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EUROBONDS:
CONCEPTS AND IMPLICATIONS
Compilation of Notes
for the Monetary Dialogue

ECON



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

EUROBONDS: CONCEPTS AND IMPLICATIONS

**Compilation of Notes
for the Monetary Dialogue of March 2011**

Abstract

The idea of eurobonds has been developed and put forward since the beginning of the sovereign debt crisis. This compilation of notes provided by members of the Monetary Experts Panel explains the different concepts and discusses their feasibility, advantages and disadvantages.

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

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CONTENTS

INTRODUCTION	4
 1. EUROBONDS: CONCEPTS AND APPLICATIONS	
by Charles Wyplosz	5
 2. EUROBONDS: THE FINANCIAL EQUIVALENT OF THE SINGLE CURRENCY	
by Stefan Collignon	17
 3. EUROBONDS: CONCEPTS AND IMPLICATIONS	
by Guillermo De la Dehesa	41
 4. EUROBONDS: THE BLUE BOND CONCEPT AND ITS IMPLICATIONS	
by Jaques Delpla and Jakob von Weizsäcker	51
 5. EUROBONDS - CONCEPTS AND IMPLICATIONS	
by Sylvester C.W. Eijffinger	59

INTRODUCTION

'Eurobonds' (in the meaning of 'pooled' sovereign debt instruments of euro area Member States) have been object of intense political debate recently. Proposals span from the possibly most cited Blue-Red Bond proposal by Bruegel (further detailed analysis see e.g, the European Parliament study compilation [Euro Area Governance - Ideas for Crisis Management Reform](#) (PE 440.292) to political manifests such as the one in December 2010 by Tremonti and Juncker. However, there is a need to understand the features and the policy implications of the different proposals, including their differences, more fully. Therefore, the Notes compiled here seek to answer the following questions:

- What are currently the basic concepts and differentiating features between the various the Eurobond proposals?
- What are the implications for borrowing cost, the liquidity of European bond markets and market discipline in general as well as against the current backdrop of tensions in European Sovereign Debt markets?
- Are there any alternative mechanisms to increase the liquidity of European Sovereign Debt markets without resorting to mutualised debt?
- What would the issuance of joint bonds imply for economic governance in the euro area and the legislative proposals under discussion?



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

Eurobonds: Concepts and Applications

Note

Charles WYPLOSZ

Abstract

Issuing Eurobonds means that all Member States become jointly responsible for anyone's debt. This would reduce the odds of a sovereign crisis but create a very serious moral hazard: fiscally-undisciplined governments would be encouraged to raise their debts, thus passing the associated risks and costs on to the fiscally-responsible governments. In general, mutualising debts help to deal with the threat of sovereign crises at the expense of discipline promotion. The Juncker/Tremonti proposal is clearly designed to deal with the crisis issue but, at least in its current schematic version, it encourages fiscal indiscipline. Solutions exist, but they need to be developed. The Delpla/von Weizsäcker proposal lies at the other end of the spectrum. It uses the idea of Eurobonds to promote fiscal discipline but it does not attempt to reduce the odds of a sovereign crisis. One would hope to have an intermediate proposal that would both alleviate the threat of crises and enhance discipline. No idea of this sort has been put forward so far. The problem is that crisis alleviation and the enhancement of market-based incentives to fiscal discipline are antinomic. Eurobonds are just instruments that can be used to achieve radically different aims.

CONTENTS

EXECUTIVE SUMMARY	7
1. WHY DO INTEREST RATES DIFFER?	8
2. WHAT ARE EUROBONDS?	10
3. THE TWO MAIN PROPOSALS	12
3.1 The Juncker/Tremonti proposal	12
3.2 Blue and red bonds: The Delpla/von Weizsäcker proposal	13
CONCLUSION	15
REFERENCES	16

EXECUTIVE SUMMARY

The idea of issuing Eurobonds is to make national debts of euro area countries identical and undistinguishable from one another. The idea is not new, and it is not surprising that it resurfaces at a time when markets sharply distinguish public debts, to the point that some governments face difficulties to borrow. Yet, there are good reasons for markets to distinguish among debts, and the higher interest rates that they require from countries that are perceived as fiscally-unsound act as a powerful incentive to restore budgetary discipline. This is why the existence of Eurobonds would significantly alter the euro area, potentially weakening fiscal discipline further. Any proposal to issue Eurobonds must explicitly address this moral hazard aspect.

The key characteristic of Eurobonds is that they mutualise national public debts. In other words, a group of countries, possibly all euro area Member States, undertake to share responsibility for each of them as far as debt service is concerned. With each government retaining sovereignty on its fiscal policy, the explicit guarantee creates an additional moral hazard problem. It is also risky since each country stands to suffer a loss should one party to the arrangement default, partially or totally. These losses may be significant. The proposals must also address these questions.

The Junker/Tremonti proposal envisages a European Debt Agency (EDA) that would pool national debts up to 40% of GDP, with many important details missing. It proposes that, at times of crisis, governments under market pressure can issue 100% of new debt through the EDA. This pretty much reduces the disciplinary effect of rising interest rates and therefore creates a serious moral hazard problem; with no complementary suggestion on how to compensate for it (solutions exist but need to be worked out). The proposal also includes the possibility for countries to issue debt through the EDA to buy back their own national debt. The usefulness of debt buybacks has been often studied and the general conclusion is that it only makes sense as part of a comprehensive debt restructuring program. The proposal is silent on this crucial aspect. In fact the proposal seems mainly designed to reduce pressure on governments, leaving markets to deal with the consequences and without any attention to the discipline issue.

The Delpla/von Weizsäcker proposal is more elaborate. In contrast to the Juncker/Tremonti proposal, it does not aim at avoiding debt crises, rather it focuses on enhancing debt discipline. Under this proposal, euro area governments would issue two different debt instruments: blue bonds up to 60% of GDP, which are mutualised and therefore undistinguishable; red bonds, which are strictly national and therefore distinguishable. This arrangement would create an incentive to bring public debts to 60%, since the interest rate would then be as low, or even lower, than German Bunds, while debt in excess of 60% is likely to carry significantly higher interest rates. This implies that governments that increase their indebtedness would face increasingly higher interest rates. If their debts go too far, they could well lose market access, i.e. face a crisis situation. In that case, the proposal's logic requires that there will never be any bailout, a stipulation that is not clearly stated.

1. WHY DO INTEREST RATES DIFFER?

The monetary union concerns a transfer of sovereignty to the ECB as the authority to conduct monetary policy, with the right to issue the common currency. As a result, there is a single euro interest rate for borrowing and lending from the ECB. Under normal circumstances, this single rate applies to borrowing and lending among banks that are considered as safe. Since the ECB borrows and lends for very short terms (normally less than one month), the single rate is only expected to apply to very short-term contracts. Beyond this horizon, interest rates are expected to reflect the perceived riskiness of the borrower. For instance, a bank may be seen as perfectly safe over the next few days but less than perfectly safe over a period of one or ten years. Thus the monetary union does not imply that all interest rates of similar maturities are equal.

This applies to borrowings by governments. Until the crisis, national public debts were carrying very similar interest rates. The spreads – the difference between a national debt and the German debt, which is considered by the markets as safest – did not exceed 15 basis points (0.15%) and were mostly lower than 5 basis points. In fact, observers – including the ECB – often remarked that the spreads were too low. But what do spreads represent? The difference between the British and German rates on, say, one-year bonds combines a currency risk and a default risk. The currency risk is the probability that the Sterling will depreciate relative to the euro over the next year multiplied by the expected size of the depreciation: if the probability is 50% and the expected depreciation is 20%, the country risk contributes 10 percentage points to the spread. The default risk combines the probability of a default and the expected size of the default. Within the euro, the currency risk is eliminated but the default risk remains.¹ The very small spreads reflected the perception that a default was highly improbable, yet not exactly zero. The crisis, of course, can be seen as a sudden revision in market expectations regarding this probability.

There is nothing wrong with that; in fact, this is exactly what was expected when the monetary union was launched. Since governments remain sovereign in matters of fiscal policy and debt issuance, each national debt is a different financial instrument that reflects the ability and willingness of the corresponding government to honor its commitment. The possibility that spreads could widen was actually considered as a crucial mechanism to enforce debt discipline, over and above the Stability and Growth Pact, which was known to be weak. This is precisely why the ECB has long been disappointed by what it saw as market complacency toward public finances in some countries.

It follows that there is a deep link between interest rate spreads and institutional mechanisms for fiscal discipline. The mechanism can be national, like the German constitutional debt brake, or collective, like the Stability and Growth Pact. The weaker these mechanisms are, the more important interest rate spreads become as an instrument for market-based discipline. Any proposal to weaken or eliminate spreads must be accompanied by better credible fiscal stability national or collective mechanisms.

