these programmes or to self-imposed austerity misguidedly adopted to avoid having to sign a MoU. By making OMT conditional on a MoU, the ECB undermines the effectiveness of its interventions.

In addition, the exit option may well turn out to be a double-hedged sword. As a country gets deeper into recession, its chances of fulfilling its commitments drastically decline. This has been the case so far for every single Troika programme. What will happen in the nearly certain event that a government under OMT support is unable to live to its (imposed) commitments? Withdrawing support will put the country in an extremely severe situation; the ECB is likely to want to avoid bearing partial responsibility for such an action. One solution is that it will mellow down its conditions, which will then lose all credibility. Another option is to insist within the Troika that the MoU conditions be made more growth friendly, as the IMF has been arguing for. This would be a welcome development, but one fraught with political risks. Either way, conditionality stands to lock the ECB in an untenable position while reinforcing the austerity bias established in early 2010 with disastrous implications that have now become highly visible.

3.2. Unknown caps

Setting a limit on interest rate spreads – which is equivalent to setting a floor to bond prices – is an essential step to curb the crisis. Should the cap be the same for each country? At all maturities? Should it change over time? More importantly even, where should it be set? These are extraordinarily complex questions, both because it has not been done before and because the implications are massive. Apparently, the ECB has decided not to reveal its choices. This can be seen as a prudent response but it also stands to undermine the programme.
The markets will undoubtedly endeavour to discover the caps. They will do so by selling large amounts of public debts, until the spreads stabilize. This will force the ECB to absorb a lot of bonds. In contrast, were the ECB to announce a cap, the markets would merely test the central bank’s resolve and promptly stop bond sales (unless they consider the cap as unrealistic, of which more later). Either way, the markets will end up knowing the cap so the only difference between the two strategies is the amount of bond purchases by the ECB.

Does it matter? In a benign scenario where there will be no sovereign debt restructuring, the difference between the two strategies is largely irrelevant. However if, as is likely, a number of countries eventually have to restructure their debts, the ECB stands to suffer large losses under the ‘secret cap’ strategy. The issue is not that the ECB may suffer heavy losses; central banks are not profit making institutions and can suffer large losses without any serious consequence. The issue is that large bond sales followed by a debt restructuring will have resulted in the socialization of private losses. This is what happened with the unfortunate Private Sector Involvement (PSI) organized for the Greek debt and it should not be repeated for many obvious reasons.

One answer is that a fixed cap can force the ECB to absorb ‘unlimited’ amounts of bonds if a debt restructuring comes to be expected, correctly or not. The fear then is that the ECB would want to argue for a debt restructuring, which may not be fully justified. This is a deep issue. In theory, only insolvent countries should restructure their debts. In practice, however, it is impossible to decide whether a country is insolvent (Wyplosz, 2011) if only because it is impossible to predict future spending and tax revenue. What is left is market judgement, which can be erroneous, and therefore market access.¹ In that case, every government will deny the need for debt restructuring for as long as it can. Meanwhile the debt will continue to grow and the eventual debt restructuring will be larger and more painful to both the country and its debtors; this is precisely what happened, and will happen again, with Greece. Having the ECB in the camp of those who push for prompt corrective action, including debt restructuring, is therefore highly desirable.

### 3.3. Short term bonds

In fact, by announcing a **cap on spreads**, the ECB will announce a **floor for bond prices**. Imagine, for instance, that the price floor for country is 70 percent of the face value of the debt. The markets will observe that 30% of the debt value is not guaranteed and therefore up for default. This reasoning provides a guide to the ECB for the questions raised before. The caps should be different for each country and chosen such that it corresponds to the likely size of the restructuring. The ECB would not just be an advocate of early restructuring, it would be the restructuring agent. This is of course politically difficult and one reason why the ECB has announced that it will only intervene on short maturities.

Indeed, backing only relatively short-maturity debts largely leaves the ECB off the position of preparing a restructuring. Indeed, an implied price discount of 30% at a two-year maturity will encourage bond-holders to keep their bonds – beyond selling for testing or price discovery – and simply wait for redemption at par in two year’s time. A promise to continuously roll-over bond purchases at short maturities allows the ECB to indefinitely postpone debt restructuring. In this way, the **OMT programme** becomes a **powerful engine to avoid debt restructuring**.

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¹ One can make a strong case that no euro area country – including Greece – has been insolvent. Yet, once markets concluded differently and set large spreads and/or shut market access down, the country effectively became insolvent.
This may well be the ECB’s intention. The question, however, is whether this is wise. An opposite view is that several countries have accumulated public debts so large that sustained growth will be impossible, as has been the Italian experience over the last 15 years. Reinhart and Rogoff (2009), among others, have found that public debts in excess of 90% of GDP stunt economic growth. The 90% threshold is only indicative, of course, but several euro area countries exhibit clearly excessive debt levels, and others will pass the threshold. If the conclusion is that some debt restructurings are desirable, the ECB’s decision to only buy bonds of less than three-year maturities is misguided.
4. THE ECB SHOULD NOT BE ALONE

The OMT programme is one of the conditions necessary to bring the euro area crisis to an end but alone it is not sufficient. If, as argued above, several countries have to restructure their debts, a number of banks will fail. In addition, **OMT open up massive moral hazard issues** that the ECB cannot deal with. Governments must do their part.

4.1. Moral hazard

The current crisis should not have happened. Adequate fiscal discipline and bank supervision should have prevented it from happening in the first place. The no-bailout clause should have been invoked to circumscribe the crisis to those countries that either failed to be fiscally disciplined (Greece, Portugal, Italy) or to adequately supervise their banks (Ireland, Spain). The ECB is now required to act as lender of last resort, a step that ought to have been avoided. There is no alternative to an ECB intervention, but it is a source of moral hazard. The proper way to deal with moral hazard is not to make rescues painful – the strategy followed so far – but to make sure such a situation is most unlikely to ever occur again. This is a task for governments.

4.2. Banking Union

With the OMT, the ECB becomes a lender of last resort to governments. It must also be prepared to act as lender of last resort to banks. The continuing deterioration of the economic situation progressively harms banks as the number of non-performing loans rises inexorably. As noted, public debt restructurings will also hurt many banks. Sooner or later, and sooner than policymakers expect, we will see important bank failures. The ECB must be ready.

There seems to be a belief that bank failures will be dealt with EFSF/ESM resources. As with public debts, the correct measure of potential needs are stocks, not flows. The assets (and liabilities) of monetary and financial institutions add up to some EUR 34,500 billion. The large banks have assets in the order of magnitude of EUR 2,000 billion. Clearly, a serious bank shake-up would quickly exhaust EFSF/ESM resources. This is why a lender of last resort is needed and why the ECB is the only institution that can play that role.

As lender of last resort, the ECB stands to inject large amount of money into failing banks. It stands to reason that the ECB will not wish to do so without a very precise knowledge of the bank situation. The arrangement proposed by the de Larosière Group organises Colleges of National Supervisors that would make the information available as needed. Leaving the task of supervision in the hands of national authorities is unlikely to work because supervisors are known to favour national champions.

This is why the ECB has asked to be given supervisory authorities. The recent Commission proposal advocates such a transfer of authority. Yet, supervision is only the first step. Once a bank fails, it is necessary that cash injections be careful calibrated to protect taxpayers, which often requires that the bank be deeply restructured or closed down. Bank resolution, therefore, must be protected from the intense pressure that is usually exerted on the authorities. Current plans do not call for a single resolution authority. This is bound to undermine the ECB’s ability to act as lender of last resort. Governments must agree to a single supervision authority and to a single resolution authority.
5. WHY CRITICISM OF THE OMT IS EMPTY

Critics of the OMT advance a number of arguments that are misleading. Here is a critical review of the main criticisms.

5.1. Moral hazard

The argument is that lending to governments will only encourage them to be fiscally undisciplined in the future. This is correct, as argued above, but incomplete. First, what else can be done to bring the spreading crisis to an end? Because of past indiscipline, several governments are now facing a crisis because of high public debts. This is a legacy from the past that needs to be dealt with. Continuing austerity has been tried and it is now clear that it only makes things worse. Second, the response to moral hazard concerns the post crisis regime. The Fiscal Compact offers the hope of a better regime. The focus should be on making the compact operational and enforceable.

5.2. Costs to ‘innocent’ taxpayers

As the ECB buys large amounts of public debts, some of which will be restructured, losses are possible. These losses, which come on top of those that will be borne by the EFSF/ESM, will have to be absorbed by taxpayers from all euro area countries, including those that have been fiscally disciplined and where banks have provided loans with prudence. This is true, but what is the alternative. Without OMT (and further action), the crisis countries will be forced to abandon the euro. Their new currencies will be deeply devalued, which will make service of their euro-denominated debt impossible. They will have to default much more deeply than if they were to stay in the euro area. The losses on bonds already acquired by the EBC and the EFSF/ESM will be larger. ‘Innocent’ taxpayers will be better protected if the euro area remains intact than if countries start to leave, a process that can prove highly contagious.

In addition, there are no ‘innocent taxpayers’. As argued above, the crisis has deepened and spread because euro area governments have repeatedly broken the no-bailout clause. Citizens of countries whose governments that willingly made this historical error will have to bear the consequences. In a democracy, citizens have the means to bring their governments to account.

5.3. Not the solution

Another argument is that OMTs, in and by themselves, will not bring the crisis to its end. This is true but disingenuous. OMT are a necessary condition to solve the crisis, not a sufficient condition. It is hard to see the wisdom of rejecting necessary conditions simply because they are not sufficient.

5.4. Inflation

The Eurosystem’s balance sheet has already been multiplied by 2.5 since July 2007. Even though OMT are to be sterilized, the view is that the printing press has been allowed to create money in a way that is bound to lead to inflation. This view is based on the historical link between money growth and inflation, one of macroeconomics fundamental stylized facts. This link, however, has been broken because of another broken link, that which associates money growth and credit creation. In the current situation, characterized by a latent bank crisis and a deepening recession, credit growth is virtually nil. Banks absorb massive amounts of liquidity to protect themselves against a risk of illiquidity. The money that they hold is not used to grant credit and support spending. The best proof is the total absence of any inflation impact of the Eurosystem’s balance sheet massive increase over
the last five years. The same applies to other country, for example the US where Fed’s balance sheet has been multiplied by a factor of 3.15.

The link break is temporary. When the crisis is over, the historical regularity will reassert itself. This means that central banks around the world will have to withdraw liquidity, a step that they are keenly aware of. This also means that those who worry about the central bank balance sheet increases should distinguish between the current historical situation and the longer run.

5.5. **Deficit financing**

A related concern links monetary financing of budget deficits with inflation. Deficit financing by central banks is known to be the source of all big inflations. OMT, however, do not deal with future deficits but with the legacy of high debts accumulated over the past. The response to future deficit financing is fiscal discipline and the re-establishment of the no-bailout clause.
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Abstract
During the first half of 2012 market sentiment was dominated by the expectation of the unravelling of the euro area. The main reason being the realisation that the European Stability Mechanism (ESM), whose ratification was at the time not yet completed, would not be big enough to save Italy and Spain.

This induced the President of the ECB to state publicly that his institution would not allow a breakup of the euro and to set out a new bond buying plan, the so-called outright monetary transactions (OMT) programme, to support the promise. The OMT implies an indirect but potentially unlimited backup for an EMS bond purchasing programme. In substance, this is not different from the ‘EFSF/ESM as a bank’ proposal of Gros & Mayer.

Confidence returned quickly, although only temporarily, after the announcement. The conditionality of the programme means that from now on the ECB will buy any government bonds but only with the permission of the German government and parliament.
LIST OF ABBREVIATIONS

ECB European Central Bank
EFSF European Financial Stability Facility
ESM European Stability Mechanism
GDP Gross Domestic Product
MFIs Monetary Financial Institutions
OMT Outright Monetary Transactions
SMP Securities Markets Programme
EXECUTIVE SUMMARY

During a widespread panic only the central bank can assure the stability of the financial system. During late 2011 and the early summer of 2012 expectations of an imminent insolvency of major member countries and a generalised break down of the euro became more and more widespread and resulted in a vicious circle of higher risk premia, higher refinancing costs for banks and expectations that these rates imposed an unsustainable burden on both banks and sovereigns.

The absence of a sufficiently large rescue fund that could kill these expectations induced the President of the ECB to state publicly that his institution would not allow a break up of the euro. The so-called Outright Monetary Transactions (OMT) programme designed for this purpose, promises an indirect but potentially unlimited backup for an EMS bond purchasing programme aiming to restore some confidence, at least temporarily.

We do not wish to suggest that the OMT programme will solve all problems. The crisis requires deep-seated reforms, not only for fiscal policy, but also in other areas. But without a firm commitment by the ECB that the euro will not be allowed to disintegrate, the crisis countries might simply not have enough time to implement these reforms.
1. INTRODUCTION

In our submission to the European Parliament of December of 2011\textsuperscript{1}, when the proposal of endowing the ESM with a banking licence was laid out, it was argued that:

“Countries are vulnerable to ‘runs’ on their public debt markets owing to the fact that they have only long-term assets (the capacity to levy taxes from their citizens), but short-term liabilities because even without running a deficit they have to refinance a sizeable proportion of their overall debt each year. The fiscal authority of any country that loses the confidence of the financial markets (and cannot print its own currency) can thus quickly run out of funding and thereby become insolvent if investors go on strike.”

The conclusion was that:

“There is a liquidity problem, which can only be solved with the support of the only institution that can create at least potentially unlimited amounts of liquidity, namely the European Central Bank (ECB).”

The validity of this argument has now been fully acknowledged by most European policymakers and resulted in the ECB setting out the Outright Monetary Transactions (OMT) programme in September 2012.

Officially the ECB has declared that it could not recognise and refinance the European Stability Mechanism (ESM) as an ‘eligible counterparty’, i.e. endow the mechanism with a banking licence. However, in practice, the ECB has decided that it will support any ESM bond-purchase operations with potentially unlimited amounts of interventions in the secondary market, albeit limited to the shorter end of the maturity spectrum.

Given that the purchase programme implies that risky government bonds will ‘sit in the belly’ of the ECB, the OMT approach is associated with a higher risk for the ECB than would have been the case under the ‘ESM as a bank’ proposal, whereby purchased bonds (and the associated credit risk) would have appeared in the balance sheet of the ESM. However, from a formal point of view, the official rejection of the baking licence for the EMS has been welcomed by many as a much needed rejection of ‘monetary financing’.

Markets welcomed the ECB decisions and costs on short-term borrowing started to fall quickly and sharply in the euro area periphery, but only temporarily. At this stage of the crisis, it would be mistaken to believe that there will be no actual need for the OMT programme to be implemented.

In order to understand the extent of the OMT and its possible effects, the following issues should be clarified: Is the OMT really necessary? Is the OMT a veiled form of monetary financing? What are the risks associated with it? The following paragraphs explore each of them separately.

\textsuperscript{1} Gros and Mayer (2011).
2. IS THE OMT NECESSARY?

Most likely the OMT was not the only option on the table to address the liquidity crisis and restore an acceptable level of financial stability in the sovereign bond market (directly) and on other market segments (indirectly). As mentioned in the introduction, providing the ESM with a banking licence would have addressed the same fundamental problem of the euro area, which the creation of permanent rescue fund (ESM) did not solve. Indeed, the problem was not about the purpose of the ESM but its size: a fund endowed with a limited amount of resources cannot work as back stop mechanism in case of liquidity crisis, at least not when a large Member State is in trouble. Fiscal resources will always be insufficient to counter large spread liquidity problems as governments cannot dispose of unlimited amount of resources in the short run and this is particularly the case under the current debt crisis conditions. Moreover the 'cascade structure' of the ESM exacerbates the risk associated with augmenting the size of the fund: if large countries, such as Italy and Spain, need support the remaining basis, using fiscal 'tax', shrinks.

In a widespread liquidity and confidence crisis, only the central bank can provide the resources necessary to address the problem.
3. **IS THE OMT MONETARY FINANCING?**

The real question should be: Does the ECB increase the risk of inflation by buying government bonds? The answer is that, in general, this is not the case.

To understand the reason why government bond purchases (of the kind envisaged by the OMT programme) do not increase the risk of inflation, one must keep in mind that the prohibition of monetary financing was meant to forestall a repeat of the experience of the 1970 and partially the 1980s when in some countries the central bank financed a large part of very high fiscal deficits. These deficits added to an already high demand level and therefore led to higher inflation. However, the purpose of the OMT will not be to finance deficits, but to help countries subject to a liquidity squeeze to refinance the existing stock of public debt at acceptable rates.

The best illustration of this situation is Italy (the Italy of today, not of the 1970s). As shown in Table 1 its fiscal deficit will soon be reduced to 1.5% of GDP.

**Table 1: Financing needs and deficits**

<table>
<thead>
<tr>
<th></th>
<th>Maturing debt</th>
<th>Budget deficit</th>
<th>Total financing need</th>
<th>Maturing debt</th>
<th>Budget deficit</th>
<th>Total financing need</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Italy</strong></td>
<td>414</td>
<td>37</td>
<td>451</td>
<td>356</td>
<td>25</td>
<td>380</td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td>158</td>
<td>64</td>
<td>222</td>
<td>171</td>
<td>61</td>
<td>232</td>
</tr>
</tbody>
</table>

*Source: IMF, Fiscal monitor, April 2012 (Table 2) and author’s elaboration.*

Such a small deficit does not lead to any danger of inflation, especially in today’s depressed environment. Moreover, each year, Italy needs to roll-over an amount of existing debt equivalent to about 15-20 percent points of GDP (the stock of debt amounts to about 120% of GDP and the average maturity is about 6-8 years), this implies that more than 9/10 of the total financing need for Italy concerns roll-over of the existing debt. Even for Spain, which still has a substantial deficit (above 5% of GDP) the roll over needs are about three times as important as the financing of the deficit (see Table 1).

In this context, the purpose of the ECB intervention in the sovereign bond markets through the OMT is to prevent a deterioration of a liquidity shortage which arises from the roll-over needs (given a large stock of debt) and not financing of deficits.

Furthermore, even technically the ECB would not be financing deficits if the OMT where to be implemented. Under the OMT, as under Securities Market Programme (SMP) beforehand, its interventions would be limited to the secondary market, i.e. the ECB would buy existing/traded government bonds without providing any fresh money to government. It remains of course true that sub-segments of government bond markets are related and investors are more likely to provide a government with fresh money if the ECB stands potentially ready to buy, at least part of, the stock of debt. Yet, this reasoning applies also to almost any central bank operation: If the ECB has a standing facility, under which banks can use government bonds as collateral in refinancing operations, it indirectly also makes it easier for governments to finance themselves. Banks have indeed an incentive to hold government bonds. The problem is that banks, especially in some peripheral countries, are already too much exposed to sovereigns and indirectly the ECB measures reinforce the vicious bank-sovereign feedback loop which threatens the stability of the entire euro area.
The ECB has rightly decided that it would focus on the shorter end of the yield curve. There are two main reasons for this. The first concerns the fact that, under normal conditions, short-term yields are determined by monetary policy. Indeed they are driven by monetary and liquidity considerations rather than credit risk considerations. In this sense they belong to the sphere of action of a central bank. The second reason is that, with reference to individual countries, financial stability is much easier to restore if the yield curve has the normal shape, i.e. short rates are below longer ones. A good indicator of real credit worries for a country is a flattening of the yield curve, or worse, an inverted yield curve, i.e. a situation in which short-term yields equal or even surpass long-term ones. A flat yield curve signals that investors expect a debt default/rescheduling. Indeed under such a scenario short- and long-term bonds are all treated equally. This is exactly the kind of belief the ECB aims at killing with its programme.

3.1 Sterilisation

In order to reassure against inflation fears that could be associated with the programme, the ECB has announced that OMT purchases will be fully sterilised. By definition sterilisation implies that the purchase of bonds does not affect the money supply. In principle, the ECB could do so quite simply, just by putting in place liquidity absorption operations like reverse open market operations, i.e. selling other assets, or by colleting banks’ deposits. The latter is indeed the way sterilisation occurred. As a matter of fact, the ECB ‘sterilised’ the SMP purchases through ‘fixed term deposits’, which she managed to attract from banks at a rate just 0.001 % above the normal deposit rate (for current accounts). This variable has a very high correlation with the SMP holdings on the balance sheet of the ECB.

However, this has little economic relevance. As long as the ECB has a standing facility at which it satisfies all credit institutions’ financing request at a fixed rate, sterilisation operations can at most shift items across categories.

However, while the ECB can attract fixed term deposits of almost exactly the size of its SMP operations it has no control over the total amount of deposits which banks wish to hold at the ECB. It is clear that there must have been a lot of substitution between fixed term deposits and other deposits at the ECB given that the correlation between total of all deposits held by Monetary Financial Institutions (MFIs) at the ECB and the fixed term deposits is rather low.

The general point is that with fixed rates on both deposits and ‘normal’ refinancing operations (up to three months) the ECB cannot in any way control the size of its own balance sheet. The key element in determining the size of the balance sheet of the ECB has been in reality the size of the longer term refinancing operations. Figure 1 shows a high correlation between long-term refinancing operations (blue line) and ECB liabilities to euro area credit institutions (red line), which include deposits of banks at the ECB, as well as with the total size of the Bank’s balance sheet (green line).
Figure 1: ECB balance sheet: Selected items (billion Euros)

Source: ECB Statistical Data Warehouse.

Note: Liabilities to MFIs includes deposits and current accounts of euro area credit institutions to the ECB related to Monetary Policy Operations. What it is called SMP is in fact securities held for monetary policy purpose which include both the SMP and the Covered Bond Purchase programmes.

Figure 1 also illustrates, that the size of the SMP has been so far just too small that it could have exerted any important overall impact on the balance sheet of the ECB.

The OMT might of course have to be larger than the SMP and might thus end up having an impact not only on the distribution of different items on the liability side of the balance sheet of the ECB, but also its overall size. But does this matter? Theory suggests that what matters for the economy and what might create inflationary pressures should be an excessive growth rate of money, not the monetary base. This is also the reason why the ECB has concentrated in its ‘monetary pillar’ on the growth rate of M3 (and not the monetary base or its balance sheet).

Theory suggests and evidence supports the argument that during financial crises money and the monetary base can develop quite differently. This is illustrated in Figure 2 below, which shows the evolution of the monetary base and M3 since 1999.
It is apparent that since the outbreak of the crisis, M3 has been rather stable (it increased of about 9 percentage points in four years) whereas the monetary base has exploded, doubling in size in just four years. In the US and most other developed economies the same phenomenon can be observed: central banks’ balance sheets have expanded, but the money supply has not and inflation has remained subdued, along with expectation of future inflation. It is interesting to note that the opposite development took place during the period 2001-2003, but over the longer run, as shown in Figure 2, the monetary base and M3 increased in parallel.


3 Interestingly enough, the standard money multiplier, which inversely depends on banks’ reserve requirements, should have doubled after January 2012, when the coefficient of minimum reserve requirement was reduced by the ECB from 2% to 1%. In theory, this means that money supply should double, in reality it halved with respect to monetary base.
3.2 Inflation risk versus credit risk

Following the argument exposed earlier, while risk to inflation associated with the OMT seems contained, there is obviously a credit risk for the ECB (as for the ESM). Many commentators and market participants fear that countries facing negative growth, low competitiveness and falling tax revenues (combined with a large stock of debt) will in the end have to restructure. The underlying hypothesis for the OMT, as for the SMP, must thus be that the official sector has a different view of the credit risk as at least part of the private sector. The rationale for an ESM programme is to give the country enough time to undertake reforms and fiscal adjustment to be able to fully service its debt in the longer run (with Greece being the exception, at least in the mind of the European Council).

Furthermore, beyond credit risk, an additional risk has played a crucial role in the ECB decision, the so called convertibility risk. Widespread expectations of a breakdown of the euro could well be self fulfilling. The ECB has clearly weighted the risk of breakdown of the euro as more relevant than the credit risk in its balance sheet.
4. CONCLUSION

We do not wish to suggest that the OMT program will solve all problems. The crisis requires deep-seated reforms, not only for fiscal policy, but also in other areas. But without a firm commitment by the ECB that the euro will not be allowed to disintegrate, the crisis countries might simply not have enough time to implement these reforms.
**REFERENCES**


NOTE

Abstract
Under the Outright Monetary Transactions (OMT) programme, the ECB will buy bonds of distressed Member States in order to restore the efficiency of the transmission mechanism of monetary policy. This is necessary in order to maintain the euro as a stable currency. However, it exposes the ECB to additional risks. To minimise these risks, deeper integration of financial markets and European economic policies are required. To support the ECB, the ESM should issue Union Bonds, which are technically different from Eurobonds insofar they do not create additional liabilities for Member States.
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ANNEX I: THE YIELD CURVE 63
EXECUTIVE SUMMARY

ECB and IMF have expressed their concern that financial markets seem to expect the break-up of the euro. Under the new Outright Monetary Transactions (OMT) programme, the ECB will buy bonds of distressed Member States, provided they have applied for assistance from the ESM.

This new policy tool has become necessary in order to restore the efficiency of the transmission mechanism of monetary policy and to maintain the euro as a stable currency. Excessive spreads in the yield structure of euro area government bonds prevent the traditional channels of monetary policy transmission from working efficiently. Direct interventions in the bond market by the ECB seek to normalise the yield curve in order to stabilise the economy.

The negative spillover from the sovereign debt crisis into the real economy is made worse by the home bias and financial segmentation and fragmentation of financial markets. Home bias means that local banks hold excessive shares of “their” government’s debt in their portfolio. They are therefore also excessively vulnerable when yields on this debt increase and prices collapse. Home bias therefore distorts monetary policy and contributes to a vicious circle of banking fragility, high liquidity preference, credit crunch, economic recession, public debt fragility and more problems for banks’ balance sheets.

The vicious circle is re-enforced by the famous No-bailout principle, which assumed that financial markets would surveil governments and “punish” excessive borrowing by raising interest rates and thereby ensure fiscal discipline. But, if markets punish excessive borrowers by pushing rates up, bond prices will fall and the assets of banks and other private investors will depreciate. With home bias and market segmentation local banks will suffer disproportionately from the deterioration of local economic conditions. To restore their balance sheets, banks will reduce leverage, thereby causing a credit crunch; alternatively, they will lend aggressively to high-yielding risky projects, thereby increasing financial fragility. Hence, the theory of market discipline due to the no-bailout commitment is bankrupt and the ECB has now become its receiver. OMT is the answer.

While OMT may cut through this vicious circle, it also exposes the ECB to new risks. To minimise these risks, deeper integration of financial markets and European economic policies are required. To support the ECB, the ESM should issue Union Bonds, which are technically different from Eurobonds insofar the do not create additional liabilities for Member States.
1. THE MEANING OF A STABLE CURRENCY

On 6 September 2012 the ECB’s Governing Council announced the creation of a new policy tool, the Outright Monetary Transactions (OMT). Under this programme, the European Central Bank (ECB) will buy sovereign bonds of one- to three-year maturity, provided the issuing country has agreed to a fiscal adjustment programme with either the European Financial Stability Facility (EFSF), or its successor, the European Stability Mechanism (ESM). This announcement was welcomed by financial markets as “the great bazooka”, and criticised by Bundesbank President Weidmann (2012) as endangering price stability. The Bank’s decision must be seen in line with President Mario Draghi’s repeated declarations that the ECB will do “whatever it takes to preserve the euro as a stable currency”. During his press conference on 2 August, he said:

“The Governing Council extensively discussed the policy options to address the severe malfunctioning in the price formation process in the bond markets of Euro Area countries. Exceptionally high risk premia are observed in government bond prices in several countries and financial fragmentation hinders the effective working of monetary policy. Risk premia that are related to fears of the reversibility of the euro are unacceptable, and they need to be addressed in a fundamental manner. The euro is irreversible.”

On 27 August 2012, ECB Board member Jörg Asmussen presented some further details and explained that

“The risk premia for some sovereign debt are no longer reflecting only default risk, but markets are now pricing in a break-up of the Euro Area” and he added: “Such systematic doubts are dramatic - and for the European Central Bank not acceptable. Only a currency, which is beyond all doubt for its continued existence, is a stable currency.”

Draghi and Asmussen echo the IMF’s (2012:10) exhortations that

“The crisis calls for a much stronger collective effort now to demonstrate policymakers’ unequivocal commitment to sustain EMU. Only a convincing and concerted move toward a more complete EMU could arrest the decline in confidence engulfing the region. A credible roadmap toward a full banking union and fiscal integration will make the short-term crisis measures more effective. Structural reforms throughout the Euro Area will also be necessary to revive growth in the long run, while macroeconomic policies can smooth the needed adjustment in the short run.”

Through these statements we perceive the clear idea that a stable European currency is more than low inflation: stability is now a matter of survival. As the IMF put it:

“The Euro Area crisis has reached a new and critical stage. Despite major policy actions, financial markets in parts of the region remain under acute stress, raising questions about the viability of the monetary union itself. The adverse links between sovereigns, banks, and the real economy are stronger than ever. As a consequence, financial markets are increasingly fragmenting along national borders, demand is weakening, inflation pressures are subsiding, and unemployment is increasing. A further intensification of the crisis would have a substantial impact on neighbouring European countries and the rest of the world.”

1 See Draghi, 2012.
2 Asmussen, 2012.
What can be done to keep the euro as a stable currency? A narrow view would only focus on price stability, which is of course the primary objective of the ECB. But although price stability is a necessary condition for a sustainable monetary union, it is not sufficient. Price stability is important for many reasons: it preserves the function of money as a store of value, it prevents distortions in the markets for goods, labour and capital, and ultimately it is one of the pillars of social justice. The question is how can price stability be maintained? Most economists agree that in the long run prices are a monetary phenomenon, which means that the amount of money in circulation determines goods prices. However, the point is that this is only valid over a long period of time. In the short- and medium-term, liquidity preferences and portfolio strategies by financial investors drive a wedge between money, output and prices. This wedge is particularly important in an environment of heightened uncertainty and tensions in financial markets, so that a simple analysis of the supply of money and the growth of monetary aggregates is insufficient to assess the risks for price stability.

If the relation between money and prices is unstable, controlling price stability by manipulating interest rates and money supply becomes increasingly difficult. The situation has deteriorated significantly since the start of the crisis. Lending conditions have varied substantially across the Euro Area and the pass-through of policy to lending rates has weakened, especially in the periphery (IMF, 2012: 16). Aware of this fact, the ECB is now seeking to restore the efficiency of the transmission mechanism for the conduct of monetary policy by implementing Outright Monetary Transactions (OMT). In a special article in the August Monthly Bulletin it argues:

"The financial system is the primary channel through which monetary policy affects the economy and ultimately prices. Stable, efficient and integrated financial markets are the basis for a smooth transmission of monetary policy across countries. The current degree of heterogeneity in financial conditions therefore poses a major challenge for the single monetary policy."  

In order to design a successful anti-crisis strategy, proper understanding of how monetary policy works is crucial. In a famous paper, Bernanke and Gertler (1995) wrote: "To a great extent, empirical analysis of the effects of monetary policy has treated the monetary transmission mechanism itself as a ‘black box.’" Critics who have expressed doubts about the ECB’s new OMT policy instrument are frequently carrying the flag of price stability, but they do not address what is in the black box. As a consequence, policy mistakes are hard to avoid. For Europe, this could herald disaster.

1.1. **The transmission mechanism of monetary policy**

The transmission mechanism describes how decisions about official interest rates affect economic activity and inflation. It is commonly understood that real investment and economic activity need to be financed by credit contracts covering the long-term. Normally, monetary policy seeks to influence the long-term conditions by varying the short-term rate. But if uncertainties and distortions prevail in the economy, the stable relation between the policy and market rates breaks down. Economic theory usually assumes that firms will borrow to invest when the expected returns exceed the cost of credit, i.e. the opportunity costs of investment, which reflect risks of all kinds. Lenders will provide credit only if they are compensated for giving up the advantage of being liquid. The central bank supplies money, i.e. risk free liquidity, to banks in the interbank market and thereby controls interest rates at the short end. However, long-term interest rates reflect the liquidity preferences of lenders (banks) who wish to hedge their risks. Because holding securities for a longer period is more risky than holding money, long-term interest rates are normally

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higher than short-term rates. But in an environment with heightened risks of loss in the value of real and financial assets, the liquidity premia can vary substantially. For example since late 2010, retail lending rates have started to rise while policy rates remained low. In this situation, the central bank loses control over the transmission mechanism.

In normal times, the main channels through which the central bank transmits monetary policies are:4

- Official interest rate decisions affect market interest rates (such as mortgage rates and bank deposit rates), to varying degrees and across different maturities.
- Policy actions and announcements affect expectations about the future course of the economy and the confidence with which these expectations are held, and also affect asset prices and the exchange rate.
- These changes in turn affect the spending, saving and investment behaviour of individuals and firms in the economy, hence aggregate demand.
- The level of demand relative to domestic supply capacity—in the labour market and elsewhere—is a key influence on domestic inflationary pressure
- Exchange rate movements have direct effects, though often delayed, on the domestic prices of goods and services imported from different currency areas, and indirect effects on the prices of those goods and services that compete with imports or use imported inputs.

When the transmission mechanism breaks down, the economy is likely to get stuck in a depression. Credit demand for real investment will be lower when the future return on capital is uncertain or impaired by austerity policies. It is well known from the finance literature that risk premia are time-varying and risk aversion increases during slowdowns (Manganelli and Wolswijk, 2009). But higher risk premia will also in return hamper economic growth. Economic activity could be constrained by the unavailability of credit when high volatility in financial markets induces investors to shift away from risky financial assets into monetary assets, i.e. into more liquid short-term assets. Such a situation is called a credit crunch. Given the ECB’s mandate of maintaining price stability and, subject to that, to support high employment (see Treaty on the European Union, art. 3), the ECB must minimise demand fluctuations as measured by the output gap and prevent a credit crunch causing a depression and negative long run effects on potential growth.

After the Lehman crisis in 2008, the traditional mechanisms were impaired everywhere. Expected returns dropped and uncertainty increased. Interest rate differentials increased dramatically. Banks stopped lending and monetary policy became increasingly powerless. In accordance with textbook economics, fiscal policy had to rescue monetary policy. European governments, together with the G20 partners, and all major central banks responded by stimulating their economies. This active intervention has prevented a global depression. However, Europe was soon hit by a second shock, the sovereign debt crisis. This time European governments did not respond in concerted ways. Instead of reducing uncertainty, their actions increased it and they embarked on austerity strategies, which have compounded the debt problems in many states. This has made the task of monetary policy increasingly more difficult.

The main problem is that the confidence in policy announcements by Euro Area governments is severely hampered by inconsistent and irresponsible political discourses in leading Member States (Collignon, Esposito, Lierse, 2011). The political uncertainty has now reached a point where markets openly consider the risk of the Euro Area breaking up.5 As the IMF (2012:9) found:

5 See ECB, 2012 and as an example Dumas, 2012.
“The deepening of the crisis suggests that its root causes remain un-addressed. EMU still lacks the basic tools that can break the adverse feedback loops between sovereigns, banks, and the real economy. Also, largely missing are ambitious policies to restore strong and balanced growth across the Euro Area that can counter current headwinds to growth, rectify competitiveness problems, and raise trend growth.”

The first priority for overcoming the crisis must be restoring the efficiency of monetary policy and this requires removing distortions which result from the segmentation and fragmentation of bond markets.

1.2. Government bonds and the home bias

Until the outbreak of the global financial crisis, European bond markets seem to have achieved a high degree of integration; with the elimination of exchange rates, interest rate spreads of Euro Area 10-year government bonds against the German benchmark had converged to minimal amounts. Before the Lehman crisis, yields were driven by the standard variables identified in the literature: short-term interest rates, credit and liquidity risk and other “pure” risk considerations. After Lehman, risk premia increased and following the Greek debt crisis, they seemed to spin out of control.