Which is more effective, market or institutional discipline? The experience with market discipline is quite disappointing. The general view is that markets move too late and then too much, shifting from complacency to panic.

This observation applies to the current European sovereign crisis as well, and is exemplified by the way rating agencies decide too abruptly and considerably lower ratings on, say, ten-year bonds that they had long described as safe. Like most market participants, rating

¹ There remains the possibility that a country leaves the euro area but, in this case, its past debt is still denominated in euros. Switching to the new domestic currency would amount to a default since it would change the terms of the original debt contract.

agencies compensate their overlooking the risks with an exaggerated reaction. As the markets panic, they suddenly place borrowers under the obligation of immediately solving a problem that long been simmering and that is best addressed progressively.

The experience with institutional mechanisms is relatively short. A preliminary assessment, offered in Debrun et al. (2009) is that national rules have some effectiveness. The experience with the Stability and Growth Pact, the most elaborate collective undertaking so far, is not encouraging. As shown by Fatas and Mihov (2009) and Mongelli and Wyplosz (2009), the pact has not made a quantifiable difference during the first ten years of the euro's existence.

The conclusion is that neither institutions nor market discipline alone are likely to improve the quality of fiscal policies in the euro area. The implication is that both need to be kept in place and, whenever possible, improved.

2. WHAT ARE EUROBONDS?

Since bonds issued by national governments from euro area countries share the same currency but remain different, there is no unified bond market. This stands in sharp contrast with the huge market for US treasuries, which underpins the supremacy of the dollar as the single international currency. In the absence of federal debt, the euro is bound to remain a currency of secondary international importance, which is likely to weigh on the development of European financial markets. While political constraints currently prevent the emergence of a federal government, which would issue its own public debt, there are periodic suggestions that national governments could pool (some of) their debt instruments and make them identical.

To be identical, Eurobonds must share the same currency, as they already do of course, but they also must bear the exact same risk. To that effect, they must be guaranteed in the exact same way. Indeed, a bond is as safe as those that issue it. Many solutions are possible. They can be issued by a single agency, which is backed by member governments. The backing can be total or limited to a portion of the debt; in the latter case, the debt would likely command a premium over the debt issued by the government considered to be safest. Alternatively, they can be issued by national governments, which however formally and contractually commit to guarantee each others debts. In this case, the guarantee must be complete and the contractual terms must be exactly identical; otherwise national debts will remain different. An intermediate solution (blue and red bonds) is presented below.

Whatever solution is adopted, the key characteristic of Eurobonds is that they mutualise national public debts. In other words, a group of countries, possibly all euro area MemberStates, undertake to share responsibility for each one of them as far as debt service is concerned. With each government retaining sovereignty on its fiscal policy, the explicit guarantee creates a severe moral hazard problem unless it is appropriately dealt with. Why should any government exercise restraint when it knows that others will pay for its own excesses? That such proposals attract interest in the midst of the current crisis may seem surprising. In fact, there is a clear logic, albeit one that is fraught with serious risks.

The intention is quite explicitly to rule out sovereign crises. If the Greek debt was guaranteed by the other euro area Member States, there would be no crisis. That is true, but there must be a price. One price is the moral hazard issue. The answer is to tighten up institutional mechanisms apt to delivering fiscal discipline in the future. Indeed, we have seen a range of proposals to harden the Stability and Growth Pact, including new sanctions that should act as a powerful deterrent, for instance the suspension of voting rights for delinquent countries and a range of fairly inquisitive surveillance procedures. Solidarity thus comes along with some reduction in fiscal policy sovereignty.

The other price is financial. Governments that offer a guarantee must be ready to suffer occasionally some losses. Are the sums involved worrisome? The table below shows the cost that all other countries would suffer if one of them, indicated in column 1, would default on 25% of its debt (this is a level frequently observed in sovereign debt restructurings). The losses are measured as a percentage of the insuring countries, assuming that all 17 euro area countries contribute in proportion to their GDP. For all but five countries, the losses are less than 1%, with four others above 0.5%, the maximum penalty imposed by the Stability and Growth Pact, which was meant to be a powerful deterrent, and was never levied for fear of a grave political backlash. Of course, no one would expect Germany or the Netherlands to default, but other countries that could be, or currently are, on the market watch list, could impose losses that are quite enormous.

Loss imposed on other countries by a 25% default (based on 2010 debt levels)

Germany	7.05%
Italy	6.04%
France	5.59%
Spain	2.08%
Netherlands	1.10%
Belgium	0.98%
Greece	0.91%
Austria	0.56%
Ireland	0.42%
Portugal	0.39%
Finland	0.24%
Slovakia	0.08%
Slovenia	0.04%
Cyprus	0.03%
Luxembourg	0.02%
Malta	0.01%
Estonia	0.00%

Source: AMECO, European Commission

Note: The table shows the ratio of 25% of the corresponding country gross debt to the sum of other countries' GDP.

Proponents of these measures must believe that it is possible to improve the effectiveness of the pact, much against what past experience has taught us. Opponents invariably observe that sovereignty is of the black-and-white variety: either each government and its parliament retains the last say on fiscal policy and restrictions will fail to make a difference as has been the case so far, or there are situations when governments and parliaments lose final authority. Proponents note that IMF programs impose some loss of sovereignty, but they fail to note that:

- 1) asking for an IMF program is never compulsory, countries can choose to default instead;
- 2) IMF programs are rare events that are triggered by occasional crises, not a permanent surveillance mechanism with built-in sanctions;
- 3) each IMF program is negotiated and tailored to each country's particular circumstances.

In short, IMF programs are temporary last-resort customised solutions, not the kind of permanent and automatic restraints that a hardened Stability and Growth Pact would entail.

The conclusion here is that Eurobonds would radically transform the euro area, unless they are set up in a way that seriously mitigates the moral hazard that they would create and unless they are capped to politically acceptable levels.

3. THE TWO MAIN PROPOSALS

Two recent proposals have attracted much attention. They are examined in the present section on the basis of the previous discussion:

- How do they affect market-based disciplinary effect? If they do, what are the countervailing institutional measures proposed?
- How are these bonds backed? How does the backing affect national sovereignty?
- Are there any serious moral hazard effects?
- Do the Eurobonds create a potential for significant costs?

Both proposals envisage that each country's debt would consist of two separate instruments. One is the same as is currently the case, a national debt guaranteed by each state. The other one is a Eurobond guaranteed collectively by all euro area Member States. The details differ and, as is often the case, they differ substantially.

3.1 The Juncker/Tremonti proposal

In a brief article published by the *Financial Times*, Ministers Juncker and Tremonti have proposed to create a European Debt Agency (EDA) to replace the EFSF as of 2013. This agency would have the right to issue debt up to 40% of national and collective GDPs. As a start, half of new national debts would be issued as EDA debt, thus building up the stock of Eurobonds over time. The proposal also includes a 'switch' procedure that would allow EDA to buy distressed national debts at a discount. Finally, distressed countries that cannot borrow, or only at high interest rates, would be allowed to issue 100% of their new debts through the EDA, at the EDA rate.

The proposal has two explicit intentions: to bring sovereign bond market stress to an end and to create a large and efficient bond market. As previously noted, the creation of a unified European bond market is desirable and this proposal would achieve that aim if the EDA benefits from a full guarantee of member governments. Such a guarantee is not explicitly stated, though; it is rather implied for the simple reason that the proposal is vacuous without a full collective guarantee. Without details on the mechanism that is envisioned, the proposal cannot be assessed fully.

Would the proposal prevent a sovereign debt crisis? Had we had an EDA in 2008, those countries that currently face high interest rates would have had access (up to 40% of GDP) to cheap borrowing. Still, the non-guaranteed portion of their debt would be under stress but they would have been eligible to the emergency window that would allow them to issue *all* the new debt through EDA. Thus the only stress that would be eliminated is the government's one, not the market's. This, of course, would create a serious moral hazard for the government could continue to borrow at low rates.

The proposal does not address this issue (more precisely, it summarily dismisses such an implication).² Some solutions exist, for example that newly issued EDA debt be swapped against national debt with a discount directly related to market prices.

² The relevant part is: 'An E-bond market would also assist Member States in difficulty, without leading to moral hazard. Governments would be granted access to sufficient resources, at the EDA's interest rate, to consolidate public finances without being exposed to short-term speculative attacks. This would require them to honour obligations in full, while they would still want to avoid excessive interest rates on borrowing that is not covered via E-bonds.' There is no argument as to why moral hazard is eliminated, except perhaps that the threat of higher rates would properly incentivise each government. Since half of the new debt is protected, the incentive to avoid high rates is half of the current one.

Nor does the proposal concern itself with the counterpart to the market discipline reduction that it creates. Virtuous countries would take on the risk of default of less virtuous countries, up to 40% of their debts (which exposures nearly double those shown in the table above). They are bound to require serious institutional safeguards.