The literature has identified four major components driving bond yields: (i) The response of long-term yields to short-term interest rates is, of course, one of the transmission mechanisms of monetary policy. Manganell and Wolswijk (2009) have shown that this mechanism has functioned in the Euro Area as expected until early 2008. (ii) Credit risk is the part of yields that would compensate investors for the ‘expected loss from sovereign default. For investors who hold the sovereign bond to maturity, this loss is simply the product of the probability of default and the loss-given-default’ (Remolona, Scatigna and Wu, 2007). It is often measured by CDS swaps and has been shown to be the most important component in the dramatic rise of yield spreads since the Greek crisis (Codogno et alt., 2003; Favero and Missale, 2012). (iii) Liquidity risk refers to the extra interest rate an investor requires to be compensated for bearing the risk of having to liquidate the security at a lower price with respect to the benchmark. (iv) ‘A less obvious component of the spread is the risk premium. Such a premium compensates investors for the fact that the realised loss from default may exceed the expected loss. Such a default risk is asymmetric because the possible losses from default are large relative to the possible gains from an absence of default.’ (Remolona, Scatigna and Wu, 2007). In the present environment of uncertainty about the future of the euro, this pure risk premium is likely to be high, although to my knowledge no empirical estimates have been made.

Making this decomposition is essential for deriving policy implications: a large default risk premium is associated with market discipline and calls for improvements in the sustainability of public finances, while a large liquidity risk may indicate incomplete bond market integration, pointing to the need for further harmonisation of technical standards and bond issuance policies (Baele et alt, 2002; Manganell and Wolswijk, 2009). However, liquidity and default risks also interact, when the lack of access to liquidity pushes a debtor into default. In fact, contrary to corporate bonds, it is hard to distinguish insolvency and illiquidity for government bonds (Collignon, 2012a). This justifies to call the risk-driven component of government bond yields “liquidity premium” in the broadest sense and to distinguish it from the policy driven short-term interest rates. It is then clear that the liquidity premium in this broad sense may distort the transmission mechanism of monetary policy and other instruments than lowering interest rates are needed to stimulate economic growth.
Economic interpretations of the Euro crisis focus usually on fundamental factors such as fiscal policies, macroeconomic imbalances and competitiveness. Monetarists do not deny the importance of these factors, but expect results from structural reforms only in the medium or long run, while liquidity issues dominate the short run. European authorities have undertaken a wide range of reforms with respect to fiscal discipline, macroeconomic imbalances, bailout procedures etc. Yet, the crisis continues unabatedly. The ECB has reduced policy rates to historic lows, but Europe suffers from a credit crunch. As the traditional monetary transmission mechanism no longer works, the ECB had to resort to unconventional methods of monetary policy (Collignon et al. 2012). While it first tackled the liquidity needs of banks, especially by the Long-Term Refinance Operations (LTRO), it is now focussing on government bonds and the yield curve through Outright Monetary Transactions (OMT).

Why has it become necessary for the ECB to go beyond conventional policy practices and intervene in government bond markets? **Government bonds play a key role in the transmission mechanism of monetary policy**, because ultimately they determine important aspects of the financing conditions in the banking system (ECB, 2012:7):

- When fears of adverse developments affect sovereign bonds, they can spread negative expectations regarding the conditions of banks and borrowers (Merler and Pisani-Ferry 2012a)
- Banks compete with high yielding government securities when they are setting the remuneration on their deposits and the return on bonds issued in the primary market. This contributes to increasing banks’ funding costs. Government securities are also used for the calculation of yield curves.
- Securities issued by governments are also often used as collateral, which banks use in order to obtain liquidity from the central bank. Secured lending in the interbank market is usually conducted by using sovereign debt as collateral. Tensions in the sovereign debt markets will, therefore, reduce the collateral base of banks and contribute to the “freezing” of the interbank market.
- A decline in the valuation of government bond portfolios leads to the deterioration in the balance sheets of banks and this can cause a credit crunch.

Thus, even, if the Treaty on the Functioning of the European Union (Art. 123) prohibits granting direct credit by the ECB to governments, the role of government bonds is crucial for the conduct of monetary policy, regardless of whether the ECB buys them outright or not. In fact, because the banking system transmits monetary policy to the real economy, developments in the sovereign debt market affect the efficiency of monetary policy not only through the central bank’s balance sheet, but also through the balance sheets of commercial banks.

The ECB and the IMF have clearly identified the fragmentation of financial markets as one of the major dangers for the functioning of monetary union. This fragmentation is manifest in the large yield spread between Member State government bond yields (Baele et al., 2004), but also in the home bias of investors.6 The importance of government bonds for the conduct of monetary policy generates a specific vulnerability when markets are segmented or fragmented, because the uneven distribution of risks can then not be diversified away. Within the Euro Area investors are well known to have a **home bias**, i.e. a tendency to keep a considerable share of their assets in domestic equities despite the purported benefits of

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6 I refer to **fragmentation** when regulatory and other obstacles prevent bond markets to function efficiently; **segmentation** refers to price differentials of papers of similar grade; **home bias** describes the fact that investors hold a disproportionate share of “their” government’s debt in their own portfolios.
diversifying into foreign equities. Local banks often hold in their balance sheets debt issued by "their" governments, because they act as governments’ agents or simply because they know the local habitat best. Thus, the home bias generates regional financial market segmentation. It reflects insufficient integration of Europe’s financial markets and has become a source of increased financial vulnerability during the crisis. This fact suggests that reducing the disproportional share of government debt held by national banks could help making the Euro Area more robust against shocks (Merler and Pisani-Ferry, 2012).

The reasons for home bias are one of the “six major puzzles of international macroeconomics” (Obstfeld and Rogoff, 2000). Under the stylised assumptions of neoclassical economics the benefits from the international diversification for the risk/returns of portfolios are uncontested. Hence, the home bias must be caused by market imperfections and the literature has advanced a number of distortive factors from culture (Grinblatt and Keloharju; 2001; Huberman, 2001; Morse and Shive, 2003), transaction costs (Faquree, Li and Yan, 2004), exchange rates and their volatility (Burger and Warnock, 2003; Lane and Milesi-Ferreti, 2005; Fidora, Fratzscher and Thimann, 2006) to information asymmetries (Bae, Stulz and Tan, 2005; Nitsch and Stotz, 2005). However, the puzzle remains particularly perplexing in European Monetary Union, where most of these factors should have lost their importance. While several authors (De Santis and Gérard, 2006; Oehler et al., 2007; Baele et al., 2004) have shown that the home bias has decreased in the early years of the euro, the proportion of domestic government securities in banks’ portfolios (although not in aggregate) remains still significantly higher in the Euro Area than in the United States and has increased in recent times.

Merler and Pisani-Ferry (2012) have calculated the amounts and shares of government securities held by banks, local residents and non-domestic residents (see Table 1). These data do not cover all but only 8 Member States of the Euro Area (EA8); they also do not add up to the amounts of gross debt published by the Commission in the AMECO data base. Nevertheless, the relative country shares do not vary enormously between the two data sources. It is intuitively clear that investors should hold a larger share of securities issued by large countries, because if each investor would hold a portfolio with equal risk/return distributions, everyone would hold a portfolio that reflects the relative shares of total outstanding debt. Thus, to assess whether a given portfolio share represents a home bias and is “excessive” or not, a benchmark is needed. A good measure is Member States' share in the total capital of the ECB (also shown in Table 1), because it reflects the relative weight of GDP, population and political power. Measured against this standard, the general shares of Italian and German securities in the total outstanding stock as reported by Merler and Pisani-Ferry (2012) are excessive. Banks hold slightly less than 20 percent of government securities in aggregate, but the proportion is above average in Spain and Germany, and in 2011 also in Greece and Portugal. Hence, home bias is concentrated on the Southern Member States under pressure from financial markets. Presumably, banks in these countries are buying and keeping their governments’ debt, because foreign investors are not willing to do so. But the home bias for German banks, unique among the Northern countries, is likely to reflect the opposite logic: non-German residents put their money into German banks which use it to buy safe German bonds. This reasoning is supported by the evidence that an over-proportional share of German debt is owned by foreigners. Either way, the home biases in the South and in Germany are signs of severe distortions in the sovereign debt market of the Euro Area.
2. DISTORTIONS IN THE SOVEREIGN DEBT MARKET

2.1. Distortions in Europe’s financial system

Home bias is a source of financial fragility because asymmetric shocks generate uncertainties and tensions in the sovereign bond market that will unequally push up risk and liquidity premia and depreciate the values of financial assets. With home bias, these risks remain concentrated on specific regions and investors. Lack of diversification increases volatility in bond prices, and big losses will force banks to deleverage in the weaker regions hampering their ability to provide credit to the real economy. Economic growth will slow down or even turn negative; unemployment will rise. This in turn will put further pressure on government finances and lead to more uncertainty in bond markets. In order to avoid substantial capital losses, investors will “flee to quality” and swap peripheral government securities for safer core country securities. This further exacerbates the yield differentials between Member States within the union. Thus, Member States’ economies will fall into a vicious downward spiral (Acharya et al. 2012). As the IMF (2012:13) observed:

“The pernicious feedback loops between banks and sovereigns, as well as market fragmentation, have been accentuated during the crisis. In a number of countries, the transfer of banking liabilities to the public balance sheet is continuing, while worsening public finances are still causing direct losses on sovereign bonds. In some cases, the necessary provision of ECB liquidity has led to further sovereign bond purchases by banks, deepening this link even more. Where perceptions of sovereign and banking risks have been increasing, financing conditions have deteriorated markedly, accelerating the re-fragmentation of the Euro Area’s financial market.”

---

7 In Germany we find the opposite logic: excessive flight to quality fuels a local asset and investment boom, which is as unsustainable as it was previously in the South.
### Table 1. Breakdown by sectors of government securities holdings

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Other public</th>
<th>ECB</th>
<th>Other residents</th>
<th>Non-residents</th>
<th>Total recorded (M&amp;PIF)</th>
<th>Total Gross debt (Ameco)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>23.9</td>
<td>35.5</td>
<td>3.2</td>
<td>4.8</td>
<td>42</td>
<td>25.4</td>
<td>18.5</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.8</td>
<td>15.1</td>
<td></td>
<td></td>
<td>14.4</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Portugal</td>
<td>10.6</td>
<td>36</td>
<td>0</td>
<td>1.2</td>
<td>18</td>
<td>17.3</td>
<td>21.7</td>
</tr>
<tr>
<td>Italy</td>
<td>159.9</td>
<td>267.9</td>
<td>60.3</td>
<td>76.5</td>
<td>103.4</td>
<td>450.7</td>
<td>471.6</td>
</tr>
<tr>
<td>Spain</td>
<td>74.3</td>
<td>173.1</td>
<td>9.2</td>
<td>20.8</td>
<td>34.5</td>
<td>26.5</td>
<td>65.3</td>
</tr>
<tr>
<td>Germany</td>
<td>456.9</td>
<td>404.2</td>
<td>4.4</td>
<td>4.4</td>
<td>0.5</td>
<td>0.5</td>
<td>317.1</td>
</tr>
<tr>
<td>France</td>
<td>83.3</td>
<td>123.3</td>
<td></td>
<td></td>
<td>205</td>
<td>255.5</td>
<td>352.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>18.7</td>
<td>33.3</td>
<td></td>
<td></td>
<td>0.9</td>
<td>3.4</td>
<td>44.7</td>
</tr>
<tr>
<td>Sum of EA8</td>
<td>828.4</td>
<td>1088.4</td>
<td>77.1</td>
<td>107.7</td>
<td>212.3</td>
<td>53.4</td>
<td>88.5</td>
</tr>
<tr>
<td>UK</td>
<td>-7.9</td>
<td>114.9</td>
<td>2.4</td>
<td>207.9</td>
<td>0.8</td>
<td>1.5</td>
<td>237.3</td>
</tr>
<tr>
<td>USA</td>
<td>129.8</td>
<td>284.5</td>
<td>754.6</td>
<td>1617.1</td>
<td>4616.5</td>
<td>5087.7</td>
<td>1375.1</td>
</tr>
</tbody>
</table>

### Shares

<table>
<thead>
<tr>
<th></th>
<th>percent of total</th>
<th>Share in EA8 (M&amp;PIF)*</th>
<th>AMECO</th>
<th>ECB share capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>10.6</td>
<td>19.4</td>
<td>1.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>2.6</td>
<td>16.9</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Portugal</td>
<td>9.2</td>
<td>22.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Italy</td>
<td>12.1</td>
<td>16.7</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Spain</td>
<td>21.2</td>
<td>27.8</td>
<td>2.6</td>
<td>3.2</td>
</tr>
<tr>
<td>Germany</td>
<td>29.7</td>
<td>22.9</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>France</td>
<td>13.0</td>
<td>14.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>9.0</td>
<td>10.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sum of EA8</td>
<td>18.7</td>
<td>19.3</td>
<td>1.7</td>
<td>1.9</td>
</tr>
<tr>
<td>UK</td>
<td>-1.6</td>
<td>10.7</td>
<td>0.5</td>
<td>19.4</td>
</tr>
<tr>
<td>USA</td>
<td>1.4</td>
<td>2.0</td>
<td>8.2</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: Marlier and Pitsan-Parry (2013) M&PIF, AMECO; own calculations; *own calculations on M&PIF data.
However, while the crisis deepens in the periphery, core countries enjoy a distortive advantage. To prevent a protracted credit crunch and disruptions in the Euro Area’s financial markets, someone has to buy the excess supply of securities in the secondary market that risk-averse investors are selling. This stabilising function of financial bailouts must be distinguished from the monetary financing of public debt when central banks are buying up the supply of newly issued debt in the primary market. This is forbidden by the European Treaties. However, the two may interact when the dumping of sovereign debt by private investors in the secondary market is induced by the fear of excessive borrowing in primary markets. This is why excessive deficits must be avoided.

In all modern economies, the central bank provides liquidity to the interbank market and acts as the lender of last resort to banks. It rarely intervenes in bond markets for longer maturities. But in the present environment of uncertainty, central banks use also unconventional instruments to remove distortions in the bond market and affect the yield curve. The FED has done this by its maturity extension programme, called Operation Twist (see FED, 2012); the ECB will now conduct OMT. However, market interventions are easier for the Federal Reserve System because the main instruments are treasury securities, which have a unified market and are considered as rather riskless. In Europe, bond market distortions result from market segmentation and different risk perceptions which are induced by uncoordinated fiscal policies. Given that sovereign debt is a matter of fiscal policy and given that public debt of individual states affects potentially all economic agents, so that stability is a public good, it can be argued that a bailout of public debt should be done by Member States. From a systemic point of view, a collective bailout by governments is preferable to central bank interventions, because fiscal policy should be designed and monitored by governments who represent taxpayers’ interest. By setting up the EFSF and the ESM, governments created an instrument by which they could intervene, but so far and due to the inherent collective action problems, whereby Member States optimise their partial interests to the detriment of the common interest, governments have not been able to stabilise financial markets.8

This flaw in Europe’s economic governance forces the ECB to fill the gap and to expand its role as lender of last resort to banks by buying government securities in the secondary market and undertaking Outright Monetary Transactions (OMT). Because the ECB has no legitimacy for imposing conditions on Member States’ borrowing behaviour, it has made OMT-intervention conditional on formal requests by Member States for support from the EFSM/ESM as this puts them under strict surveillance. However, in order to assess the potential risks and benefits of this new monetary policy tool, we must ask under what conditions and for how long the new programme should be implemented and what are the consequences for monetary policy over the medium-term.

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8 As the ECB (2012:47) explained diplomatically: “The presentation of a road map for financial stability, e.g. through a banking union, and the agreement reached on a recapitalisation package for the Spanish banking system did not relieve market stress […]. In the second half of July, market participants focused on possible details of initiatives to resolve the debt crisis. The outcome of a political summit did not calm the markets.”
2.2. The No-Bailout Principle and distortions in the bond market

The explicit purpose of Outright Monetary Transactions is to "address the severe distortions in the government bond market, which originate, in particular, from unfounded fears on the part of investors of the reversibility of the euro, as reflected, inter alia, in widening differences in the pricing of short-term sovereign debt" (ECB, 2012:7). Hence, the ECB seeks to restore the efficiency of the monetary policy transmission mechanism. However, we must distinguish two separate distortions.

The first is related to the liquidity crisis in the interbank market: because banks are uncertain about the true value in the balance sheets of other banks, they withhold short-term credit to each other; instead, they borrow from the Eurosystem or deposit their reserves with the central banks. As a consequence of this distrust, the spread between unsecured interbank rates and overnight indexed swaps has remained significantly higher than in the UK or the USA. The ECB has responded by providing huge liquidity injections, including through the two large Long-Term Refinance Operations (LTROs) in December 2011 and February 2012 amounting to EUR 1 trillion with a maturity of 36 months, and by cutting interest rate on main refinancing operations on 5 July 2012. The evidence in Figure 1 indicates that these operations have successfully reduced the liquidity premium in the interbank market.\(^9\)

**Figure 1:**

The Banking Crisis

Spread between unsecured interbank rates and overnight indexed swaps

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\(^9\) For econometric evidence, see Collignon et al. 2012.
Secondly, a bigger problem has now arisen in the bond market, where the term structure of interest rates, also called the yield curve, reflects unacceptable distortions due to different risk assessments for “core” and “periphery” Member States. The issue here is to “normalise” the yield curve across the Euro Area.

Yield curves describe the relationship between the residual maturity of financial instruments and their associated interest rates. They are derived from bond prices, which reflect the markets’ views about the future, and are therefore forward-looking. The relative levels of short and long-term interest rates at a certain date (the slope of the yield curve) contain information on market participants’ expectations about future risks and returns (see Annex)\textsuperscript{10}.

The economic literature has established two different theories for explaining the term structure of interest rates. The first is called the pure expectations hypothesis, which claims that arbitrage operations establish a close relationship between the slope of the yield curve and interest rate expectations, because instead of buying a long-term bond, an investor could also consider rolling over investments in short-term bonds over a period of the same length as the remaining maturity of the long-term bond. A rising yield curve would then represent the expectation of higher future short-term rates. For example, today’s short-term rates near zero are not likely to last forever, so that the yield curve should be upward sloping. A different situation occurs when monetary policy is tight and investors expect long run official rates to come down. The yield curve will then have a downward bending slope. Under the assumption of rational expectations, where deviations from equilibrium are white noise, the yield curve should be flat and constant. A hump-shaped curve would indicate that investors believe that the current low money market rates will not last, but over the medium and long-term monetary conditions are too tight.