In the absence of any explanation of how the collective guarantee is realised and without any proposal concerning institutional arrangements to promote fiscal discipline, it is impossible to evaluate the implications in term of national sovereignty. They are bound to be deep.³

The switch proposal is intended to finance buybacks by countries with large debts. Buybacks only make sense at time of distress – otherwise the country borrows the same amount that it pays back, while the idea is to buy back at a discount. Buybacks, therefore, only make sense as part of a debt restructuring strategy.⁴ The Juncker/Tremonti proposal is silent on the question.

3.2 Blue and red bonds: the Delpla/von Weizsäcker proposal

The proposal by Delpla and von Weizsäcker is simpler. It does not aim at solving the crisis or, at least, at avoiding defaults. The intention, instead, is to enhance market-based discipline and therefore to lessen the demands on the Stability and Growth Pact.

The proposal is that euro area countries issue two different debt instruments; blue bonds that are explicitly collectively guaranteed, and red bonds that would remain national commitments. They suggest to cap the issue of blue bonds at 60% of each country's GDP.

The idea is that blue bonds would be considered as perfectly safe by the markets and therefore carry an interest not higher than German bonds do. The blue bond market would be a large, deep and global market. The red bonds, on the other hand, should carry different interest rates, reflecting the market assessments of each government's creditworthiness. This proposal would eliminate neither government stress nor market stress. Quite to the contrary, the threat of default would force investors to be very careful.

Virtuous countries with debts below the Maastricht limit of 60% would face the best possible borrowing conditions. Less virtuous countries, with debts in excess of 60% of their GDPs, would face the whole brunt of market discipline *at the margin*, as they need to borrow more. This is crucial: countries with debts not much above 60% would have lower debt servicing costs than now and slightly higher marginal borrowing costs thus leaving governments with more room for maneuver. As debt levels move higher, presumably markets would impose higher costs on the red debts, which would effectively reduce considerably the moral hazard created by the pooling of blue bonds. An important aspect is that the blue bonds would be senior to the red bonds, so that governments would have to default first on the red bonds. As a result, all countries would have an incentive to bring their debts down to 60%, probably more powerfully so than with the Stability and Growth Pact, and without the need for any additional institution.

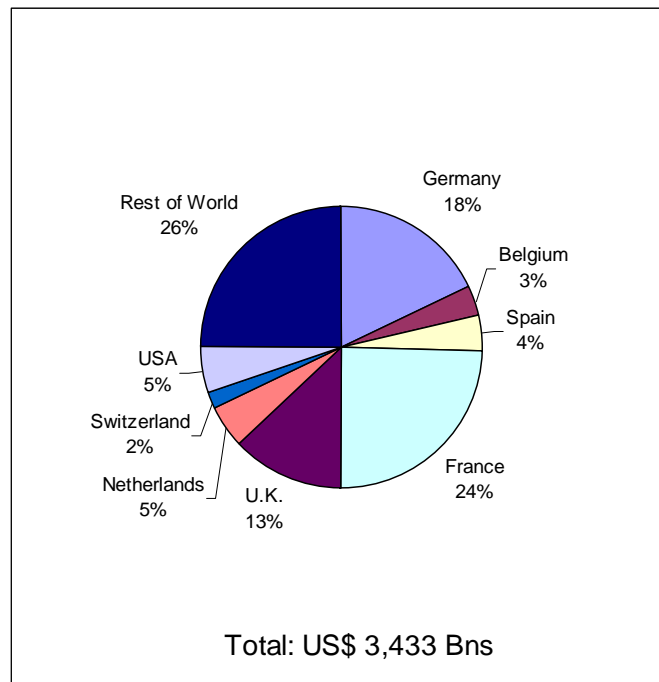
The Delpla/von Weizsäcker proposal assumes that markets will not be concerned by public debts below the 60% threshold. This is a reasonable assumption, but it depends on the collective willingness to let some red debts be defaulted upon. The proposal includes the requirement that red debts contain a collective action clause – an agreement on how debt

³ In comments on the Juncker/Tremonti proposals, Manasse (2010) develops this issue and concludes that 'the Eurobonds require a fiscal union where high debt countries lose (entirely or partially) their fiscal (and hence political) sovereignty.'

⁴ This point, which has been made long ago by Bulow and Rogoff (1988), seems to be forgotten in current discussions.

defaults would be negotiated with creditors – that would make the defaults more orderly, but defaults are never perfectly orderly. One country's default could trigger contagions on others. This is precisely the threat that has led to the May 2010 rescues, the emergency creation of the EFSF and interventions by the ECB. The move is likely to have been inspired, partly at least, by the concerns of some (large) countries that some of their banks were seriously exposed to potential defaults by periphery countries. For instance, the figure below shows that in 2010, French and German banks held 24% and 18%, respectively, of the USD 3,433 billions of the combined Italian, Greek, Portuguese and Spanish public debts held worldwide by banks. This could happen again with red debts and prompt again a bailout that would blur the distinction between blue and red debts. It would seem crucial, therefore, that the no-bailout rule, whose interpretation has proven to be elastic, be redefined in such a way that it cannot be ignored under any circumstances.

Bank of holdings of public debts of the Mediterranean countries



Source: BIS

Note: The Mediterranean countries are: Italy, Greece, Portugal and Spain.

CONCLUSION

If very carefully structured, Eurobonds can help with the so-far unsuccessful efforts at establishing fiscal discipline in the euro area. This is what the Delpa/von Weizsäcker proposal aims to achieve. Using Eurobonds to bring the crisis to its end and to prevent future crises, as in the Juncker/Tremonti proposal, opens up a number of dangerous doors. The Juncker/Tremonti proposal would create major moral hazard, which could only be alleviated through a reduction in national sovereignty over fiscal policies. There may be good reasons to foster such a reduction in national sovereignty, including the aim of deepening Europe's economic and political integration. Such a deepening, however, should not be promoted indirectly by creating institutions bound to dysfunction, so that national sovereignty would have to be abandoned in an emergency situation. Crises often offer an opportunity to move lines, but the direction of such moves may be the opposite of those intended.

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DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

EUROBONDS: THE FINANCIAL EQUIVALENT OF THE SINGLE CURRENCY

Note

Stefan COLLIGNON

Abstract

The euro area needs deep and fully-integrated financial markets in order to return to sustained economic growth and high levels of employment. Today's fractioned markets are dominated by Germany and discriminate against small peripheral Member States. Eurobonds could help to overcome these difficulties by creating a large integrated bond market, but not by serving to weaken the budget constraint in highly indebted Member States.

CONTENTS

INTRODUCTION	19
1. EUROPE'S FRACTURED DEBT MARKETS	19
2. EUROBONDS AND PUBLIC INVESTMENT	24
3. INTEGRATING THE EUROPEAN BOND MARKET	29
3.1 Blue and Red Bonds	30
3.2 Bonds issued by a European Debt Agency (Juncker and Tremonti)	31
3.3 Union Bonds as a collateralised security	32
CONCLUSION	35
REFERENCES	36
 ANNEX 1: CHANGE IN PUBLIC INVESTMENT RATIO RELATIVE TO DEBT LEVELS (EU 12)	 42
ANNEX 2: ECONOMIC GROWTH AND GOVERNMENT AND PRIVATE INVESTMENT	43
ANNEX 3: GRANGER CAUSALITY TEST FOR PRIVATE AND PUBLIC INVESTMENT AND GROWTH	44
ANNEX 4: GARCH ESTIMATES	45

INTRODUCTION

The euro crisis in 2010 has painfully demonstrated that, despite the single currency, the European Union does not have fully integrated financial markets. The ECB found in its January 2011 bank lending survey for the euro area that due to 'renewed financial market tensions stemming from concerns about sovereign risk, banks have reported deterioration in their access to short-term money markets and the markets for debt securities issuance'.⁵ These difficulties hamper the return to sustained economic growth and high levels of employment. In this paper I will look how the creation of Eurobonds could contribute to the integration of financial markets. I will first present some evidence for Europe's fractured debt markets, then discuss the link between public investment and the issue of Eurobonds and conclude on the integration of financial markets by means of Union Bonds.

1. EUROPE'S FRACTURED DEBT MARKETS

Nowhere is the fractured nature of financial markets more evident than in Europe's bond markets. The years of minimal yield spreads for government bonds have masked the fact that European government bonds represent very different economic, political and juridical realities. From the beginning of European Monetary Union in 1999 until the Lehman bankruptcy in 2008, the variance of yields was minimal and the ECB's Euro Bond Market Study⁶ concluded:

'The euro bond market developed quite well since 2001. The growing importance of the euro as an international investment currency has made the market for euro-denominated issues more attractive for both investors and issuers. A key element behind these developments of the European bond market in this period was the impetus for a better integrated and more liquid market and the increasing diversity of innovative products, such as index-linked bonds, real-time bond indices, fixed income exchange traded funds, credit derivatives and structured products.'

This optimistic view has now crashed. During the global Financial Crisis and then due to the Greek sovereign debt crisis, spreads and their variance have increased dramatically in the euro area (see figure 1). In Greece government bond yields are now 800 to 900 basepoints above Germany, in Ireland over 500 points. By all accounts, these spreads are exceptional and incompatible with a sustainable monetary economy.

Nevertheless, some observers have rejoiced in this new financial pluralism, arguing that it reflects more correctly the different fiscal policy stances between Member States. They expect that by assessing sovereign debt separately for each country, markets force governments to consolidate their finances more rapidly. The convergence of bond yields before 2008 had taken this pressure off Member States and encouraged unsustainable policies. Yield differentiation is therefore a welcomed step leading to the restoration of fiscal discipline.

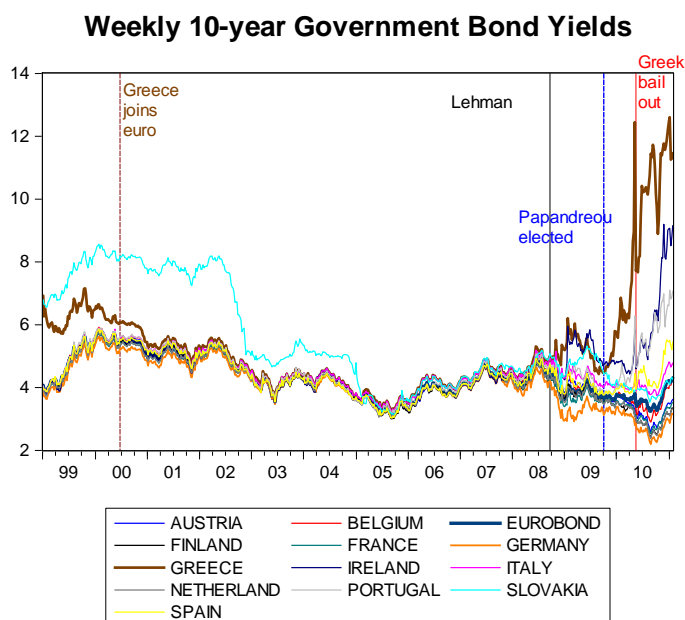
On the opposite side, it is argued that high costs of borrowing in mainly Southern Member States make fiscal adjustment even more difficult and restrain economic growth. The rising burden of debt service requires primary surpluses, which are imposing painful social policies and are often politically unacceptable. Government bond yields also spill over into private bond markets and slow down investment and growth. While there is truth to both these arguments, it is also true that the variance of yields has attained now levels, which are truly exceptional and it is not imaginable that they can be sustained (see the

⁵ ECB, Monthly Bulletin February 2011, p. 26.

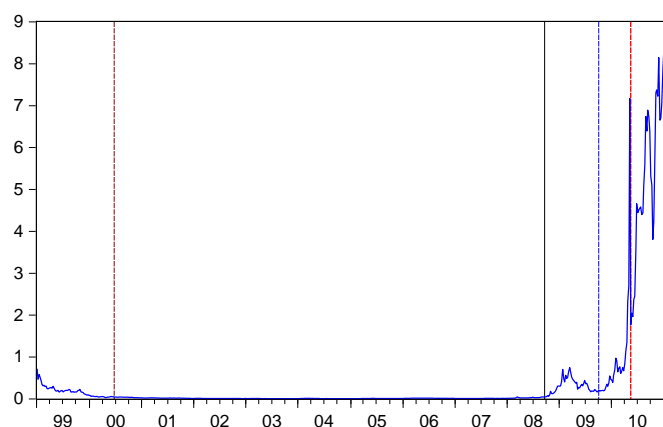
⁶ 2004, p. 5.

lower panel of the Figure 1). The question is whether the return to order will require the restructuring of public debt and a partial default in some Member States or whether providing sufficient liquidity will make the bond market operate more smoothly again. The answer to this question is also dependent on the performance of economic growth in the euro area and especially in Member States with high yields.

Figure 1:



Variance of Government Bond Yields across Euro Area



However, over and above these short term considerations, the fragmentation of Europe's bond markets is a major obstacle for a vibrant economy. Figure 2 shows the outstanding volumes of domestic debt securities in the world. If it were fully integrated, the aggregate of the euro area would be similar to the Japanese market and amount to about one half of the US market. However, national debt markets are much smaller.

While outstanding securities in Italy and France actually exceed Germany's, only the German Bund is recognised as a benchmark security.

The share of government debt titles is clearly lower in Europe, than in the two other industrialised economies. In Japan, the UK and India, domestic debt is mainly issued by governments (more than 80%) while in the US and in the euro area, government debt is less than half of the total stock of outstanding securities.

Figure 2:

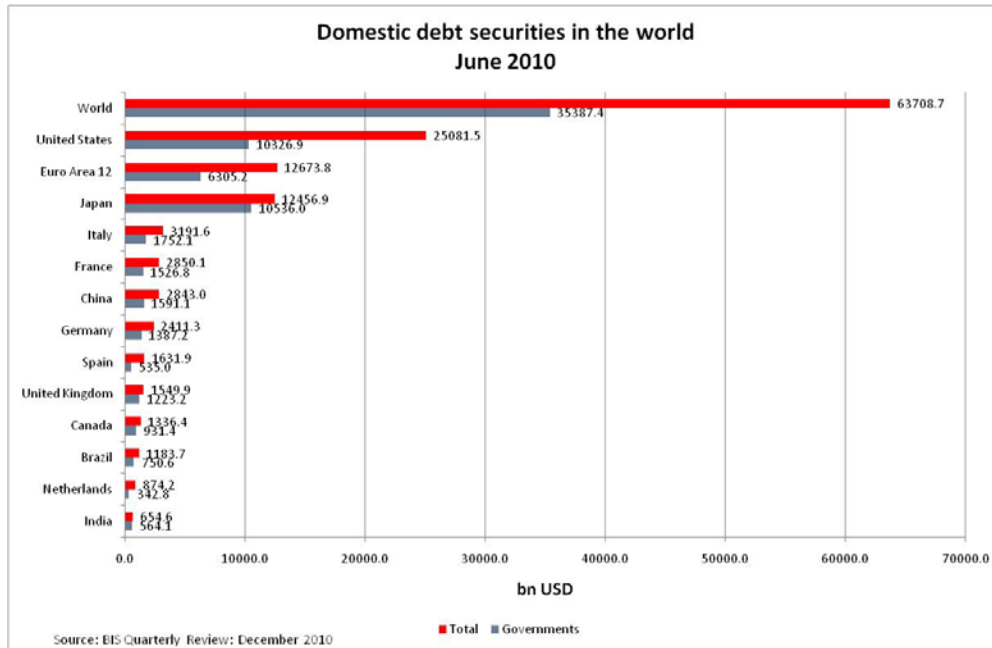


Table 1

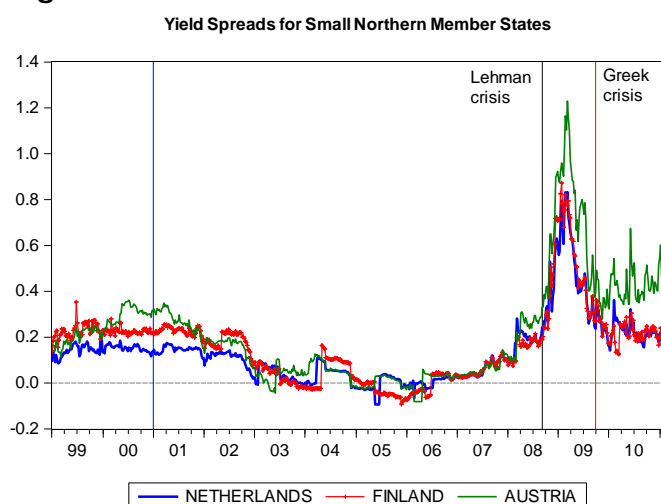
Member State Share in Euro Area Security Markets			
Jun.2010	Euro Area 12	Government debt in %	
Italy	25.2	27.8	
France	22.5	24.2	
Germany	19.0	22.0	
Spain	12.9	8.5	
Netherlands	6.9	5.4	
Belgium	3.9	4.0	
Ireland	2.8	1.8	
Austria	2.5	1.8	
Greece	1.8	2.2	
Portugal	1.7	1.4	
Finland	0.7	0.4	
Slovakia	0.2	0.4	

The fractured nature of European debt markets impede long term investment, economic growth, job creation and international competitiveness. It makes it more difficult to raise funds, because European markets are less liquid than US and Japanese markets, leading to structurally higher interest rates. Long term investors, like pension funds, cannot find instruments to match their long term needs and debt issued in peripheral markets is not easily absorbed. Large foreign investors, like sovereign wealth funds, are not attracted by small-size issuances (Monti, 2010).