The second hypothesis is derived from Keynes’s liquidity preference theory. Money (liquidity) always keeps its nominal value, so that a transfer of money extinguishes debt. By contrast, less liquid securities carry a risk of capital losses that increases with the length of the holding period of the security. An investor will only buy a security, if she gets compensated for giving up the advantage of liquidity. Therefore, the longer the maturity, the higher the risk premium contained in long-term rates. However, if the risks are concentrated in the medium term, the uneven distribution of liquidity premia may also generate hump-shaped yield curves. In the present environment of economic and financial uncertainty, the liquidity preference theory is especially salient, as it explains why banks and companies are hoarding liquid assets and only invest long-term at very high rates of return (for which there are only few opportunities).

These two theories can be combined so that the actual yield curve is composed of expected future short-term interest rates and liquidity premia for long-term commitments (see Annex). Depending on how risk assessments and liquidity preferences evolve over time, it is possible to observe many differently shaped yield curves - some rising, some falling, some hump-shaped (Lewis and Mizen, 2000). But if yield curves for government debt diverge within the Euro Area, monetary policy has a problem because the diverging risks distort the impact of the central bank’s actions. In monetary union interest rates at the very short-term (overnight rates) are the same for everyone, because all banks in the Euro Area have equal access to base money. However, if bonds with the same maturity, but issued by different governments, carry very different yields, the opportunity cost for capital distorts the competitive level playing field for investors in different regions of the monetary union. For instance, nonfinancial corporate lending rates have risen sharply in the

\textsuperscript{10} See also http://www.ecb.int/pub/pdf/other/pp95-103_mb200802en.pdf.
periphery, but have fallen in the core countries over the past year (IMF, 2012). Ultimately, such distortions could break up the single market.

Although the need for a level playing field for the cost of capital was one of the main argument for creating monetary union in Europe (Collignon and Schwarzer, 2002), this argument has long been overshadowed by the famous “no bailout clause” regarding fiscal policy. The level playing field argument says that a single currency is needed in a single market, because competition will push goods prices to converge, but if the cost of capital is distorted by segmented financial markets, firms will be handicapped in some regions and have advantages in others, irrespective of the quality and competitiveness of their products. Thus, segmented financial markets will distort goods markets and perpetuate regional unemployment. While these distortions have prevailed in the European Monetary System before 1999, they have disappeared as planned and expected in the first decade after the creation of the euro. However, due to the inept handling of the debt crisis and the resulting uncertainty, large risk premia have now reappeared and are causing severe damage in the South. The reason is, of course, that given the home bias and market segmentation, problems with sovereign debt negatively affect the financial conditions in the private sector.

The negative spillover from the sovereign debt crisis into the real economy was accelerated by the famous No-bailout principle, which says “the Union shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of any Member State” (TFEU. Art 125). This principle assumed that financial markets would surveil governments and “punish” excessive borrowing by raising interest rates and thereby ensure fiscal discipline (Codogno, 2003). We now know that this view was excessively naïve, and not only because markets were short-sighted before the crisis. Much more serious is the strong nexus between the credit risks of banks and sovereigns that is caused by the home bias described above. For, if markets punish excessive borrowers by pushing rates up, bond prices will fall and the assets of banks and other private investors will depreciate. With home bias and market segmentation local banks will suffer disproportionately from the deterioration of local economic conditions. To restore their balance sheets, banks will reduce leverage, thereby causing a credit crunch; alternatively, they will lend aggressively to high-yielding risky projects, thereby increasing financial fragility (see Stiglitz and Greenwald, 2003). Unfortunately, this logic was overlooked by the No-bailout principle because it ignored external effects. If it had been valid, a rise in government bond yields would not have affected the borrowing conditions for other debtors within a given Member State. But this is not what we have observed. In fact, a salient feature of the Euro Area crisis is the strong interdependence between banking and sovereign crisis (Merler and Pisani-Ferry, 2012a; Acharya et alt. 2012) and authorities’ resistance against bailouts have made things worse.

Hence, the theory of market discipline due to the no-bailout commitment is bankrupt and the ECB has now become its receiver. The immediate task for monetary policy must be to restore a coherent yield curve across the Euro Area in order to have all the necessary instruments for maintaining price stability. This is the purpose of OMT. However, the ECB is surprisingly lucid about the limited impact it has and recognises that the answer to Europe’s problems is deeper and better economic, financial and political integration:

"With a view to maintaining price stability in the Euro Area, the ECB has introduced a number of measures to ensure a more homogeneous pass-through of its key interest rates to the economy. However, these measures cannot provide a structural solution to the underlying causes of heterogeneous financial conditions. Rather, this involves governments acting at the national and the Euro Area/European levels in the various policy areas where the appropriate policies and mechanisms have to be
put in place. Such action is needed, in particular with regard to public finances, structural economic reforms and financial stability. It includes the need to move towards a 'financial union', with the further transfer of competences to the European level as regards Euro Area financial sector crisis management and resolution. Such policies would also create better conditions to support a smooth transmission of monetary policy across countries.\textsuperscript{11}

This is as strong a plea for more European integration as can be made by an official institution. It is not derived from political preferences, but from the logic of monetary integration and the threats to the sustainability of the euro and the European Union.

How big is the threat and how serious are the distortions in the Euro Area’s financial markets? Figure 2 shows the recent evolution of yields on sovereign debt securities for selected Euro Area Member States. Note the different scales in the different charts. Figure 2 also shows a chart for Union Bonds, of which I shall say more below. Prior to the global financial crisis, the term structure of interest rates had converged, thereby flattening the yield curves. This can be interpreted as evidence for low liquidity risk premia and confidence in the ECB’s commitment to maintain price stability. After the Lehman crisis, yield spreads increased dramatically between Member States and across maturities. These divergences spilled over into corporate bond markets and other lending rates. The increasing heterogeneity in financial conditions reflected differences in the way individual Member States were affected by the crisis. The ECB argues that the

"Previous convergence of financial conditions masked divergences in national policies and the accumulation of fiscal, macroeconomic and financial imbalances in several Euro Area countries. These imbalances were not adequately addressed, either at the national or the European level. They created vulnerabilities in these countries and paved the way for the sudden return of differentiated financial conditions when risks were repriced."\textsuperscript{12}

This is what European authorities claim to believe. It is difficult to prove. Acharya et al. 2012 have shown evidence for a negative interaction between sovereign debt, banking fragility and austerity. Collignon (2012) has argued that macroeconomic imbalances are not necessarily a threat to the financial integrity of the Euro Area. This evidence throws doubts on the official explanation of the crisis. However, whatever one may believe to be the fundamental cause of the crisis, there is now an urgent need to restore confidence by better integrating financial markets and overcoming market segmentation.

\textsuperscript{11} ECB, Monthly Bulletin, August 2012:63.
The importance of regional market segmentation can also be seen in the charts of yield curves for national debt. Figure 3 shows that prior to the global crisis (in January 2007) yield curves had the normal upward sloping shape in all Member States. They also were of similar levels, although some irregularities were visible at the short end, and higher risk premia appeared at the long maturity end in Greece and Italy. In the early part of 2010, the sovereign debt crisis pushed the whole Greek yield curve up, while little changed in the other Southern countries. In 2011, uncertainty became generalised. The expectations of Greece’s imminent debt restructuring pushed Greek short-term yields to unprecedented levels; Portugal’s yield curve became hump-shaped. Both countries, together with Ireland needed a bailout by the EFSF, but yields in the northern Member States also diverged with the German yield curve falling well below the Euro Area’s aggregate curve. Market segmentation became prevalent. Soon Spain and Italy were contaminated, too, with yields for medium term maturities well above Germany. Only the anticipation of unlimited ECB interventions seems to have finally calmed financial investors and contributed to a gradual normalisation of yield curves in September, including in Greece. However, the spreads at
the long end are still significant and further actions to reassure markets and restore economic growth are needed.

To summarise, the segmented financial markets in the Euro Area suffer from significant distortions. The ECB has been successful in lowering tensions in the short-term money markets but its task in the long-term bond market is much more daunting. With the OMT it has created an instrument which has already calmed expectations in financial markets, but there is no guarantee that this will provide the long-term solution to unsustainable yield spreads in sovereign bond markets. The risks for the ECB are economic and political: the bank cannot impose fiscal policies and thereby ensure its long-term success; it might also encounter political opposition, which would destroy the credibility it has so laboriously been trying to reconstruct. No doubt, in the medium term reforms regarding fiscal policy, competitiveness, the integration of labour markets, a banking union, etc. are necessary, but it should have become fairly clear by now that the system of the Euro Area’s economic governance is inadequate to generate the reforms which would increase Europe’s welfare. Europe’s most important structural reform would therefore be the transformation of the policy making framework.\(^\text{13}\) OMTs are opening the door for some changes, but in themselves they are insufficient.

\(^{13}\) For an outline how this can be achieved, see Collignon and Paul, 2008.
Figure 3:
Yield curves for some Euro Area member states

Source: Bloomberg
3. THE RISKS OF OUTRIGHT MONETARY TRANSACTIONS (OMT)

3.1. Precedents of direct bond purchases

Under normal circumstances, central banks tend to focus on the overnight interest rate in monetary policy implementation. Because in the present climate of uncertainty the transmission to longer term interest rates does no longer work efficiently, the ECB had recourse to a number of unconventional measures (Collignon, et al 2012), of which the recent “Outright Monetary Transaction” (OMT) programme is the most ambitious. Under this programme the Bank will buy unlimited amounts of sovereign bonds that will be fully sterilised. The bond buying will be conditioned on the EFSF/ESM programme which requires full macroeconomic adjustment. The bond purchases by ECB will focus on maturities between one to three years, and the purchases will not be senior to other creditors. With OMTs in place, the earlier Securities Markets Programme (SMP) will no longer be implemented.

The direct purchase of government securities in open market operations are a standard practice in most central banks around the globe and across history. The Bank of England invented them in the 1830s; the FED introduced them in the 1920s, soon after its creation in 1913. The Deutsche Bundesbank also started to purchase longer-term government bonds in 1974 in order to keep capital market rates low (Bindseil, 2004:152). Nevertheless, Bundesbank President Weidmann is known to have opposed the otherwise unanimous decision by the ECB’s Governing Council to buy sovereign debt issued by fragile Member States. In a *Spiegel* interview, Weidmann defended his view less by referring to German hyperinflation in the 1920s, which is an argument often discussed in the media, than by arguing that Italy’s high inflation in the 1970s was due to the “tight embracement of the Banca d’Italia by the Treasury” and that the Bundesbank only moderately intervened and quickly learned from its mistakes.15 However, this is only partially correct. The Bundesbank did not buy large amounts of Bunds, because, given the tininess of the deutschmark as a global currency, it mostly had to buy foreign currency to stabilise the exchange rate. Furthermore, Italy’s inflation did indeed increase on average by 12.5 percent per annum during the 1970s, and “only” by 4.6 percent in Germany, but the debt-to-GDP ratio increased only by 2.5 percent in Italy against 4.7 percent in Germany.16 Hence, there is no evidence that Italy’s loss of price stability was due to excessive government debt. A better explanation for Italy’s 1970-inflation is found in excessive wage increases, which were accommodated by monetary authorities under the threat of political instability. Hence we may conclude that price stability is caused by prudent monetary policy and other macroeconomic developments, and not by the nature of monetary instruments.

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14 Maybe a better historic reference would be the fact that the German Reichsbank was not allowed to buy German debt after the monetary reform until the Nazis changed the rules in 1933. But the most important question to any German policy maker today must be: would the Nazis ever have come to power had the authorities not insisted previously on excessively tight austerity policies?

15 „Auch die Bundesbank hat schon einmal Staatsanleihen gekauft, wenn es eng wurde. Das war ebenfalls in den siebziger Jahren. Das Ausmaß war aber geringer als anderswo, und die Staatsschulden waren deutlich niedriger. Nichtsdestotrotz hat die Bundesbank dies offenbar als Fehler erkannt, den sie dann korrigiert hat“. „Notenbanken sind nicht allmächtig“. Interview mit Dr. Jens Weidmann, Präsident der Deutschen Bundesbank, im *Spiegel* am 27.08.2012.

16 Data from AMECO.
In fact, the ECB is an anomaly. In the UK and in the US, a very substantial part of the central bank’s balance sheet consists of holding government securities without endangering the quality of the pound or the dollar; in the ECB, by contrast, direct purchases of government debt in the secondary market (i.e. from banks, not by financing public borrowing) have remained minimal. This is shown in Figure 4, where the thick red line indicates the amount of government securities. While it is only marginal in the ECB balance sheet, government guilt covers now most of the Bank of England’s assets and a large part of the FED’s.
3.2. **Side effects of direct bond purchases**

Central bank interventions in the sovereign bond market have several side effects. First of all, notice how the rise of public paper is compensated by a reduction of other assets, while monetary policy steers the development of the balance sheet as a whole. This phenomenon is called sterilisation, which means that when the central bank buys government bonds and holds them in its asset portfolio; it must sell an equivalent amount of other assets in order to keep money supply constant. In the ECB balance sheet, there is ample room for OMTs, provided the liquidity effects are sterilised so that money supply remains tightly controlled. This is what the ECB has announced. However, the intervention will cause a substitution effect. It will lower yields on government bonds, but possibly increase them on others. This could shift savings away from governments toward private investment, but also reduce the range of profitable investment in the private sector. Efficient sterilisation should minimise this effect.

Secondly, outright purchases of government bonds by central banks also have direct effects for social justice. When public debt is owned by the private sector, the government pays interest to asset owners out of tax revenue, which is imposed on all citizens. It therefore redistributes wealth from the bottom of the social hierarchy to the top. The higher the debt ratio and the higher the interest on government bonds, the greater will be social inequalities. This unfair system is particularly prevalent in Europe, as Table 1 proves: the ECB and other public institutions hold roughly 3-4 percent of public debt, while in the United States it is close to one half (although mainly by government agencies other than the FED). When the central bank buys some of the government’s debt, the tax burden is more equally shared. Given that the central bank is usually owned by the government,17 its profits are transferred to the Treasury. In the case of the ECB, net profit shall be distributed to the shareholders of the ECB in proportion to their paid-up shares.18 Hence, the interest payment by the treasury to the central bank is a payment to itself. Money goes from the left pocket to the right. It does not represent a debt burden to citizens.

This mechanism seems mysterious. A fundamental law of economics says: *“There is no free lunch”*. How can the government borrow money, do real things, without having to pay for them? Who pays the price? The answer is that the central bank provides liquidity services by issuing money to the banking sector and the economy. These services have a price, which is paid when banks sell their bonds to the central bank in order to get liquidity and thereby give up their claim to be paid out of tax revenue. In other words, banks and more generally the owners of money balances, rather than tax payers, pay for the government’s debt.19 However, it is important not to confuse this effect with the so-called inflation tax that results from directly monetising public debt. For, beautiful as the reduction in tax burdens by outright monetary transactions may seem, it is not limitless, because price stability is a hard budget constraint in the system. The liquidity service of money is dependent on money’s function as a store of value, for otherwise holding liquidity would generate losses of wealth. Hence, it is in the genuine interest of governments to ensure that the central bank will maintain price stability. Because in European monetary union Member States remain sovereign and may be tempted to free ride on each other, it is a constitutional necessity to give the ECB the status of full independence and setting price stability as its primary objective. Hence we may conclude that European monetary

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17 Some central banks in Europe still have private shareholders, but the central bank’s profits are nevertheless transferred to the treasury.


19 The logical counterpart of this argument is that by not buying government bonds the central banks “subsidises” banks.
union fulfils all the necessary institutional requirements to ensure that OMTs will not violate the ECB’s mandate and jeopardise the sustainability of the euro.

Nevertheless, OMTs do not come without risks for the ECB’s balance sheet. Even if the ECB will only intervene if a Member State has applied for support from the ESM and undertakes a tough adjustment programme, there is no guarantee that the prescribed policies will be sustainable and not end up in an ultimate default. But having bought such debt, the ECB would incur a loss. The resulting reduction in the bank’s net worth could undermine the credibility of the institution (Buiter 2008). However, it is all a matter of dosage and balance. The larger the amount of risky paper, the larger the potential threat to the creditworthiness of the ECB. Weidmann has a valid point, when he emphasises that the FED buys treasury bonds backed by a strong centralised federal government, while such an institution does not exist in the Euro Area. Curiously, those who complain that the absence of a federal European government prevents the ECB from fulfilling its functions are often the first to resist the federalisation of fiscal competences and the creation of Eurobonds.

On the other hand, losses by the central bank would come at the expense of national treasuries in accordance with the ECB’s shareholding quota. Thus, in the end taxpayers have to assume the liability and this poses problems of democratic accountability. Democracies are built on the principle “No taxation without representation”. Yet, while National Parliaments are the only legitimate body to vote on taxes, they have no legitimacy to impose policies on neighbouring countries for which they are not elected. In the present crisis this is an increasingly sensitive issue, as the resurgence of anti-German or anti-Southern feelings in Europe proves. The problem is that National Parliaments can only represent partial interests, while financial decisions affect all citizens in the Euro Area simultaneously. Logically, democratic principles would require that such decisions are taken by the representatives of European citizens, hence by the European Parliament. This would require a Treaty change. On the other hand, a vote by European representatives could be seen as interference into national affairs and this is incompatible with liberal principles. Even the European Parliament could not claim legitimacy for telling national governments how to tax their citizens. Ultimately, the only clean solution for these contradictions would be a European tax, separate from national taxes, and authorised by the European Parliament, which guarantees that the financial liabilities undertaken by European authorities are in the collective European interest of citizens. This is the core issue behind the joint and several guarantees required for the creation of proper Eurobonds.
4. WAYS OUT OF THE CRISIS

4.1. Reforming Europe's Governance

This paper has argued that ECB interventions in the sovereign bond market in the framework of Outright Monetary Transactions are a necessary monetary policy in order to preserve the central bank’s ability to preserve price stability. The central bank must become the buyer of last resort of government securities when the interactions of public, private and banking debt are generating a vicious spiral leading to a financial meltdown. This is generally true, but in Europe the problem is compounded by the fragmentation of financial markets and the home bias by which local banks hold an excessive share of local government debt in their portfolio. In federal states, sovereign bonds are backed by the economic and taxing authority of the central government and this fact mitigates the price fluctuation risks for banks’ assets. With regionally segmented markets and sovereign governments, local banks bear the brunt of the deterioration in a government’s reputation. However, a central bank-led bailout is risky and democratically problematic in the long run.