These disadvantages are unequally distributed. In the present crisis, the German Bund is perceived as a liquid and safe asset, but from a global point of view, German government bonds represent a small asset market that has no European significance other than that it serves as a benchmark. Only the German government can borrow at these terms; the fiction of state sovereignty makes it impossible for other Member States to obtain benefits from the higher liquidity of the German Bund market. Furthermore, because of the holistic nature of European intergovernmentalism, private debtors are affected by the performance of governments in Member States where they operate. Thus, banks and non-financial corporations are confronted with deteriorating abilities to finance their operations, while German companies benefit from cheap capital.

Some argue that if other Member States only followed German restrictive fiscal policies, they would enjoy similar borrowing conditions. However, this is not true. Figure 3 shows that in small Member States, where debt ratios have remained below German levels, such as in Austria, the Netherlands or Finland, governments had to pay a premium over German bonds during most of the first euro-decade. These yield differentials are the premium for small illiquid markets. Clearly, there is a price to pay for non-Europe in the bond market.

Figure 3



The fractured nature of financial markets signals that European Monetary Union is still incomplete. In fact, financial markets are now a replay of money markets of the 1990s. At that time, German monetary policy and the Deutschmark dominated most European currencies and other Member States in the European Monetary System had to pay unreasonably high interest rates for maintaining monetary stability. Today, Greek and Irish governments pay three to four times higher prices for borrowing money than Germany. The European Financial Stability Facility (EFSF)⁷ was needed to prevent the drying up of peripheral financial markets and a collapse of the euro area's financial system.

⁷ The European Financial Stability Facility (EFSF) is a Luxembourg-registered company owned by euro area Member States which was created following the decisions taken on 9 May 2010 within the framework of the Ecofin Council. As part of the overall rescue package of EUR 750 billion, the EFSF is able to issue bonds guaranteed by euro area Member States for up to EUR 440 billion for on-lending to euro area Member States in difficulty, subject to conditions negotiated with the European Commission in liaison with the ECB and the IMF and to be approved by the Eurogroup. The EFSF has been assigned the best possible credit rating, see: <http://www.efsf.europa.eu/about/index.htm>.

The German government has used its financial power to impose fiscal policies on other Member States in this situation. These policies may or may not be right, but the problem is that they do not have the backing of European-wide debates and are, therefore, lacking consensus among European citizens.

The sometimes grotesque remarks⁸ about Germany's role in Europe may be unjustified, but they clearly indicate the tensions resulting from the unequal distribution of power in the euro area. This situation is not sustainable and hardly compatible with the idea of Europe as a peace Union.

In this context, the idea of issuing Eurobonds gains a new political dimension. Today, Eurobonds are the financial equivalent of a single currency. The euro became a political and economic necessity because a single market is unsustainable without a single currency⁹ and the asymmetric dominance of German monetary policy in the European Monetary System between the 1980s and 90s was incompatible with the fundamental principles of European integration. Member States therefore had to give up monetary sovereignty and create a single currency. Today, Germany's neochauvinistic¹⁰ attitudes towards the EU, where some have even demanded that Member States should be expelled from the euro if they do not conform, create a political problem with serious long-term consequences that could threaten the cohesion and survival of the euro area. Economically, the high yield spreads prevent Southern Member States from recuperating their economic dynamism after the crisis. Creating a fully integrated financial market by pooling sovereign debt could overcome these dangers, and implicit solidarity of the Eurobond would consolidate the *acquis* of monetary union.

For this purpose one needs to rebuild trust. The core principle of financial markets is trust, and political trust is required to foster political will. Those who oppose the integration of a European bond market only show that they do not trust their partners in the European Union. But then, why should their partners trust them? The creation of Eurobonds could be an important step in restoring trust in the Union: between Member States, within financial markets and between citizens. However, the practical ways of creating Eurobonds are not obvious.

Proposals on Eurobonds circulating among policy experts are of very different qualities.¹¹ Some hardly go beyond a few sentences in the statements made by political leaders; some are intended for very different audiences and very different purposes; some differentiate between who issues them and what guarantees are given. But one of the most important distinctions is whether they should finance public investment or serve the integration of financial markets. Let us begin the discussion by these two purposes Eurobonds can fulfil.

⁸ The Irish Times asked on 18 November 2010 under the Headline: *Was It For This?: 'IT MAY seem strange to some that The Irish Times would ask whether this is what the men of 1916 died for: a bailout from the German chancellor with a few shillings of sympathy from the British chancellor on the side. There is the shame of it all. Having obtained our political independence from Britain to be the masters of our own affairs, we have now surrendered our sovereignty to the European Commission, the European Central Bank, and the International Monetary Fund.'*, <http://www.irishtimes.com/newspaper/opinion/2010/1118/1224283626246.html>.

⁹ See Collignon and Schwarzer, 2003. Some exceptions and derogations are tolerable as long as they cover a relatively small part of the single market.

¹⁰ Ravenscroft (2005, p. 58) has described chauvinism as 'a bias in favour of the familiar'.

¹¹ See http://www.astrid-online.it/Dossier--d1/EUOBONDS/02_Sintesi-proposte-E-bond.pdf.

2. EUROBONDS AND PUBLIC INVESTMENT

The idea of Eurobonds issued to finance public goods has the longest intellectual tradition in Europe. The idea can be traced back to the Haferkamp loans (1975) and Ortolí facilities (1978-80) and to the Spinelli Report, adopted by the European Parliament in 1981. However, nowadays the proposal often refers to an idea advanced by Jacques Delors. In 1993, the Delors Commission's *White Paper on Growth, Competitiveness, and Employment - The Challenges and Ways Forward into the 21st Century*¹² proposed the issuance of 'Union Bonds' for financing infrastructure investment in transport, energy and telecommunication in addition to European Investment Bank (EIB) loans. The repayment of these loans was to be guaranteed by the Community budget. This idea is still stimulating the fantasy of many, even if it has never been realised. Its purpose was the stimulation of real investment and economic growth. Its weakness was asking the large net contributors to the EU budget to pay for other Member States. Doubts were also expressed, whether the Union budget could fund the debt service for Union Bonds, given that the EU budget must always be balanced.¹³

In his 2010 State of the Union Address to the European Parliament,¹⁴ Commission President Barroso has revived Delors' idea by calling for '*EU project bonds*'. What this meant was subsequently explained by a Commission communication.¹⁵ These bonds are to mobilise private investment in support of the objectives formulated in the Europe 2020 strategy by bridging the gaps in private financing and leveraging the EU budget. European bonds would be used in partnership with the banking and private sectors through the EIB or become the norm for projects with long-term commercial potential. 'Project bonds' would be issued by the private sector and the European budget would be used to improve their rating in order to attract funding through the EIB, from other financial institutions and private investors. In this case, the European budget gives an off balance sheet guarantee and this could be seen as not violating Article 310 TFEU.

The idea seems attractive, although the experience in Member States with private-public-partnerships has not always been convincing. Furthermore, the contribution of public investment for economic growth is not without ambiguity in Europe, while private investment is clearly a driver of growth. No doubt, public investment can be an economic stimulus during a crisis, when private investment and demand collapse. Indeed, public spending has prevented a deep depression after the Financial Crisis in 2008. Figure 4 shows that the private investment ratio moves pro-cyclically in the three major industrialised economies, because it rose in the low growth years of the early 1990s, after 2000, but not in the financial crisis in 2008. The public investment ratio moves anti-cyclically - at least after the 2008 crisis. This is in line with macroeconomic textbooks. However, the long term impact of public investment on growth is less clear.

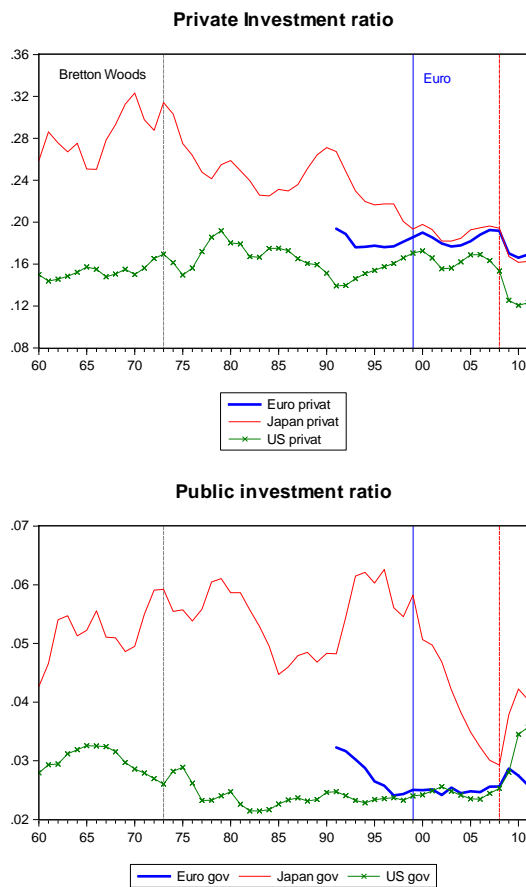
¹² COM (93), 700 final 5.12.1993.

¹³ See TFEU (Lisbon Treaty), Article 310(1).

¹⁴ 7 September 2010, see: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/10/411>.

¹⁵ <http://register.consilium.europa.eu/pdf/en/10/st13/st13977-re01.en10.pdf>.

Figure 4

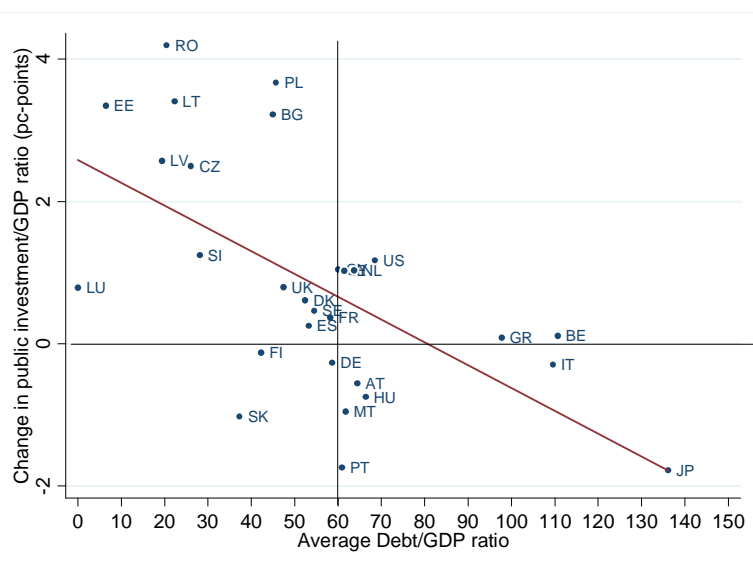


Over the long run, investment ratios have been more stable than private investment in the United States and Europe. In Japan private investment collapsed with the financial bubble in 1991 and public investment first sought to compensate for this, but then fell from 6% to 3% after 1998. Japan's economy has stagnated ever since. In the euro area, private investment has not changed significantly between the 1990s and 2000s, but it was cut by a third after the signing of the Maastricht Treaty. This noticeable reduction in public investment raises an intriguing question: was investment cut by governments because this was the most convenient way for lowering budget deficits to below 3% and reaching the Maastricht criteria?

Figure 5 shows a clear negative relation between Member States' average public investment,¹⁶ although the public investment ratio did only *fall* when the debt ratio exceeded 80%.¹⁷ Thus, high public debt is bad for public investment into infrastructure. This justifies the emphasis on reducing public debt in Europe.

¹⁶ The average covers the period 1999-2011, after European monetary Union has started and the Stability and Growth Pact became operational.

¹⁷ I have also checked for the deficit position, but this was not statistically significant. The econometric evidence for Figure 3 is given in Annex 1.

Figure 5

One may be tempted to conclude that Eurobonds will be good for growth, if they could help deeply indebted Member States to finance public investment. However, it is not certain that public investment is more productive than private and that it has a positive permanent effect on growth in Europe. If public investment had a stronger effect on growth than private investment, it would be recommendable to use Eurobonds for financing European investment, but if such leverage effects does not exist, one should improve the conditions for banks and companies to access credit markets and one must privilege the financial market function of Eurobonds.

Table 2: Economic growth and Government and Private Investment¹⁸

Dependent Variable: GDP growth rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(E_GOV)	-0.041650	0.031229	-1.333685	0.2010
DLOG(E_PRIV)	0.286814	0.035032	8.187221	0.0000
AR(1)	0.914462	0.073281	12.47879	0.0000

Table 2 shows that that there is no evidence for higher leverage from public investment. Private investment raises the economic growth rate. If the going growth rate is 2.5% in the euro area and private investment increases by 10%, GDP will grow by an extra 0.286 percentage points, hence nerly 2.8%. However, public investment and economic growth are negatively correlated, because the coefficient for government investment is -0.041.

Nevertheless, it would be wrong to read the negative coefficient on public investment as a sign of negative causality that goes from public investment to economic growth. First of all, the coefficient is not statistically significant. There is a 20% chance that the impact of government investment is zero. Secondly, correlations do not imply causality. It is possible that governments cut investment to reduce deficits in order to keep in line with the Maastricht criteria and the prospect of macroeconomic stability may have stimulated economic growth.

¹⁸ For the full econometric output, see Annex 2.

The estimated coefficient would then be negative. One can check for this indirect effect by running Granger Causality tests (see annex 3). The result is that private investment (Granger-)causes GDP growth and inversely, and private investment also causes public investment, but not the reverse, while public investment has no causality effects. Hence, we must conclude that, in the present institutional environment, issuing EU Project Bonds to finance public investment, as suggested by President Barroso, is not likely to stimulate growth in the European economy¹⁹.

This does not mean that public investment is not warranted. In fact, it should be undertaken precisely when it has merit in itself. Public spending must create European public goods, for which citizens are willing to pay. For example super fast trains from Krakow to Edinburgh or from Stockholm to Palermo may improve the living standards of European citizens. Investing into the development of natural and ecological energy resources and the efficient transport of this energy to consumers is in the interest of humanity.

Such projects are justified when citizens want them, and not just because they may accelerate long term growth. They are the result of political choices and not a technocratic device. Yet, allowing citizens to make such choices would require more democracy in Europe, notably by giving the European Parliament the power to determine the European budget and to fund it by taxes.

There is, however, also an argument to oppose Eurobonds related to problems of public choice. Fiscal conservatives tend to reject Eurobonds because such bonds are frequently promoted by politicians in highly indebted Member States which need to consolidate their public finances. For example, Tremonti proposed the issue of Union Bonds in 2003 to avoid additional fiscal consolidation.²⁰ Eurobonds are then sought as a device for softening the budget constraint for governments. Not surprisingly, net contributors to the EU budget resist the idea because they would have to shoulder the burden of other Member States' debt.

In this context, a suggestion by Bonnevey (2010) is interesting. He proposed to start with a Franco-German agreement on tight fiscal policy coordination and subsequently to enlarge it to cover the whole euro area. Under this agreement, the two governments would issue a joint Eurobond with the purpose of combining financial market discipline with political cooperation: *'The recourse to a common debt instrument and the collateralizing of a newly-issued security on the tax revenues of the participants, by forcing the States to respect their commitments, would reinforce the credibility of public action and would stimulate a form of fiscal coordination essential to the effectiveness of the single currency and the construction of the European economic edifice'*. Thus, the danger of relaxing fiscal discipline would be reduced by a strong cooperative policy commitment.

Although Bonnevey's proposal deals with the free-rider problem, it has not found much political support. In Member States where fiscal conservatism is policy consensus, the joint issue of Eurobonds continues to be feared as an invitation to free ride on other Member States' consolidation efforts.

¹⁹ This is different in the United States, where public investment has a higher impact on growth than private investment, even if it is statistically less significant:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
US_PRIVAT	1.236997	0.445458	2.776911	0.0124
US_GOV	3.574852	1.944065	1.838854	0.0825
C	-0.256116	0.105672	-2.423691	0.0261
AR(1)	0.548735	0.231086	2.374591	0.0289

²⁰ See http://it.wikipedia.org/wiki/Giulio_Tremonti.

Not surprisingly, proposals for financing European investment by European bonds are vetoed by them, even if the project would have merit on its own. It seems unlikely that this situation will be easily unblocked unless a totally different consideration is brought into the game. The full integration of the Eurobond market may be such an additional variable.

3. INTEGRATING THE EUROPEAN BOND MARKET

Most recent proposals for Eurobonds were motivated by the debt crisis in Southern European Member States. Confronted with the danger of sovereign default, many investors have pulled out of peripheral bond markets. And the resultant lack of liquidity has pushed their yields far beyond the German benchmark (see Figure 1). Many observers argue that Greece and possibly some other governments will not be able to service their debt in the future.²¹ Whether this is true, we do not know. It remains an open question, whether European governments in financial distress are really insolvent. If they were, it would be best to restructure the debt and reduce their debt service now, although this could have dramatic consequences for European banks. Table 3 shows the exposure of banks to debt in Greece, Ireland and Portugal. Cumulated claims are substantial. For German banks they amount to nearly half of their total capital. Even assuming a 50% recovery rate, banks would be severely hit by a default. It is nowadays fashionable to demand that banks should 'assume responsibility' for governments' distress, because they have lent 'excessively'. But banks have already shouldered an important share of the cost of the financial crisis in 2008-2010 by writing off bad debt during the Financial Crisis (see Table 3). Adding to this burden by expropriating bond holders (which is what a 'haircut' means) could seriously damage banks' capital and therefore block economic recovery.