The way out of the crisis requires rapid steps toward deeper integration. The governance of European monetary union is still a half backed house of an integrated market and a fragmented governance. The partial interests of national governments often overshadow the common interest and hide the obvious solution, which the IMF (2012) has spelled out so clearly:

“A determined move toward a more complete union is needed now to demonstrate policymakers’ unequivocal commitment to sustain EMU. This means measures to break the adverse loops between sovereigns and banks. To this end, the first priority is a banking union for the Euro Area, with a common supervisory and macroprudential framework, deposit guarantee scheme, and bank resolution authority. (...) To reduce the tendency for economic shocks in one country to imperil the Euro Area as a whole, banking union needs to be complemented by more fiscal integration — combining ideas of a political union and stronger central governance with more risk sharing. A unified statement of support for all of these steps by Euro Area governments, with a clear timetable of decisions, could arrest the decline in confidence engulfing the region.”

No doubt, a Euro Area banking union is a key to stabilise the euro. It must comprehend a European deposit guarantee scheme, a bank resolution mechanism that allows winding down failed institutions without damaging contamination, and a common European supervision that helps overcoming market segmentation and institutional home biases.

On the other hand, a fiscal union must provide a democratic framework for designing and implementing fiscal policies for the Euro Area as a whole. Such a fiscal union must go beyond the framework of fiscal tightness; it must enable authorities to respond to shocks in a flexible way in order to ensure that stability means stability of welfare and wealth that is shared among all European citizens (see Collignon, 2010).

The obvious link between banking and fiscal union are Eurobonds. Several proposals are circulating among experts in Europe (see Collignon, 2011; Favero and Missale, 2012). The European Commission (2011) has published a Green Paper which analyses three possible modalities for what it calls Stability Bonds: the full or partial substitution of Stability Bond issuance for national issuance, with joint and several guarantees;\(^{20}\) the partial substitution...
of Stability Bond issuance for national issuance, with several but not joint guarantees. Clearly, such debt instruments would be a great step for Europe as they would fully or partially remove the home bias within the Euro Area. Eurobonds would promote further market integration, greater liquidity and a reduction in liquidity premia, possibly leading to lower borrowing costs. They also would ensure market access at better conditions during crises and reduce the risk of crisis propagation from contagion and interdependencies. The communality of public debt would also overcome the disruptive dynamic of vicious circles that is implicit in the no-bailout principle.

However, the political appetite for joint and several guarantees is modest. In Germany, constitutional obstacles have been erected (Mayer and Heidfeld, 2012). The main objection against Eurobonds is the moral hazard argument: if strong Member States guarantee the debt of their weak partners, the latter may no longer have an incentive to bring their house in order. The European Commission has therefore rightly insisted that any form of Eurobonds would “have to be accompanied by a substantially reinforced fiscal surveillance and policy coordination as an essential counterpart, so as to avoid moral hazard and ensure sustainable public finances”.

Hence, the advent of Eurobonds is unlikely over the near future, although maintaining trust and confidence in the ECB requires a rapid advancement to new institutional solutions.

4.2. Union Bonds

As an alternative to Eurobonds, I will here update my earlier proposal (Collignon, 2011) to issue Union Bonds, but adjust it to the new economic and political environment. This is how it would work.

Union Bonds are issued as a special purpose vehicle by the European Stabilisation Mechanism (ESM). They are not guaranteed by Member States, but represent a portfolio of national government securities. In other words, Union Bonds are an asset backed security that does not generate any new liability for Member States and their treasuries. Neither joint nor several guarantees are given by Member States. No Member State nor European institution “assumes” the national debt of other Member States.

The value and income payments for investors in Union Bonds are derived from and collateralised (or “backed”) by a pool of underlying assets, which consist exclusively of government bonds of Euro Area Member States. The payments are obtained from the interest payments on national bonds. Each national security represents a fraction of the total value of the Union Bond

1. The national securities are pooled into a portfolio with fixed shares which represent the quota of Euro Area Member States in the paid up share capital of in the ECB. This ensures that Union Bonds will always reflect the pooled sovereign risk of the Euro Area and eliminates the home bias.

2. The special purpose vehicle of the ESM will issue the Union Bonds and buy national debt in the secondary market with the proceeds. It could also do the same in the primary market or combine buying newly issued national debt in the primary market with outstanding debt stock in the secondary market. For example, if Greece needed to borrow EUR 10 billion in the primary market, the ESM could buy this new national bond issue and combine it with outstanding German, Dutch French, Italian etc. bonds obtained in the secondary market. Given that the Greek share in the ECB capital is 2.8 percent (see Table 1), EUR 10 billion new debt would generate Union

joint guarantees would give an investor legal recourse to all the participating issuers, in case not all the obligations of any issuer were fully met. See Favero and Missale, 2012.
Bonds of EUR 357.1 billion without creating any additional risks or liabilities for the other Member States. The consequence is a gradual securitisation and unionisation of national sovereign debt.

3. In case of default of a Member State on its national debt, the losses are borne collectively by the portfolio owners in proportion of the quota of the defaulting Member State. Assume a Union Bond with value EUR 100 and Greece defaulting and having a haircut of 50 percent. This would reduce the value of the Union Bond to EUR 98.6, because the Greek share in the Union Bond is 2.8 percent. Hence, Union Bonds are significantly more stable and minimise the risks for investors. Figure 2 shows that the range of Union Bond yields in the term structure varies between 1 percent and 6 percent, slightly higher but not much wider than for Germany, although significantly lower than the yields for Southern European debt.

4. Who would be willing to hold Union Bonds? From an unbiased market point of view the attraction is uncertain. Risk-loving investors could do better, by buying high yielding bonds; risk-averse operators would prefer a large German portfolio. However, if investors have an institutionally preferred habitat, Union Bonds which are issued with the consent of governments could become attractive. However, institutional incentives could favour Union Bonds as a vehicle to restore financial stability in the Euro Area.

5. The most powerful incentive would be a decision by the ECB to grant favourable status to Union Bonds as collateral for banks when they borrow from the Eurosystem. This would incite banks to swap national debt against Union bonds. It also has the advantage that the ECB would be hedged against the default risks of particular Member States.

6. The ECB should also decide to do outright open market purchases only in Union Bonds, as this would protect its balance sheet against the high risk of losses from national defaults. It would thereby contribute to more social justice and fairness in the Union, as risks and benefits are equally balanced without distorting home biases.

7. How much debt should the ESM buy up? In 2011, the total outstanding public debt in the Euro Area was approximately EUR 7500 billion (See Table 1). Germany has the largest outstanding debt with EUR 2088 billion, followed by Italy EUR 1897 billion and France EUR 1717 billion. Greece’s debt is EUR 355 billion. Narrow money (M1) issued by the Eurosystem is EUR 4780 billion and broad money (M3) is EUR 9849 billion. The ECB has so far bought approximately EUR 212 billion of sovereign debt mostly of low grade. If one would aim to unionise 60 percent of all outstanding national debt, this would create a market for Union Bonds of about EUR 4500 billion and still leave EUR 3000 billion traded separately. Thus, the Euro Area would simultaneously have a market for national debt, which is necessary for primary issues, but it would start to build up a deep European bond market, which may prepare the path not only to proper future Eurobonds, but also to a more prosperous Europe.
5. CONCLUSION

In uncertain times, unusual policies are needed. The ECB has made a big step toward stabilising Euro Area financial markets by creating the new instrument of Outright Monetary Transactions (OMT). It has been shown that institutionally this instrument is sound and does not endanger price stability as long as outright purchases are sterilised.

However, the Euro Area cannot stop there. Monetary policy is embedded in a broader economic policy framework. While some reforms may be useful in the medium term, they will not necessarily restore trust and confidence in the financial markets. If the Euro Area does not quickly find its ways back to economic growth, more sovereign defaults could occur and the balance sheet of the ECB would be impaired.

Home bias and financial segmentation and fragmentation distort monetary policy and contribute to a vicious circle of banking fragility, high liquidity preference, credit crunch, economic recession, public debt fragility and more problems for banks’ balance sheets.

While OMT may cut through this vicious circle, it also exposes the ECB to new risks. Ideally Eurobonds with proper democratic taxing legitimacy would solve this problem. However, in the short run, the creation of Union Bonds could provide an alternative solution, which would protect the ECB’s independence and balance sheet.
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ANNEX I: THE YIELD CURVE

The yield curve depicts interest rates on bonds with different remaining maturities. Several types of yield curves can be distinguished: normal, flat, inverted or hump-shaped. Normally, yields should be rising as maturity lengthens. The curve is flat when short and long-term securities are perfect substitutes. It is inverted, when the value of cash is higher than the return from holding a security over a longer period. It is hump-shaped when short and long-term yields are higher than those for the medium term.

Explanations

1. The pure (or unbiased) expectations hypothesis

If bonds with various maturities are perfect substitutes, arbitrage opportunities will reduce future yields to expected future short-term interest rates, as any investor could reconstruct the long run return by a series of refinanced short-term securities. Thus, long-term instruments are equal to the geometric mean of the yields on a series of short-term instruments.

2. Liquidity preference

In this theory, the rate of interest is understood as “the reward for parting with liquidity for a specified period” (Keynes, 1936: 167). Hence, liquidity preference would give an advantage to holding cash over bonds and investors would demand a smaller reward for holding short-term maturities. Implicitly, liquidity preference is a theory of the risk in an environment of uncertainty. It explains why under normal circumstances longer maturities carry higher yields.

3. Expectations cum liquidity preference

These two theories can be combined (Lewis and Mizen, 2000:122-126). Each forward rate is composed by two conceptually separated elements: (i) the unbiased expectation of future short-term rates and (ii) the positive risk or liquidity premium.

If we write $R$ for the yield, $r$ for the short-term interest rate and $L$ for the liquidity premium, we get the maturity value of a security as:

\[
(1+R)^n = (1+r_1+L_1)(1+r_2+L_2)...(1+r_n+L_n)
\]

And the yield at a given maturity $n$ is:

\[
R = [(1+r_1+L_1)(1+r_2+L_2)...(1+r_n+L_n)]^{1/n} - 1
\]

It is clear that the pure expectations theory assumes $L=0$, so that the yield curve is flat if short-term interest rates are expected to remain unchanged over time. However, liquidity and risk considerations can modify the pure expectations curve. The shape of the yield curve will then depend of the distribution of risk over time.
4. Market segmentation and preferred habitat

If financial instruments are not substitutable, the supply and demand for short and long-term bonds is determined independently. A higher preference for liquidity may increase demand for short-term bonds and drive yields down. Preferred habitat theorists explain the segmentation by institutional reasons: banks need to keep their positions liquid, while insurance companies are biased to invest into long-term bonds. In the European context, home bias for government securities is a form of regional market segmentation.
A more effective Euro Area Monetary Policy than OMTs - Gold-Backed Sovereign Debt

Ansgar BELKE

NOTE

Abstract
This note argues that using gold as collateral for highly distressed bonds would bring great benefits to the euro area in terms of reduced financing costs and bridge-financing. It is mindful of the legal issues that this will raise and that such a suggestion will be highly controversial. For this purpose, it brings gold into the debate and outlines the value of Europe’s gold reserves. It also explains that gold has been used as collateral in the past and how a gold-backed bond might work and how it could lower yields in the context of the euro crisis. This move is then compared to the ECB’s now terminated Securities Markets Programme (SMP) and its recently declared Outright Monetary Transactions (OMTs). Namely, a central bank using its balance sheet to lower yields of highly distressed countries where the monetary policy transmission mechanism is no longer working. Beyond some similarities between the moves, the specific benefits of using gold in this manner vis-a-vis the SMP and the OMTs are highlighted. For instance, there is no transfer of credit risk between high risk/low risk countries, losses are borne by specific countries and not by the largest shareholder of ECB. It would turn out to be more transparent and it would not be inflationary and would foster reforms.
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EXECUTIVE SUMMARY

This note looks at the problems underlying the current escalating crisis which essentially represent the trigger for the active involvement of the ECB in euro area rescue activities. It stresses that the breakdown of the monetary transmission mechanism has exacerbated the problem which is mirrored by the ECB’s sovereign debt market and Long-Term Refinancing Operations (LTRO) activity. It then introduces into the basic characteristics of the ECB’s now terminated Securities Market Programme (SMP) and its follower, the Outright Monetary Transactions Programme (OMT).

As a next step, gold is brought into the debate. For this purpose, the value of Europe’s gold reserves is outlined. Moreover, it is explained that gold has been used as collateral already in the past. This is followed by an explanation how a gold-backed bond might work and how it could lower yields. Chapter 6 deals with some legal issues involved.

In the main part of the note, the move towards a gold-backing of selected euro area sovereign bonds is compared to the SMP and the OMT. Both programmes relate to a central bank using its balance sheet to lower yields of highly distressed countries where the monetary policy transmission mechanism is no longer working. Similarities and differences between the two programmes are highlighted. Many benefits of using gold in this manner vis-à-vis the SMP and the OMT are derived. For instance, the absence of any transfer of credit risk between high risk and low risk countries, the fact that losses are borne by specific countries and not the largest shareholder of the ECB, and, finally, that it would not be inflationary. Finally, the likely spread of political views across the euro area Member States and institutions is considered. For this purpose, the note focuses upon how entrenched those views may be and how one might build a consensus towards such a solution in Europe.
1. **INTRODUCTION**

With the Outright Monetary Transactions (OMT) programme, the European Central Bank opened up its third round of secondary bond market purchases on 6. September 2012. Whether they deliver a permanent reduction in bond yields in the South is highly uncertain. If this latest round fails, then Europe’s options look grim. Austerity and growth programmes have not met expectations and the outlook is further clouded by the fact that the funds available from the IMF and EFSF/ESM are dwindling as a result of other bailouts. Europe is running out of time and options.

The SMP has always been a controversial option, riddled with potential dangers. It was seen by many as a de facto fiscal transfer from the North to the South and, moreover, a transfer made without democratic consent. By showing willingness to buy the debt of poorly performing countries, the SMP was seen as reducing incentives for necessary long-term reforms. In addition, although the ECB tried to ‘sterilise’ these transactions, this is far from an exact science, leaving a risk of higher money supply fuelling inflation.

An alternative manner in which to lower yields might be to issue securitised government debt, for example, with gold reserves. This could achieve the same objectives as the ECB’s bond purchases programmes, but without the associated shortcomings. This would clearly raise legal issues but then so too did the ESM, SMP and OMT. This would not work for all countries but would for some of those in most need. In fact, Italy and Portugal have gold reserves of 24 percent and 30 percent of their two-year funding requirements. Using a portion of those reserves as leveraged collateral would allow those countries to lower their costs of borrowing significantly.

Making use of the national central banks’ gold reserves is much more transparent than the OMTs, much fairer, and would make it easier to get genuine consent amongst the euro area population and the European Parliament. Nor does it lead to unmanageable fiscal transfers from the North to the South with huge disincentive effects. It does not shift toxic debt instruments onto the ECB. And it does not cause sterilisation problems or increase the difficulty of exiting unconventional monetary policy. Simply speaking, a gold-based solution is much less inflation-prone and does not reduce incentives for the reform of beneficiary countries.

The remainder of this note proceeds as follows. Chapter 2 looks at the problems underlying the current escalating crisis which essentially represent the trigger for the active involvement of the ECB in euro area rescue activities. It is stressed that the breakdown of the monetary transmission mechanism has exacerbated the problem which is mirrored by the ECB’s sovereign debt market and LTRO activity. Chapter 3 introduces the basic characteristics of the ECB’s now terminated Securities Market Programme (SMP) and its successor, the Outright Monetary Transactions (OMT) programme.

Chapter 4 brings gold into the debate. For this purpose, the value of Europe’s gold reserves is outlined. Moreover, it is explained that gold has been used as collateral already in the past. The main focus then is in Chapter 5 on an explanation how a gold-backed bond might work and how it could lower yields. Chapter 6 deals with some legal issues involved.

In Chapter 7, the move towards a gold-backing of selected euro area sovereign bonds is compared to the SMP and the OMT. Both programmes relate to a central bank using its balance sheet to lower yields of highly distressed countries where the monetary policy transmission mechanism is no longer working. Similarities and differences between the two moves are highlighted. Many benefits of using gold in this manner vis-à-vis the SMP and the OMT are derived. Chapter 8, finally, considers the likely spread of political views across the euro area Member States and institutions.
2. THE BREAKDOWN IN THE MONETARY POLICY TRANSMISSION MECHANISM

The sovereign debt crisis is eroding long standing assumptions around sovereign debt risk. In developed markets, the rising burden of public debt combined with low economic growth is raising concerns around the long-term ability of some euro area sovereigns to repay. For some countries, the credit spread in their cost of debt financing has increased significantly. This is hampering the so-called monetary policy transmission mechanism. Conversely, changes in long-term sovereign bond yields feed to a certain extent into fluctuations in corporate bond yields and bank lending rates. As a reaction to losses from significant declines in sovereign bond prices, consumers tend to enhance their precautionary savings, which in turn work against the intended stimulus to private consumption from monetary policy easing (Cœuré, 2012; ECB, 2012b, pp. 7-10). What is more, sovereign bonds are these days exposed to severe haircuts and, as a consequence, their refinancing capacity has become smaller. The volume of available collateral in the shape of government bonds has become smaller which has curtailed the refinancing opportunities of commercial banks. The price corrections of sovereign debt also exerted an immediate negative effect on the assets on the banks’ balance sheets and, hence, on the risks markets attach to them. This works against the refinancing necessities of commercial banks. Additionally, it has the potential to work out as a significant impediment to the provision of loans to the real sector of the economy (Cœuré, 2012; ECB, 2012b, pp. 7-10).

Although the ECB’s LTRO facility is helping to address the current liquidity crisis for weaker banks but it does not directly address sovereign solvency issues. The LTRO facility allows banks to post sovereign debt as collateral to get access to cheap ECB funding. Banks in GIIPS nations had a 70 percent share, i.e. EUR 350 billion of the first EUR 500 billion LTRO. However, the risk of default remains with the banks (Belke, 2012a). Sovereign debt still remains on the balance sheet of banks. And there is a collateral top-up requirement if the bonds pledged fall in value or default.

This has prompted the ECB to introduce controversial non-conventional monetary policy tools, such as its Outright Monetary Transactions Programme (OMT) and its predecessor, the Securities Market Programme (SMP).
3. THE STATUS QUO: SECURITIES MARKETS PROGRAMME (SMP) AND OUTRIGHT MONETARY TRANSACTIONS (OMT) PROGRAMME

3.1. Securities Market Programme (SMP)

To address the issue that sovereign debt market activity plays a significant role in monetary transmission, one of the unconventional tools that the ECB has used is the Securities Markets Programme (SMP).

The Securities Market Programme (SMP) was launched in the Governing Council on 10 May 2010. Under the programme the ECB used part of its balance sheet to purchase debt securities of malfunctioning segments of the debt markets. Despite the fact that purchases on the secondary market are not prohibited by the Treaty and the ECB Statutes (as opposed to primary purchases), they were considered by some as circumventing the prohibition to purchase in the primary market. The ECB was challenged in Germany through the Constitutional Court for having violated the Statutes. The ECB was forced to explain its actions and has gone to great lengths to highlight the link between the stability of sovereign debt markets and the smooth functioning of monetary policy. However, with respect to the public in some Northern euro area countries, especially Germany, this remains largely unsuccessful. With the earlier resistance to the SMP unlikely to have subsided, alternatives which achieve the same outcomes without the controversy should be examined.

3.2. Outright Monetary Transactions (OMT)

As announced on 2 August 2012, the Governing Council (GC) of the ECB has on 6 September 2012 made a couple of decisions on the technical features of the potential future outright transactions to be conducted by the Eurosystem in secondary government bond markets which are targeted towards stabilising a functioning monetary policy transmission and the singleness of the monetary policy. These transactions have been labelled Outright Monetary Transactions (OMTs) and will be implemented based on a specific framework to be described below. OMTs are meant to enable the ECB “to address severe distortions in government bond markets which originate from, in particular, unfounded fears on the part of investors of the reversibility of the euro” (Draghi, 2012; ECB, 2012b, pp. 7ff.).

As shown above for the case of the SMP, the ECB has in the past tried several times to dampen the crisis through bond purchases and at the same time to push the countries to undertake more reforms – without success. But “this time it’s different” promises ECB President Draghi and points at conditionality as the main and decisive innovation of the new OMT programme.

Strict and effective conditionality which is attached to an appropriate European Financial Stability Facility (EFSF)/European Stability Mechanism (ESM) programme represents a necessary condition for OMTs. These programmes can be implemented as a full EFSF/ESM macroeconomic adjustment programme or in the form of a precautionary programme (the so-called Enhanced Conditions Credit Line), as far as they grant the opportunity of EFSF/ESM primary market purchases. IMF is also called upon by Draghi to take part in the monitoring of such a programme and also in the design of the country-

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specific conditionality. The Governing Council will adhere to OMTs to the extent that programme conditionality is without any reservation respected as long as they appear to be legitimised from a monetary policy perspective. Conditionality thus is regarded as necessary but not sufficient for OMT. What is more, it will abandon these operations as soon as their targets will have been reached or when the respective government does not comply with the precautionary programme or the macroeconomic adjustment programme. In the wake of a tough assessment, the Governing Council will take a decision “on the start, continuation and suspension of OMT in full discretion and acting in accordance with its monetary policy mandate” (ECB, 2012b, pp. 7ff.).

In terms of coverage, OMTs are envisaged for future incidences of EFSF/ESM or precautionary programmes or full macroeconomic adjustment programmes as specified above. They come into question for euro area Member States finding themselves currently under a macroeconomic adjustment programme and are in a situation in which they are on their way to regain access to the sovereign bond market as well. Transactions will be targeted at government bonds of a maturity from one to three years. The ECB’s focus is thus on the shorter part of the yield curve. What is more, it does not put any a priori quantitative caps on the size of OMTs (ECB, 2012, pp. 10f.).

In terms of creditor treatment, the Eurosystem imposes the same treatment for itself and private or other creditors, i.e. a “pari passu” arrangement, concerning bonds issued by euro area member countries and acquired by the Eurosystem through OMTs, of course in strict accordance with the terms of such sovereign bonds. At least legally, the ECB thus is not senior in the case of country default anymore (Draghi, 2012).

The liquidity created through OMTs shall be fully sterilised, according to the ECB. With respect to transparency, there is some progress compared to the SMP. As was the case also for the latter, the aggregate bond holdings stemming from OMTs and their market values will be published with a weekly frequency. The average duration of OMT holdings, differentiated by country will be published on a monthly basis. The latter is necessary simply because the benefitting country is anyway already identified via the conditionality and, thus, at closer inspection is no real progress as compared to the SMP.

Following the decision of the ECB Governing Council on 6 September 2012, on Outright Monetary Transactions, the Securities Markets Programme (SMP) was therewith terminated, leaving its volume standing at EUR 200 billion. The additional base money injected into the system through the SMP is promised to be continuously sterilised, and the SMP portfolio of securities already on the balance sheets of the ECB are said to be held its maturity.

Draghi has also announced a change in the eligibility for central government assets. Accordingly, the Governing Council of the ECB has come up with the decision to suspend the adaptation of the minimum credit rating threshold in the framework of the “collateral eligibility requirements for the purposes of the Eurosystem’s credit operations in the case of marketable debt instruments issued or guaranteed by the central government, and credit claims granted to or guaranteed by the central government, of countries that are eligible for Outright Market Operations or are under an EU-IMF programme and comply with the attached conditionality as assessed by the Governing Council” (Draghi, 2012). The suspension comprises all outstanding and new assets which can be subsumed under the above category.

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3 The ECB intends to clarify this issue in the legal act concerning OMTs.
5 See ECB (2012), p. 11. The decision on the collateral eligibility of bonds issued or guaranteed by the Greek government taken by the Governing Council on 18 July 2012 is still applicable (Decision ECB/2012/14).
4. SECURING EUROPE’S DEBT WITH GOLD

It is by now clear that even in the fourth quarter of 2012 the euro area will stay under significant stress. But it is not at all clear whether the ECB or the euro area governments will de facto be able to act properly to choke market fears and bring down (allegedly) overly high government borrowing costs. As unease builds, it may be time to explore new ideas to cut interest rates.

An idea would be the gold backing of new sovereign debt. It is common knowledge that a few countries which are the most affected by the euro crisis, i.e. Portugal and Italy, hold large stocks of gold. In aggregate, the euro area holds 10,792 tonnes of gold, that is 6.5 percent of all gold that has ever been mined, and worth some USD 590 billion (Farchy, 2011).

As expected, this scenario was the trigger for some to propose that not only the financially distressed governments should sell some of their gold (see, for instance, Prodi and Curzio, 2011). Over the last couple of years, the value of gold has soared. And a popular view is, if there were ever a suitable time that euro area Member States are in need of an unanticipated windfall gain – for instance, to pay interest on their sovereign bonds – it would be now (Farchy, 2011; Pleven, 2011).

But "this would be a mistake. For quite apart from the fact that a massive dump of gold would dampen its price, the eurozone debt woes are now so large such that gold sales would only scratch the surface of the problem" (Tett, 2012; see also Alcidi et al., 2010) This is because the gold holdings of the financially distressed euro area countries (Greece, Ireland, Italy, Portugal and Spain) make up only for 3.3 percent of their central governments’ total outstanding debt (see Tett, 2012).

Through issuing sovereign bonds backed by gold, euro area Member States should securitise part of that gold instead. The latter could be enacted in a rather simple way. But one could also structure it to contain tranches of different risks. The main point in both variants is that gold would serve to provide sovereign bonds with further safeness – and thus comfort investors who do not give credence to euro area government balance sheets any more (see Tett, 2012).

4.1. Materiality of gold reserves

Using gold as collateral would not work for all countries but would do so for some of those in most need. France and Germany hold significant reserves but enjoy low unsecured borrowing costs. Greece, Ireland and Spain, on the other hand, don’t hold enough gold for it to be a viable solution Italy and Portugal, however, hold gold reserves of 24 percent and 30 percent of their two-year funding requirements and could have a material impact of their debt servicing costs (Figure 1).

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6 This view is supported by recent DIW analysis; see Fichtner et al. (2012).
4.2. Gold as collateral: historical experience

In history, collateral schemes have been utilised quite on a few occasions. In the 1970s, for instance, Italy and Portugal employed their gold reserves as collateral to loans from the Bundesbank, the Bank for International Settlements (BIS) and other institutions like the Swiss National Bank. Italy, for instance, received a USD 2 billion bail-out from the Bundesbank in 1974 and put up its gold as collateral. More recently, in 1991, India applied its gold as collateral for a loan with the Bank of Japan and others. And in 2008, Sweden’s Riksbank used its gold to raise some cash and provide additional liquidity to the Scandinavian banking system (Farchy, 2011, World Gold Council, 2012).

As Paul Mercier (2009), at that time deputy director of market operations at the ECB, expressed it: “In a generalised crisis that leads to the repudiation of foreign debts or even the international isolation of a country […] gold remains the ultimate and global means of payment that is still accepted and it is one of the reasons used by some central banks to justify gold holdings.”

According to this statement, countries have in history headed towards their gold reserves only in their toughest situations. What is more, lenders are most probably requiring that this gold is transported to a neutral location. Gold-backed bonds could help in some respects but would not be a full and all-comprising solution. Questions arise, for instance, over the unintended impact on unsecured debt yields. There is scant evidence that the idea has received any significant support from policy makers up to now. Even if euro area political leaders accepted the idea in the end, significant legal obstacles would loom at the horizon most notably connected with the fact that a large share of the gold is held by central banks and not by treasuries (Farchy, 2011, Tett, 2012).

Only a decade ago, it appeared rather “old-fashioned to ever suggest that any investor would claim gold as collateral; in the era of cyber finance, securities such as treasury bonds, tended to rule” (Tett, 2012). However, over the past few months, groups like...
LCH.Clearnet, ICE and the Chicago Mercantile Exchange have to an increasing extent begun "to accept gold as collateral for margin requirements for derivatives trades" (World Gold Council, 2012; Tett, 2012). In addition, in summer 2012 the Basel Committee on Banking Supervision issued a working paper in which it suggested that gold should be one of six items to be employed as collateral for margin requirements for non-centrally cleared derivatives trades, joint with assets such as treasury bonds (Basel Committee on Banking Supervision, 2012, p. 22; Tett, 2012).

Finally, Curzio (2012) acknowledges that when Romano Prodi suggested in 2007 that Italy should use its gold reserve to pay the debt, the reaction was negative. The Italian Finance Minister in 2009 wanted to tax gold and the European Central Bank opposed the idea. Curzio concludes that Italy at the moment has little resources to invest in growth and should consider asking Germany or any other Asian sovereign fund for a loan with its gold reserve as collateral. Rather, Curzio and Prodi suggest using gold reserves as collateral for a bond.\(^7\)

Much in the same vein, Giuseppe Vegas, Chairman of Consob recently suggested a treasury fund with the rating of 'Triple A' collaterised by the jewels of the state namely the shares of ENI, ENEL, buildings, gold reserves and currency as an instrument to reduce the interest payment on the government debt.\(^8\)

All these moves taken together suggest that a creeping change of attitudes is going on. This evolution takes place lesser in terms of the desirability of gold per se, but more through the growing riskiness and undesirability of other allegedly "safe" assets like sovereign bonds. This pattern will probably not reverse soon. This is so especially because markets long waited to see what the ECB might really do after 6 September 2012 and, after this date, whether Spain would be the first case for outright market operations a couple of weeks later in October 2012 (Rees, 2012, and Tett, 2012).

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\(^7\) See: [http://www.firstonline.info/a/2012/09/11/alberto-quadrio-curzio-usare-loro-come-collaterale/4097075e-c2ac-4bd4-9567-0d6877d3a1e0](http://www.firstonline.info/a/2012/09/11/alberto-quadrio-curzio-usare-loro-come-collaterale/4097075e-c2ac-4bd4-9567-0d6877d3a1e0).

\(^8\) See: [Corriere della Sera, 26 June 2012](http://www.corriere.it/economia/12_giugno_26/fondo-immobili-societa-quotate-bot-vegas_31aeeb20-bfa8-11e1-8089-c2ba404235e2.shtml).
5. ESTIMATING THE YIELD REDUCTION OF GOLD-BACKED DEBT

Gold reserves are not typically considered in sovereign yield analysis during normal conditions (default is often triggered with reserves intact). So the chosen bond structure would need to offer very explicit risk reduction in order to benefit from lower risk spread. Sovereigns have historically sought to retain their gold to assist recovery, and thus often default on debt obligations rather than sell down reserves. Examples are Argentina and Russia.

It can be shown that gold backing of sovereign debt reduces the annual yield, thus supporting the monetary transmission mechanism. Clearly, the functioning of the monetary policy transmission mechanism could be improved in the short-run since the yields on government bonds - as a key reference point for other interest rates - fall significantly because of sharply falling risk premia of gold-backed bonds. In the case of Portugal, for instance, this would make up for several percentage points on 5-year bonds. The hedge that the gold would provide against a default as an example of an extreme event would surely attract investors such as emerging market governments and sovereign wealth funds. If a country such as Portugal or even Italy were to default, most gold price, especially if it is denominated in Euro, would sky-rocket (Baur and Lucey, 2010; Saidi and Scacciavillani, 2010, and Farchy, 2011).

To show this for Portugal, we take the following approach (see Table 1). A top-down model is developed to quantify the change in yield when sovereign debt is backed by gold. The credit risk characteristics of bonds/debt are driven by three main factors: i) the probability of default (PD); ii) the expected unsecured recovery rate in the event of default and iii) the collateral/guarantee recovery in the event of default. The yield rate is modelled as: (risk free rate) + (risk premium) with the risk premium as a proxy for the compensation for the credit risk of the asset and calculated as PD*(1-total recovery rate). Financial stress on a sovereign leads to increase in its bond yields as the severity of the crisis translates into an increase in risk free rate, an increase in the probability of default and a decrease in expected recovery rate in the event of default. In the following, we give an illustrative analysis of the issues.

Table 1: Yield differential of gold-backed sovereign bonds: The case of Portugal

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Stress unsecured sovereign bond</th>
<th>Gold backed facility Alternative 1</th>
<th>Gold backed facility Alternative 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Gold secured portion</td>
<td>0%</td>
<td>33.33%</td>
<td>50%</td>
</tr>
<tr>
<td>b. Estimated annual yield</td>
<td>10.0%¹</td>
<td>6.00%</td>
<td>5.00%</td>
</tr>
<tr>
<td>c. Risk free rate</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>d. Risk premium e*(1-f)</td>
<td>8.00%</td>
<td>4.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td>e. Annual probability of default</td>
<td>16%²</td>
<td>12%³</td>
<td>12%³</td>
</tr>
<tr>
<td>f. Total recovery after collateral (1-a)<em>g + (a</em>h)</td>
<td>66.7%</td>
<td>75.0%</td>
<td></td>
</tr>
<tr>
<td>g. Expected unsecured recovery</td>
<td>50%⁴</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>h. Gold collateral recovery (approx)</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Assumptions:

1. Standalone unsecured yield as per example from a 5-year Portugal bond
2. As per 5-year Credit Default Swap (CDS) value
3. Estimate a 25 percent PD reduction in a gold backed structure
4. Sovereign default recoveries historically 30 percent to 80 percent (depends on debt size and bargaining power) – 50 percent conservative average assumed

The logic behind the calculations runs as follows. Starting with the analysis of unsecured debt, we begin with the estimated annual yield of unsecured debt. In this example we are looking at a 5 or 6 year bond. We have taken as a starting point the market rate at the time of analysis which was a yield of 10 percent (assumption 1). Then we look at the CDS rate to calculate an annual probability of default (assumption 2). Next, we calculate the recovery in the event of a default. Historically this has been 30 percent to 80 percent, so we take 50 percent (assumption 4). Total recovery in the case of unsecured debt is then 50 percent. A check of the calibration of the calculations delivers the following: the total recovery equals 50 percent; the annual likelihood of default is 16 percent, therefore the risk premium amounts to 8 percent (= (100-50) times 0.16). Subtracting the calculated risk premium of 8 percent from the yield of 10 percent equals a risk-free rate of 2 percent.

Now consider the case of secured debt and compare it to unsecured debt, using a similar calculation logic. Next take the Euro risk free rate, which is conservatively taken as 2 percent (looking at German 2 year yields for example). The risk of default is assumed to be 25 percent lower due to the incentive of losing gold collateral and now amounts to 12 percent (assumption 3). Assume now that total recovery in the event of default is increased due to the partial gold backing. Calculate the overall recovery rate using the assumption of 100 percent recovery of the gold element and of a 50 percent recovery of the rest in the partially collateralised structure. Calculate the risk premium by multiplying the probability of default by the loss given default (1 - recovery rate). Add the risk premium to risk-free rate to obtain the estimated annual yield.

Now consider that Table 1 has a Portuguese example bond which is 33 percent and 50 percent collateralised by gold. This obviously implies that it only collateralises part of its two-year needs. If the example should be one whereby all its bonds are collateralised, the percent collateral backing will be needed to be reduced, to something below 30 percent. If one takes exactly 30 percent, the total recovery after collateral is 0.65 (i.e. 0.3*1 +(1-0.3) *0.5) and the risk premium amounts to 4.2 percent (i.e. 0.35 * 12 percent). The estimated annual yield then is 6.2 percent.

The sovereign bond yield reductions could in principle be compared to the econometrically estimated effects of the SMP. Due to the recent character and limited time range of the SMP, empirical investigations of its effectiveness are still rare. Kilponen et al. (2012) investigate the impact of an array of different euro area rescue policies on the sovereign bond yield spreads, but only through dummy variables coded as one on the day of announcing the respective measure. Hence, they do not test for a permanent impact of SMP measures. They find a significant effect of SMP announcement. Steinkamp and Westermann (2012) make use of a SMP variable as a control variable in an estimation equation – however, with an insignificant result.
6. LEGAL PRACTICALITIES

It has to be recognised that there are legal and political considerations, as there were with the SMP.\(^9\)

The first critical issue is **reserve ownership**. In most countries, gold reserves are held and managed by central banks rather than governments. Specifically, in the euro area, gold reserves are managed by the Eurosystem which includes all Member States’ central banks and the ECB (Article 127 TFEU, and Protocol (No 4) on the Statute of the ESCBs and of the ECB, Article 12).