Table 3

European bank balance sheets: country risk exposure					
(% of total capital)					
	<i>Euro Area</i>	France	Germany	Italy	UK
Claims vs Greece	5.4	9.8	8.0	1.2	1.2
Claims vs Ireland	11.3	7.5	30.2	3.3	12.9
Claims vs Portugal	7.6	7.1	8.1	1.0	2.2
Cumulated claims (GR+IR+PT)	24.3	24.4	46.3	5.4	16.3
Assuming a recovery rate 50%	12.2	12.2	23.2	2.7	8.1
Effective losses during the crisis due to write-offs since 2008	11.3	10.4	22.1	2.5	19.6
Sources: <i>Bis, Bce, Bloomberg.</i>					

However, it is also possible that governments are fundamentally solvent and that the crisis is largely caused by the aftershocks of the Financial crisis and insufficient liquidity. Solvency means that in the long run, governments be able to generate primary surpluses of an amount that would allow repaying the debt. It can be shown that the Excessive Deficit

²¹ See for examples, Citibank, 2011.

Procedure in the Treaty would guarantee the sustainability of public debt, although the long-run steady-state debt levels will rise substantially due to the important reduction in growth rates (see Collignon, 2010).

Hence, increasing growth must be a policy priority, although large additional financial means will be needed to sustain public finances as long as economic growth remains weak. This justifies enlarging the EFSF and later the ESM to help financially fragile Member States to overcome their difficulties. Furthermore, in order to resume investment and economic growth, the private sector must find attractive conditions to borrow money. Such conditions are not only dependent on monetary policy or banks' capital, but also on the depth and liquidity of European bond markets. Many proposals for Eurobonds seek to increase liquidity in Europe's markets, and at the same time they wish to lower the cost of borrowing for highly indebted Member State governments. The most widely discussed proposals came from Delpla and von Weizsäcker (2010) and Junker and Tremonti (2010), who argued that Eurobonds would end the crisis. My own proposal (Collignon 2010a) sought to increase liquidity by a market-driven approach independently of government policies. We will now look at these ideas more closely.

3.1 Blue and Red Bonds

Delpla and von Weizsäcker (2010), in a proposal marketed by the Bruegel Think tank, wish to reduce the average cost of borrowing, while maintaining the pressure for fiscal consolidation on overly indebted governments.²² They divide Member States' public debt in *blue* and *red* tranches: the first covers public debt below the 60% debt/GDP ratio; the second relates to all debt in excess of this. In case of a partial default, the red tranche will be hit first and the blue tranche will only be affected by that part of the default that is not absorbed by the junior tranche. In other words, government funds, which are used to service and repay government debt, will first satisfy the claims of the Blue Bond holders. As a result, the blue tranche will become less risky, and the red tranche will be more risky, leading to a differentiation in interest rates. Because the marginal cost for red debt would reflect the higher default risk, governments would be under pressure to reduce their red debt and conform to the reference values in the Treaty on the European Union.

Participating countries would pool and merge their blue tranches, creating a government bond market similar in size, liquidity and quality to the US Treasury debt market. According to the authors, the Euro-Area Blue Bond market could amount to 60% of euro area GDP (about EUR 5,600 billion), which is about five times the current market for the German Bund and almost as large as the US Treasury debt market (about USD 8,300 billion).

Due to this gain in liquidity, the cost of borrowing would be reduced on the blue tranche. By contrast, the red tranche would remain national and liquidity here would be less than in the homogeneous national bond markets today. This reduced liquidity further increases borrowing costs on red debt and maintains the pressure on Member States to bring their debt ratios down below 60%.

Delpla and von Weizsäcker calculate that the gain from lower interests on blue debt could amount to an average net present value of six percent of the GDP of participating countries. This would be a substantial contribution to making public debt more sustainable.

²² One should be aware that the debt problems discussed here are related to governments and not to countries or states. In many Member States with high public debt, there are perfectly credible private debtors who should not be affected by their government's problems. This is one reason why ideas of a temporary or permanent withdrawal from the euro area are totally absurd: they would damage private firms who are not affected by public misdemeanors.

The proposal is elegant and politically astute. Small Member States would benefit from extra liquidity, highly indebted countries have an incentive to consolidate, and Germany should feel reassured by the strengthened discipline in Europe's fiscal policy. Foreign investors would find it attractive having an alternative asset to US government bonds. However, the proposal does not explain precisely how the pooling of blue debt is to be put into practice.

3.2 Bonds issued by a European Debt Agency (Juncker and Tremonti)

In December 2010, the President of the Eurogroup Jean Claude Juncker and the Italian Finance minister Giulio Tremonti called for Eurobonds that 'would end the crisis'.²³ They conceived them as European Sovereign Bonds, issued by a European Debt Agency (EDA), presumably a successor to the EFSF. They expected that the amount of outstanding paper could gradually reach 40% of GDP of the EU. This would be equivalent to EUR 3,700 billion, less than half of the US market. The EDA could finance up to 50% (in exceptional cases 100%) of new debt issues by EU members, but never more than 40% of GDP. They remain therefore well within the Maastricht limits. Hence, the EDA is a primary market instrument, although it would also stabilise the secondary market by an inbuilt default mechanism: The EDA would offer countries in trouble the possibility to switch outstanding national bonds for Eurobonds at a discount, whose size depends on the degree of market stress. Highly indebted states could thereby reduce their outstanding debt.

Eurobonds, would enjoy a higher status than national debt and would qualify as collateral for the ECB. This takes pressure off the ECB's outright open market purchases of risky government debt. Eurobond interest rates would therefore be lower than national rates. If Member State debt up to 40% of GDP were financed by Eurobonds, a large chunk of the existing debt of the troubled economies would be refinanced at lower interest rates, which improves the solvency of the weakest members, not just their liquidity.²⁴

Two objections have been raised. First, the idea of repurchasing debt (or switching it) at discounted rates is contrary to market logic: if investors know that governments will remain solvent, bonds will trade at par and the discount option would instantaneously disappear. Little would be gained. Second, and this goes to the core, it is not clear who would be liable for the new euro area debt. The German government has resisted the Juncker/Tremonti proposal because it does not want to be committed to paying the debt of other Member States. But would Eurobonds have to be assumed jointly by all Member States? If that were the case, the Eurobond proposal would require a change in the EU Treaty. An alternative is that Member States would give 'proportionate' guarantees for the Eurobonds; each Member State would simply stand behind a fraction of the bond issue in proportion to GDP. Under this form of guarantee, Germany would not have to bail out other countries if they defaulted. Instead, the private sector bond purchaser would stand to take the loss. This is basically the guarantee which was offered on the EFSF bond issues, although the AAA rating for such bonds required high cash deposits by Member States, which makes issuing such bonds more expensive. A third possibility would be that the EDA is an independent institution, in which case it has to be clarified how it raises the funds necessary to service the interest and repayment of the Eurobonds.

An independent institution would find it hard to issue Eurobonds without government support. My own proposal of Union Bonds tries to overcome these problems.

²³ http://www.ft.com/cms/s/0/540d41c2-009f-11e0-aa29-00144feab49a.dwp_uuid=bd2f85d2-8e90-11db-a7b2-0000779e2340.html#axzz17JJTBvsQ.

²⁴ See Gavin Davis: <http://blogs.ft.com/gavyndavies/2010/12/12/how-the-e-bond-plan-would-work/>.

3.3 Union Bonds as a collateralised security

In early 2010, I proposed Union Bonds, which were to be created by an independent fund without backing from governments.²⁵ At that time, the EFSF had not yet been set up, and neither the Delpla/von Weizsäcker nor the Junker/Tremonti papers had been published. Nor had the ECB started to buy government debt in the secondary market. The idea was inspired by the private creation of the ECU prior to European Monetary Union. I still believe that the Union Bond idea could contribute to more liquid and integrated financial markets in the euro area, even if in today's context it is no longer appropriate to imagine the creation of Union Bonds as a purely private initiative taken by banks on their own. A public initiative is needed, although private institutes could certainly contribute to it.

Union Bonds could help to overcome some of the shortcomings in the proposals discussed above. They would solve the question of how government debt could be pooled *without creating a European sovereign debtor*. They also could help to reduce the risk exposure for a specified class of investors, similar to the Blue and Red Debt proposal. By reducing the risk of contagion of the European banking system from a sovereign default, the proposal would strengthen the integration of Europe's financial markets. It would thereby not only help bridging the liquidity needs for highly indebted Member States, but it would also create well-functioning debt markets and stimulate economic growth.