The second issue is **central bank independence**. National Central Banks must remain independent of governments in pursuit of their primary objective of price stability (Article 130 TFEU). The Treaty on the Functioning of the European Union (TFEU) expressly prohibits direct financing of governments by central banks (Article 123 TFEU). One should be mindful of the legal issues that this will raise and that such a suggestion will be highly controversial. It is specifically likely to raise questions as to whether or not this represents a breach of the prohibition on monetary financing.

The third issue is related to the **limited potential of gold reserve sales**. There are longstanding gold sale limits which are valid until 2014 that could potential limit collateral transfers and would need to be addressed. The Eurosystem central banks are currently signatories to the 3\(^{rd}\) Central Bank Gold Agreement (CBGA) which restricts net sales of gold reserves to 400 tonnes p.a. combined\(^10\). A number of other major holders - including the US, Japan, Australia and the IMF - have announced at other times that they would abide by the agreement or would not sell gold in the same period. Hence, the CBGA agreement could serve as a constraint on the size of potential gold reserve transfers until 2014, as it commits signatories to collectively sell no more than 400 tonnes of gold p.a. between September 2009 – 2014. Gold collateral could be interpreted as outside the scope of the CBGA or the maturity of the bonds could be staggered in order to limit the amount of gold coming onto the market in the event of a default.

There are clearly important legal issues that need to be addressed, but then that was also the case with the ESM, SMP and OMT. European legislation may need to be amended to accommodate a gold pledge for sovereign debt. This could be done by elaborating an amendment to the Treaty which establishes pledged gold as segregated from Eurosystem central banks and other national banks.

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7. GOLD-BACKED BONDS VERSUS SMP/OMT

We now analyse the SMP more deeply, raise some important caveats, check whether they also apply to the OMT and we will finally assess whether gold-backed sovereign bonds would represent a valid alternative.

Since intervention under the SMP has been confined to the secondary market, the ECB did not literally offend against the Treaty.11 But it violated its spirit as bailing-out government deficits through the printing press is prohibited with an eye on the TFEU, at least according to some “Northern” euro area lawyers. The main political actors were eager about justifying their move by referring to unusually high market tensions, which regrettably left the ECB with no other way out. Although sovereign bond markets for the most indebted euro area Member States de facto nearly dried out in the weeks before May 2010, markets do not turn out to be irrational at all upon closer inspection.12 With the benefit of hindsight, one feels legitimised to state that their fear to be forced to write off their loans was generally not unrealistic. According to empirical evidence gained for the period until the SMP was installed, government bond spreads reacted systematically to the anticipated fiscal policy stance of Member States during the financial crisis. This indicates that the fears of dys-functionality were probably overridden (Gerlach, Schulz and Wolff 2010, and a couple of studies co-authored by Juergen von Hagen and Ludger Schuknecht). However, in his justification of the OMT release in September 2012, Draghi heavily relied on one study by the Research Department of the Banca d’Italia and on another by J.P. Morgan which state that sovereign bond yields still tend to take steady values “not consistent with fundamentals” in August 2011 (Mac Gorain, 2012; Di Cesare et al. 2012, p. 13).13 Hence, either this is an empirical corroboration of the fact that the SMP was not successful or that the SMP was set in place without any economic legitimation.

7.1. No transparency

The ECB did not release any official information about the composition of the SMP bond purchases – neither on countries involved nor on the maturities. Obviously, this was against the interests of the European Parliament which usually forcefully strives for transparency of ECB Governing Council decisions (one recent example being its interventions with respect to an early publication of the records of the ECB Governing Council meetings).14 As an official reason it is often mentioned that the SMP would otherwise not become effective. But one other obvious reason is the emergence of

11 It was clear from the beginning that for the ECB there would be a theoretical way out to arrive at a result similar to a direct purchase of sovereign bonds (see already Belke, 2010, explicitly on this option): If in the financially weak euro area Member States commercial banks come or would be put under pressure to buy sovereign bonds – and the ECB would at the same time abrogate – as already systematically executed not only in the case of Greece – all her rules for mortgaging collateral, governments could procure money through a less noticeable indirect route.

12 Although all countries have announced broad-based bank rescue packages, investors have differentiated between countries mainly on the basis of other, more country-specific factors (e.g. fiscal outlook). This has also been valid after February 2010 when markets have increasingly differentiated among the weak members. In a recent paper, Heinemann, Osterloh and Kalb (2012) find that a euro area Member State’s stability culture (which may be expressed by the use of gold as collateral) is one of the most significant drivers of euro area sovereign yield spreads since it fosters the inclination to implement fiscal rules which in turn are the significant variables in ordinary regression equations estimating sovereign bond yields.

13 Note that the convertibility risk was derived here from Google-omics by checking how often internet Google users inserted a term like “euro area breakup”. However, there would really be a credibility problem for central bank research emanating, if the finding of “dys-functionality” of sovereign bond market would become more probable the more Southern the central bank research is conducted, i.e. if Bundesbank research does not find it but Banca d’Italia does.

14 Whelan (2010) introduces an insightful thought experiment and supposes that the EUR set up a programme to buy municipal bonds but would not announce how much came from California or Florida or other states or cities. He asks how long would this survive before members of Congress demanded a full explanation of the programme? But that is where we have been from May 10, 2010, up to now in the euro area.
considerable internal unanimity within the ECB Governing Council on this issue – decisions appeared to be slightly more controversial than the OMT decision which only received resistance from the German Governor Jens Weidmann and not from the Governors of other Northern euro area central banks any more. For instance, Jean-Claude Trichet had to admit that the ECB decision to set the SMP on track had not been taken unanimously.\textsuperscript{15} In addition, these are important signs of a re-nationalisation of monetary policy counteracting the principle of the singleness of European monetary policy (for more details see Belke, 2010).

7.2. Elements of subsidy

“In addition, targeted bond purchases issued by highly indebted euro area governments contain an element of subsidy which tends to severely weaken their fiscal discipline: the interest rate premium on bonds of fiscally weaker countries declines and that of stronger countries increases. Fiscally solid countries are punished and less solid ones, in turn, are rewarded for their lack of fiscal discipline and excess private and public consumption. The credit risk is thus just rolled over from the bonds of the weaker countries to those of the stronger ones and the ECB is made responsible for their liabilities” (Belke, 2010).

This programme went along with a resource transfer if (as it seems in some cases) the ECB has paid higher prices than those corresponding to the true default risk. This came to the benefit of the immediate sellers of these bonds. Especially French banks managed to pass their stocks of Greek bonds to the ECB with – if at all – little loss to the ECB. In addition, also those investors have profited from the transitory stabilisation of bond prices through the SMP which had acquired the bonds of financially stressed sovereigns from suppliers which had to sell those due to a downgrading of their rating for regulatory reasons.

“Already by the mere fact of bond purchases, the ECB acts like a fiscal agent by taxing other euro area creditors through higher bond rates in order to support a government which finds itself in a financial emergency situation. This is valid again when the ECB collects the money which was already spent for bond purchases. Other euro area creditors are put into a disadvantage because the ECB must offer higher interest rates in order to receive the money back which in turn makes credit more expensive” (Belke, 2010).

7.3. Financial dependence of the ECB and the ESCB

In one of my 2010 Briefing Papers in the framework of the Monetary Dialogue, I argued with respect to the SMP and now applicable to the OMTs as well that “surprisingly less focus has been put on the at least as equally important aspect of the slowly vanishing financial independence of the ECB. Who will actually have to pay the losses of the purchased private and sovereign bonds, if Greece and Portugal - to begin with - will not be able to serve their debt in the end? Ultimately, the owners of the ECB would be asked to pay up, while by far the largest part will be imposed on Germany. It cannot be excluded that the toxic bonds in the balance sheets of the ECB might eat up most of the reserves and its equity capital if they were to fall in value by a sufficiently large amount – in the worst case, the amount could make up for up to three digit billion euros. In this case, less central bank profits are transferred to the account of the euro area governments – with a given public deficit and level of spending - taxes and duties will inevitably go up.” (Belke 2010). It cannot eve be excluded that losses will exceed the whole equity capital of the ESCB. In this case, the euro area governments will have to ramp up the ECB’s equity capital with the purpose to either bolster the ECB’s reserves or to avoid a negative equity capital of the central bank.

7.4. **Sterilising ECB bond purchases: Unknown terrain**

The ECB had decreed to sterilise its sovereign bond purchases within the SMP and announced the same for the new OMT programme - neutralising bond purchases via sales of other bonds or money market instruments from its own balance sheet to leave the overall monetary base unaffected. The ECB’s main aim has been to counter accusations that the bank is monetising national government debt (for details see Belke, 2010).

Technically, sterilisation could be put into place by means of a tender of interest-bearing time deposits. However, making this option attractive for depositors might necessitate an increase in interest rates which in turn may limit the degrees of freedom in setting main refinancing rates. Another option addressed by the ECB itself would consist of issuing own ECB debt certificates.\(^\text{16}\)

When implementing implicit **minimum price guarantees for government bonds**, the ECB does not know exactly how many bonds it would have to acquire to sustainably stabilise the prices of the financially distressed countries’ bonds. To keep out of harm’s way, the ECB probably tends to purchase more than necessary, which would blow up the stock of base money more than necessary. Additionally, the credibility of future sterilisation measures always suffers from the character of being "merely promised". The tenders of a time deposit can be taken just as an indication that the ECB wanted "to put out a few feelers 'to see how it will work'; in fact they are not mandatory" (Belke, 2010).

And all sterilisation efforts combined with any new programme such as the ESM or the OMT convey the impression to be irrelevant, given the background of the overall ECB monetary policy stance: still offering loans to an unlimited degree through its refinancing programmes. Moreover, the OMT bears – as described below – further characteristics beyond the SMP which render it even more "unlimited". Finally, global excess liquidity is already vagabonding around the globe but did not unravel due to still small money multipliers. It also is an important determinant of the money supply not tackled by sterilisation (Belke, 2010, and Belke and Gros, 2010, cited by Saidi and Scacciavillani, 2010).

What is more, the issuance of own ECB debt certificates would make bonds of sovereigns under financial stress even less marketable (Belke, 2010).

7.5. **Shifting toxic debt instruments on board of the ECB**

The ECB is faced with a significant credit risk because it lends to financially stressed banks which are not able to receive loans elsewhere and at the same time steadily lowers its quality requirements on collateral and accepts "toxic" government bonds in the framework of its bond purchases (for details see Belke, 2010; Belke, 2012b; and Gros, 2012). Equally important, the quality of the collateral transferred to the ECB is determined in a nation-specific way – in the context of the ECB lending to Greek banks it is made up by doubtful private Greek assets and Greek sovereign debt. Conflicts among Member States cannot be excluded because the ECB acts as a "central counterparty for cross-border lending incurring risks along national lines" (Gros, 2011).

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\(^{16}\) See, for instance, the proposal by (at that time) ECB Board member Bini Smaghi. Belke (2009) delivers a detailed assessment of the pros and cons of this proposal.
7.6. **Attracting investors: Only temporary effects**

The fact that risk premia were increasing again in Southern European sovereign bond markets already in the wake of the SMP clearly indicated that the rating of the euro area by large investors has not changed substantially since the adoption of the rescue packages and the announcement of strict austerity programmes in Greece, Spain, Italy and Portugal (Di Cesare et al., 2012; and Mac Gorain, 2012). But the same assessment appears to be also valid with respect to the success of the announced OMTs (as anticipated by Belke, 2012e). Only some weeks after the announcement of the OMTs, Spanish yields started to sky-rocket again.

It is thus of paramount importance that investors must be put into a position to be capable of assessing the euro area Member States individually according to their country risk and not as a member of a homogenous block (“standalone ratings”). The main escalating problem is that the ECB is curbing real returns of sovereign bonds through its bond purchases to realisations which are certainly not sufficient to attract private investors. This in turn raises doubts about sustainability of the bond purchasing solution.

7.7. **“Sterilising” monetary policy: Targeting the asset side of the ECB’s balance sheet**

“The problem inherent in both sterilisation approaches is that they reshuffle only the liability side of the ECB’s balance sheet. Both approaches are arguably not well-suited to either diminish the bloated ECB balance sheet or to remove the (potentially) toxic covered bonds or sovereign bonds” (Belke, 2010).

Hence, further purchases of sovereign bonds under the OMT following the now terminated SMP are not a sustainable solution at all. This instrument is limited in time and volume. Unlimited extension of the balance sheet does not appear manageable especially as the equity capital of the ECB is already leveraged by a higher double-digit number. In addition, “the intake of potentially toxic assets as collateral and by outright purchases in the central bank balance sheet artificially keeps the asset prices up. A credible strategy of sterilisation to deal with the consequences of the financial crisis should, thus, deal primarily with the asset side of the ECB balance sheet” (Belke, 2010).

7.8. **Danger of inflation**

The absence of a fiscal “back-up” might be an incentive for a central bank to head for seigniorage revenue through inflation. It follows that there is a manifest risk of higher than targeted inflation. Accordingly, Sims (2003) and others have demonstrated “that there are clear limits to a government’s and a central bank’s ability to credibly commit to an inflation target in the absence of a fiscal anchor. The reason is that, under stress, the expectations of the public as to how the central bank will respond to an extreme deterioration in its financial position will determine the effectiveness of macroeconomic stabilisation efforts” (Belke and Polleit, 2010). A central bank incurs inflation dangers by printing additional money intended to avoid sovereign bankruptcy. The inherent problem combined with this “solution” is that the citizens have ultimately to pay for the risks originally taken by the central bank itself.

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17 For instance, the saving requirements are so drastic that their successful implementation seems to be almost impossible and politically risky for Greece, Portugal and Spain.


19 For empirical correlations of financial stress and policy performance of central banks, in particular with regard to inflation, see Klüh and Stella (2008). They find that a negative relationship between central bank financial strength and inflation outcomes. It turns out to be robust to the choice of alternative country samples, control variables, estimation strategies, and conceptualisations of central bank financial strength.
This is a topic often brushed under the carpet but has increasingly been taken up by the Bank for International Settlements (see also White, 2012) and even most recently by the new leaders of Deutsche Bank. And they are not alone.

The problem is on the one hand technical – there is no historical example of such a huge amount of liquidity to be sterilised after the SMP and the LTROs in the euro area (not to speak of global liquidity). On the other hand, it is system-inherent. As stressed so often by Austrian School economists such as Hayek, to stop inflation is less a technical but in the end more of a political problem (Belke and Polleit, 2009). From this perspective, the ECB may well be endowed with all the instruments to re-collect all the base money put into circulation by its bond purchases but will it really implement them in the necessary strictness in the end even if inflation proves to be the easiest way for politicians to get rid of sovereign debt. According to history, inflationary expectations are not based in first instance on central banker’s statements of good intent (White, 2012). Hence, there is also the undeniable risk that the extension of the ECB’s balance sheet will finally fuel inflation in the medium run – at least in the North of the euro area as part of the solution of the present balance-of-payment crisis (Belke, 2012c).

Indeed, there was significant growth of the monetary base over the recent period – in itself signalling inflation potential for the future (see Belke and Polleit, 2010, for the so-called p-star model). But this cannot be established for M3 (Commerzbank, 2012, and BIS, 2011). Whether inflation potential is contained in the SMP and the OMT combined with the LTROs will be dependent on whether the ECB will be able to re-collect all the money in the banking sector before the start of an economic recovery and, thus, a more dynamic loan and M3 development in the euro area. There is a huge amount of money “in the pipeline” alone with an eye on the LTROs (Belke, 2012a, and Belke and Polleit, 2010).

Even more important, the ECB is caught in the current situation and de facto taken hostage by its strategy (for an analogous argument with respect to the Fed see White, 2012). In order to avoid negative consequences of the preceding covered bond and SMP programmes and also the LTROs it comes up with a new even bigger and more far-reaching programme - the OMT. It has thus moved into a (too) close symbiosis with politics. Even Bundesbankers like Jens Weidmann or Joachim Nagel re-iterate that unconventional monetary policies will remain activated until the euro area crisis will be resolved in the end which might take quite a long time. "The ECB is probably not able any more to completely refuse the politicians', US portfolio managers’ and rating agencies’ strive for inflating away public debt” (Belke, 2011a). As soon as market participants will anticipate this constellation (note that anticipation is sufficient for this to happen), inflation expectations will rise immediately and which will be reflected in market pricing.

7.9. ECB bond purchases: Efficiency and path-dependence

"It did not come as a surprise that the bond purchases by the ECB under the SMP turned out to be effective on the markets only on the first days. Only a little bit later, around one week after the announcement of the SMP in May 2010, for instance, the euro plummeted to a four-year low. Also other indicators of the degree of uncertainty traded at the markets convey the impression that investors do not believe in the sustainability of the "newly designed" euro area any more – the latter being characterised by a daunting institutional failure to make sovereign default in EMU possible. Instead, markets assume that “toxic” government bonds would finally be located on the ECB balance sheet, threatening the long-term stability of the euro. As a result, the European currency fell against most other currencies” (Belke, 2010).

Consider the realistic case that the ECB will hold the bonds to maturity (as indicated by Draghi, 2012). Then the ECB will effectively tax the private sector if it strives to diminish its balance sheet (if it does not, it risks inflation). It will in turn have to sell sound non-sovereign bonds which will be lowering their prices and drive up the premia corporations will have to offer then to pay for their bonds.

The danger has risen by launching SMPs and OMTs that the ECB will get caught up in its role of a lender of last resort and a central counter-party of euro area risks (White, 2012). “The more bonds the ECB will buy, the more difficult it will be to deny further sovereign financing in the future because doubts on the markets will prevail until an institutional solution of debt restructuring will be installed in the shape of a fiscal agent to be financed by the governments themselves and not through the creation of money” (Belke, 2010).

Overall, the “most worrisome aspect is that the euro area has stumbled into a perpetuation of unconventional monetary policies by the execution of the SMP” (Belke, 2010) and will do even more so by activating the OMT programme. Of course, an at least as important purpose of these measures is to bail out banks and governments to support their bond issuance, although external communication and justification is heavily focused on the necessary repair of the monetary transmission mechanism. “What is difficult to see at the moment is how, once started, it can stop” (Belke, 2010).

7.10. Lowering the degree of reform: The "There-Is-No-Alternative" view

A credible implementation of necessary structural reforms promotes lower funding costs of governments and economic growth. This was recently demonstrated through the examples of Italy and Spain. Their bond yields shot immediately back up, when Italy after a sweeping pension reform did not as ambitiously push through labour market reforms, and as soon as Spain – faced with domestic political resistance – came up with increasingly less ambitious deficit-reduction plans. This pattern of reform intensity was motivated apparently by the massive support of two “Big Berthas”, i.e. Long-Term Refinancing Operations, and the anticipation of resumed government bond purchases by the ECB which finally materialised as OMTs.

The negative employment effects on highly centralised and inflexible wage bargaining systems (Italy and Spain) and/or irresponsibly slow deleveraging of the housing bubble by too high construction investment figures (Spain) are simply shifted by an accommodating monetary policy through sovereign bond purchases onto third parties. But the costs of structural rigidities would only become visible in case of a credible announcement of the exit from the ultra-expansionary monetary policy. More important and more democratic: The scope for rent-seeking interest groups - as in the Spanish case the regional bankers and real estate agents - would be diminished and the pressure for action for governments would become much greater. The empirically corroborated TINA (“There-Is-No-Alternative”) effect would develop its welfare-enhancing effect, given the still insufficiently mobile population in the South of the euro area, and would increase the market-based adaptability to shocks (Belke, Herz and Vogel, 2006). This would be deeply democratic, because a passing of reform failure onto third parties like the employed in the North could be prevented. Collateral damage to healthy parts of the euro area economy, such as diminishing returns on investments in sound companies and banks would be avoided.

With the ECB’s transition to the OMTs on 6 September 2012, things have changed slightly. This time and different from the SMP, the ECB tries to take into account the fear of reform fatigue in the crisis countries. On the one hand, ECB assistance shall be provided only to countries that accept the conditions of the bailout fund ESM. On the other hand, the ECB announced that it will only buy bonds with a maturity of less than three years. The
rationale behind this is that the affected countries should know that will have to turn back on the markets rather soon. This is intended to keep the reform pressure up.

7.11. SMP and OMT critique: A summary

Our above analysis has demonstrated that without a mechanism to manage an orderly sovereign default adjustment programmes lack credibility and the ECB balance sheet is exposed to significant risk. Only sovereign funds, including gold-backed sovereign bonds, disclose the genuine opportunity costs to the initiators. But choosing the money printing press, the opportunity costs of the appropriate adjustment programmes wrongly appear to approach zero.\(^{21}\) This is especially so because the ECB programmes are not sufficiently transparent.

As an alternative to the first best solution of a European Monetary Fund\(^{22}\), the ECB could have supported sovereign debt consolidation by solely accepting (of course, after a transition period) bonds issued by those governments which have introduced upper limits to debt levels as collateral.\(^{23}\) This proposal à la Martin Feldstein has been called by Belke (2010) a highly appreciated departure from the ECB's current practice to assist banks by accepting toxic assets as collateral and to purchase Southern euro area sovereign bonds. In the same vein, one could argue in favour of a gold-backing of sovereign bonds because the potential loss of gold serves as a disciplining device for fiscal policy behaviour of the respective government.

7.12. Beyond SMP: Some OMT specifics

Many of the caveats raised above with respect to the SMP also apply to the OMT. But the OMT is even more critical and shifts the problem into a new dimension – due to a couple of reasons. The recent ECB Council meeting on 6 September 2012, has dealt – according to its own wording - with nothing less than a plan for the rescue of the euro area. The core issue is how the ECB can prevent, by means of a renewal of its securities market programme (sovereign bond purchases), that Spain's and Italy's financial power is choked by extremely high risk premia. One of the probabilities would be a combined action of the EFSF and the ECB which would have the advantage that conditionality could be imposed on the receiver countries. The EFSF would buy limited amounts of sovereign bonds and at the same time the ECB announces unlimited purchases. Controversial issues are, for instance, an interest rate level or spread (vis-à-vis German bunds) threshold for interventions, and the publication or secrecy of such a threshold if it is pursued (as a representative source White, 2012, p. 7).

One of the huge difficulties however hailed as an advantage compared to the SMP by Draghi, implied by this OMT scheme is that the ECB would in this case make dependent its decisions from political decisions made by the board of the rescue funds. This is of course working against its political independence. What is more: how will the ECB react if a country breaks its reform promises? Will the ECB then really be able and willing to stop its supporting bond purchases immediately and risk disorderly default of the respective

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\(^{21}\) This opportunity cost argument is also a counter-argument against those arguing that the ECB does not risk to suffer in financial terms from holding sovereign bonds because the ECB could agree to get repaid far in the future, say in twenty years or so, if the respective country really goes bankrupt.

\(^{22}\) The idea of a European Monetary Fund (EMF) was provided by Gros and Mayer (2010). They proposed funding the EMF out of levies on countries that breached EU fiscal rules, thus pushing the incentive to comply, and from borrowing in the markets. If an EMF had been launched with the start of the euro, it would have accumulated enough money to rescue a small- to-medium-sized euro area member. In a crisis, a Member State could call on funds up to the amount it had paid in, providing its fiscal policies were approved by other euro area governments. Financial support beyond that amount would entail a supervised “adjustment programme”.

\(^{23}\) That the country could effectively be cut off from the euro area’s money market when its government debt is no longer eligible as collateral for the ECB’s repo operations again demonstrates the strong enforcement mechanisms the EU disposes of (probably in contrast to the IMF). See Gros and Mayer (2010).
country with dangers for the functioning of the euro area monetary transmission mechanism which it claims to repair through its (announced) sovereign bond purchases? In fact, Mario Draghi clearly stated that the ECB “would pull the plug on any country that reneged on reform or fiscal consolidation pledges – even though such a course of action could theoretically trigger market panic and an exit from the euro” (Financial Times, 2012). The Bundesbank, for instance, is still sceptical since it sees these measures as violating the EU Treaty, i.e. the prohibition of monetary financing of public debt (Die Welt, 2012).

There is quite much uncertainty remaining about the operation of the OMTs. As anticipated, the ECB does intentionally not publish the sovereign bond yields that it considers as a upward threshold and triggers for its intervention. Some progress is however foreseen with respect to the (monthly) publication of the countries whose bonds the ECB purchases.

Mario Draghi’s self-vindication for getting the ECB into a programme that blends monetary policy with fiscal policy is – as described in detail in Chapter 2 - that both the transmission mechanism, based on which the ECB aims to guide interest rates across the euro area through its main refinancing rate, and the “singleness” of European monetary policy have collapsed since financial markets are just pricing in the so-called convertibility risks for euro area Member States that may quit the euro (Di Cesare et al., 2012; Mac Gorain, 2012). This exclusive monetary policy legitimation is, as stated above, logically at odds with the tight conditions requested by the ECB before it starts its OMTs.

Mario Draghi took up this criticism stating that there was “a case for central bank intervention in countries that had found themselves in “a bad equilibrium in which you may have self-fulfilling expectations that feed on themselves”. Draghi continued: “But we must remember why these countries found themselves in a bad equilibrium to start with – this is because of policy mistakes” (Financial Times, 2012). The idea behind this is that the larger the firepower of the fund the lower the bond yields of the countries under distress and the lower the probability of default of a government due to lower interest at costs. But this kind of argument neglects that there is political uncertainty in between two points in time, for instance induced by election dates and different inclinations of different political regimes to declare a default. So there is no unique interest rate threshold which triggers ECB intervention (Gros, 2012a).

As said, a necessary condition for Outright Monetary Transactions is “strict and effective conditionality attached to an appropriate European Financial Stability Facility/European Stability Mechanism (EFSF/ESM) programme”. Such programmes can take the form of a full adjustment programme or, as a less strict variant, a precautionary programme (the so-called Enhanced Conditions Credit Line). It appears most probable that the ECB will orient itself at the latter because otherwise the respective country looses capital market access. However, this not at all intended for Spain and Italy (Rees, 2012; Ruhkamp and Mussler, 2012).

After all experience, the ECB will act applying “enhanced conditions” as minimum requirements under this credit line (ECB, 2012), i.e. the respective country has to stick to the rules of the deficit procedure and should have a “sustainable” debt level. Moreover, it has to obey to the thresholds of the EU procedure with macroeconomic imbalances and should be characterised by a “sustainable” trade balance. Consequently, the ECB has rather much leeway in defining the conditions and also in assessing their degree of fulfilment. Since the ECB has the right to go beyond these minimum requirements, there is ample room for conflicts between the ECB and the respective country.24 This might well develop

24 Accordingly, the Financial Times (2012) cites Simon Tilford, chief economist at the Centre for European Reform, as follows: “One question is whether the benefits from the bond buying are going to be enough to offset the damage inflicted by the conditionality attached”. 
into an “open flank” for the ECB since it can react on a violation of the conditions by a specific country solely by stopping its intervention on the respective sovereign bond market. However, this would immediately drive the country’s risk premia and interest rates up (Ruhkamp and Mussler, 2012).25

7.13. Disappointing results from bond purchasing programmes: A case for gold-backing

The dependence of Italian, Spanish and French commercial banks on financing through the ECB is now significantly higher than usual. The bigger this share gets, the more demanding it will be for Southern euro area banks to tap other ways of financing, especially with an eye on the fact that the ECB enjoys a de facto preferred creditor status26. Finally, emancipate the banks from ECB funding may turn out to be more and more complicated. As in July 2012 alone, deposits of approximately EUR 75 billion subsided from Spain and partly landed in Germany (where the money supply is by now increasing more strongly). It is clear that we have to deal with a huge dimension of capital flight from the South which is funded by the ECB money printing press (Belke, 2012e).

Against this background, it is clear that the bazookas and even ECB government bond purchases cannot be expected to reduce the borrowing cost of governments in a systematic fashion - rather the opposite. If anything, they put downward pressure on the euro and favour the euro area core and exporting country, Germany. This adds to the steadily increasing lack of structural convergence in the euro area. Persistently high bond yields lead to a divergence and fragmentation of the euro area Member States. By the continuation of its policy to flood the economy with money the ECB risks that any specific monetary policy measure will no longer have a uniform effect on all euro area economies. If the impression among outside investors grows that the current stance of monetary policy is easing the pressure for reform in the problem countries too greatly and the euro area fragments slowly thereby, their departure from the euro area as a whole will be at risk (Belke, 2012d).

Sooner rather than later secondary market purchases of the EFSF / ESM might be deemed necessary, in order to substitute foreign investors (which currently flee abord for structural reasons) in Spanish government debt securities almost at any price.

Accordingly, it might turn out after some weeks that the complementary ECB measures announced on 6 September 2012 will not deliver a permanent reduction in bond yields in the South. Then, at the latest, one should look for a "last resort" solution, since the supply of alternative options looks to be exhausted because all austerity and growth programmes do not meet the expectations. Additionally, international support from the IMF, the EFSF and other institutions usually granted to troubled economies and preferred over gold-backed issuance is stretched as a result of other bailouts (Bundesbank, 2012).

One obvious alternative would be to go for gold-backed sovereign debt. Despite all current denials, the point in time may have come to foresee the use of valuable and fungible assets such as gold to provide the Southern countries with temporary, but crucial in the current crisis of confidence, bridge-financing heading towards a complete long-term solution. To be explicit, such a proposal does not address the gold-backing of euro or stability bonds whose usefulness is conceded by the EU Commission only in the very long perspective.27 Nor it is

25 Even investors in sovereign bonds with a maturity of up to 3 years of distressed countries will get cold feet then, because they have bought these bonds excepting that they would be able to resell them later on to the ECB. Hence increases in longer maturity bond yields might well drive shorter maturity yields upward if there is any doubt in the reform willingness of the distressed governments.

26 The problem of its preferred creditor status is however addressed by the ECB in the OMT programme.

27 The European Commission (2011), p. 9, proposes in its Green Paper "on the feasibility of introducing Stability Bonds that "[...] Stability Bonds could be partially collateralised (e.g. using cash, gold, shares of public
directly related to the recent debt redemption funds proposal by the German Council of Economic Advisors according to which the EFSF and later also the ESM firepower should ultimately be increased by a gold coverage of bonds.\textsuperscript{28}

As mentioned before, Gold has been already used in the 1970s by Portugal and Italy to raise loans from the Bundesbank and the Bank for International Settlements (BIS). More recently, India managed to take a gold-backed loan from Japan (see Section 4.2). Gold prices tend to move counter-cyclically, which is likely to reinforce its stabilising effect in the current situation of financial stress. We do explicitly not propose to simply raise revenue from any short-term selling of the gold reserves.\textsuperscript{29} That would only drive down the price of gold (Alcidi et al., 2010; Pleven, 2011; World Gold Council, 2012). We now compare the move to gold-backed bonds to the ECB’s SMP and OMT programme according to which the central bank uses its balance sheet to lower yields of highly distressed countries where the monetary policy transmission mechanism is no longer working. We also outline similarities between the two moves.

7.14. \textbf{Comparison of gold-backed bonds with the bond purchasing programmes}

Gold-backed bonds/using Gold as collateral is consistent with the logic used for SMP and OMT and achieves similar outcomes. It is available to the ESCB on its balance sheet and is under the independent control of the Governing Council. It would significantly lower yields in malfunctioning markets, thus re-opening the monetary transmission mechanism.

But it is superior to the SMP and OMT with respect to a couple of criteria. Admittedly, it could be argued that the transfer of gold reserves to say a debt issuing agency which in turn will serve investors would be in breach of the prohibition of monetary financing of government debt. Although gold is not directly sold to euro area governments and, hence, cannot without further ado be viewed as a fiscal transfer between the central bank and the government, this is indeed legally debatable. However, it would clearly be preferable to a revival of the ECB bond-buying programme SMP in the shape of the OMT, which shares the same inherent flaw.

Making use of the National Central Banks gold reserves is much more transparent, being an important argument vis-à-vis the euro area population and also the European Parliament which traditionally lays much emphasis on transparency of EU governance. It does not lead to unmanageable and disincentivising fiscal transfers from the North to the South. Hence, gold-backed bonds do not imply any transfer of credit risk between high risk/low risk countries. Potential losses are borne by specific countries and not by the largest shareholder of ECB and main guarantor of the rescue funds. This in turn reduces the probability of a downgrading of Germany and its final step-out from the funds and, thus, makes the EFSF/ESM firewall more sustainable.

\textsuperscript{28} German Council of Economic Advisors (2011), p. 79: “To this end, each country participating must guarantee 20 percent of its loan by pledging currency reserves (gold or foreign exchange holdings)”. The Telegraph mentions in this context that Southern Europe’s debtor states must pledge their gold reserves and national treasure as collateral under a EUR 2.3 trillion stabilisation plan gaining momentum in Germany. See http://www.telegraph.co.uk/finance/financialcrisis/9298180/Europes-debtors-must-pawn-their-gold-for-Eurobond-Redemption.html.

\textsuperscript{29} The gleaming bars in the vaults of the Greek central bank are worth USD 5.8 billion. If Athens were to sell that gold, the Greek state would theoretically be able to meet at least part of the debt payments due soon without any outside help. See http://www.time.com/time/world/article/0,8599,2080813,00.html#ixzz27U4AE3Uw.
Additionally, the implementation of gold-backed bonds does not shift toxic debt instruments on board the ECB as is the case with respect to the OMTs for which the Governing Council of the ECB has decided on 6 September 2012, to suspend the application of the minimum credit rating threshold for central government assets as collateral. On the contrary, gold serves as high-value collateral.

Nor does it lead to sterilisation problems and growing problems of exiting unconventional monetary policy which made the SMP path-dependent and nearly irreversible in the short-to medium run which contradicts any bridge-financing character. Simply speaking, a gold-based solution would be less inflation-prone. Those arguing that the gold-backing solution would decouple the money supply and hard currency potentially leading to hyperinflation neglect the current non-role of gold for backing a currency. But above all, the use of gold as collateral avoids or lessens in importance, the reduction of incentives for reform of the beneficiary countries under the SMP and the OMT. The reason is that a lack of fiscal discipline or reform effort of an euro area Member State puts its gold reserves at risk and gold thus delivers the best incentive structure. What is more, gold-backing of bonds strictly follows the above mentioned principle that only sovereign funds tend to reveal the true opportunity costs to the initiators.

Remember that we argued that the ESCB can attach conditions to its gold transfer such as the implementation of structural reforms. The move would not only fix the monetary policy transmission mechanism but also provide the time to implement the necessary reforms.

The main message boils down to the following. First, a gold-backed bond could be justified in the same manner as the SMP and the OMT programmes. Second, a gold-backed bond would not have the intrinsic disadvantage of the SMP and/or the OMT: there is no immediate fiscal transfer, no risk of an inflation tax and it should increase incentives for structural reform and not reduce those.
8. HOW TO BRING UP A CONSENSUS IN FAVOUR OF THE GOLD-BACKED SOVEREIGN DEBT SOLUTION?

Is the gold variant as a solution politically enforceable at all? As noted above, sovereigns should only consider gold-backed debt in specific and distressed circumstances. Hence, the need for refinancing within the euro area must be overwhelming in order to receive political support from the South for gold-backing. Clearly, financing costs must have become unsustainable as a requirement for public support of a gold-backing of sovereign bonds: a high inflation perspective limits the ability to perform quantitative easing, that unsustainable sovereign yields are offered by the public markets and the debt/GDP ratio is untenable (Belke, 2012e).

The arguments against the use of gold for the backing of financially stressed bonds are raised by central bankers and economists especially from Italy such as Banco d’Italia Governor Visco– a country abundantly equipped with gold reserves – who themselves have supported a revival of the SMP, now in the form of the OMT (Visco, 2012).30 However, as demonstrated in detail above, both variants of unconventional monetary policy collide significantly more with the EU Treaty and the ECB Statute.

30 Note that the proposal by Prodi and Curzio (2011) is closest to the one presented in this note. However, theirs is symmetric in the sense that gold reserves of all euro area countries are to be pledged. See also Curzio (2012).
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NOTES
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