Under the proposal, Union Bonds are issued by a specially designed Trust, which buys government securities in the secondary market and issues against them a securitised asset called 'Union Bond'. Thus, Union Bonds represent a portfolio of government bonds. The portfolio shares reflect the paid-up share capital in the ECB, although one may consider some deviations from that rule.

The Trust is owned by private and public investors. Theoretically, the Trust could be set up by private financial institutions alone, but public institutions would add political credibility to the Union Bonds. Candidates are quite naturally the EFSF or its future successor, the European Stabilisation Mechanism (ESM), but also the EIB or the Kreditanstalt für Wiederaufbau in Germany, the Caisse des dépôts et consignations in France or the Cassa depositi e prestiti in Italy.

Union Bonds are tradable in capital markets, where the overall quality and credit-worthiness of the euro area's public debt is constantly evaluated. They thereby contribute to the integration of the euro bond market. Shareholders earn a fee for handling the Trust, but the main purpose of Union Bonds is that they pool national debt and transform it into a European asset. Investors who purchase Union Bonds earn income paid out of the interest received from the national bonds in the portfolio.

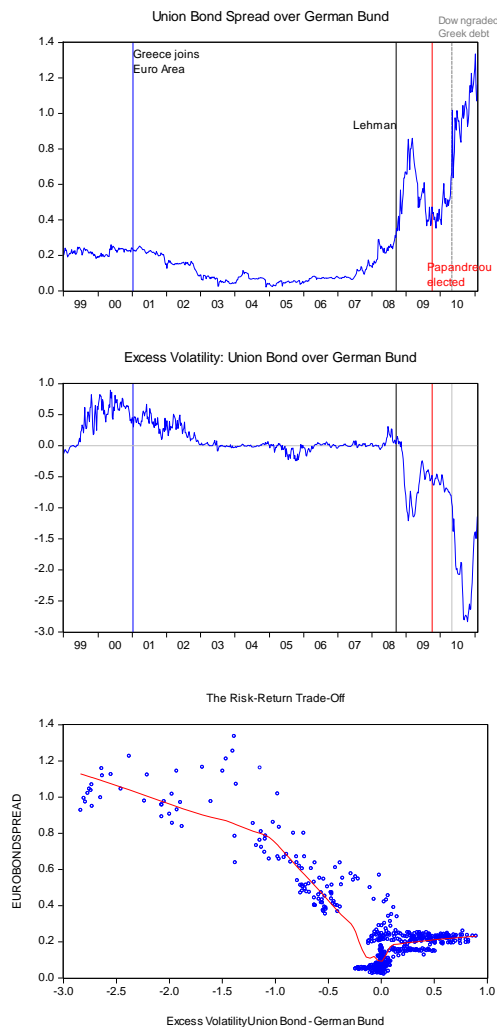
The advantage of Union Bonds, conceived as securitised public debt certificates, is that that they yield higher returns for less risk, see Figure 6. The first panel shows that the yield on the Union Bond portfolio has shot up during the Financial Crisis and again when the Papandreou government discovered the fiscal position of its predecessor government. However, in the second panel we find that the volatility of Union Bonds was lower than for German Bunds, which is what one would expect from a diversified portfolio.²⁶

²⁵ See CER Rapporto Europa 2010 (http://www.stefancollignon.de/PDF/CerReport_2010.pdf) and my chapter in: Eurobank, 2011. *From the international to the European and Greek crisis: What will the future bring?*, Livanis Editions, Athens (forthcoming).

²⁶ Volatility is here measured by the conditional standard deviation of an integrated Garch (1,1) process. For the estimate see Annex 3.

Finally, the third panel plots excess returns against excess volatility and we find that Union Bonds yield higher returns for lower risk (volatility).

Figure 6



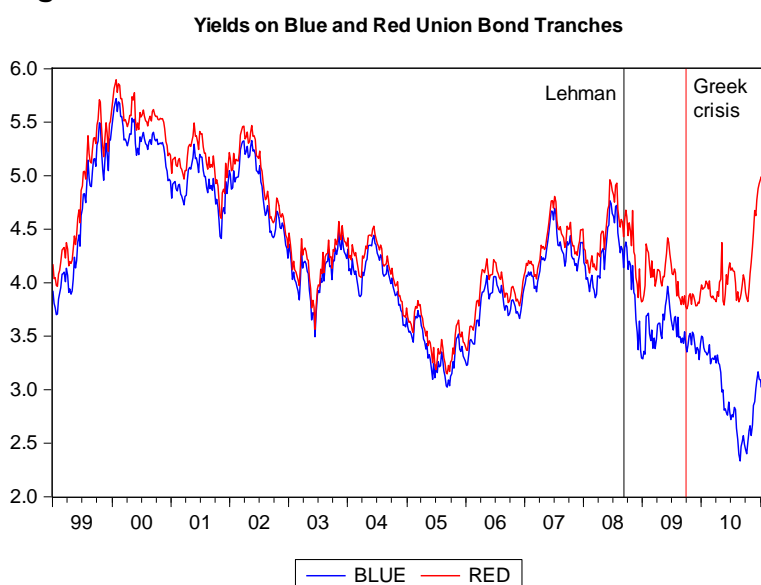
By swapping national debt against Union Bonds, banks and other financial institutions can strengthen their balance sheet because they are lowering their exposure to potentially non-performing assets while at the same time they increase their profitability. Thus, Union Bonds would reduce the risk of banking crises and should improve lending conditions and raise private and public investment.

So far, our discussion has assumed that investors buy Union Bonds which reflect the full euro area portfolio. This makes sense if the purpose is to reduce volatility and increase the liquidity of the bond market. The fixed portfolio shares ensure that the revenue reflects a distribution similar to seignorage and profits of the ECB. This makes Union Bonds particularly interesting for monetary policy operation, either as collateral or for outright open market purchases.

However, some questions remain. What are the micro incentives for private investors to buy and hold such bonds? For long term investors, there is merit in having a diversified note with higher yields at lower volatility, but in times of deep stress some risk loving bullish investors may want to buy direct, while bears would not touch the risky element.

To increase the incentives for investors to hold Union Bonds, their earning potential can be improved by waterfalls of risk tranches. One could distinguish two separate risk classes of Union Bonds. A 'Blue Debt tranche' is senior debt over the 'Red Debt tranche'. Blue Union Bonds represent 60% of the total Union Bond portfolio, Red Union Bonds the other 40%. Blue Bonds would receive returns equal to the three lowest individual Member State yields, but they are guaranteed priority treatment in case one or several of the component sovereign debtors would default. The 'Red Debt tranche' would go to investors who are willing to assume the higher default risk and in exchange they receive a larger portion of the portfolio's income. Figure 7 shows the yields on our fictitious Blue and Red Union Bonds, based on historic data. The Greek risk of insolvency has clearly raised the yields on the Red Tranche.

Figure 7



The issuance of private Union Bonds could contribute to the denouement of Europe's sovereign debt crisis in a number of ways.

- First, Union Bonds would generate a large and deep European bond market. For if the Trust buys newly issued debt in the primary market, thereby helping to overcome funding bottlenecks for Member States, it would have to bundle the newly issued debt with outstanding debt by other Member States. This leads to the gradual absorption and substitution of national debt into Union Bonds. However, this substitution does not require Union Bonds to have the status of sovereign debt.
- Second, Union Bonds would reduce the risks of a banking crisis following a sovereign default, because it reduces the concentrated exposure on some risky assets. Banks could sell Southern European debt to the Trust and in exchange buy Union Bonds. Thus the liquidity in European bond markets is improved overall.
- Third, governments which can borrow at low interest do not lose this advantage; nor do they have to bail out or pay for high-interest debt of their partners. All Member States still need to issue debt in primary markets on their own merits. This fact will minimise moral hazard problems, because vigilant markets will assess default risks and ensure market transparency. Fiscally conservative Member States, like Germany, could still issue at low rates in the primary market.
- Fourth, because the Trust can intervene in primary markets, Union Bonds can reduce the cost of borrowing for highly indebted governments.

- Fifth, the Trust can thereby replace the market stabilisation function of the ECB's direct bond purchases in the secondary market. Moreover, the ECB could swap its portfolio of risky sovereign debt against less risky Union Bonds.
- Sixth, by 'Europeanising' public debt, Union Bonds would also stabilise private bond markets. Because banks would not have to fear liquidity bottlenecks, they would continue to fund profitable investment opportunities and thereby support economic growth and the sustainability of debt.

CONCLUSION

Eurobonds are often intended to relax the hard budget constraint of Europe's fiscal policy rules and to finance public investment at the European scale in order to stimulate the European economy in the context of fiscal austerity. However, the evidence for such desired effects from public investment is weak. By contrast, private investment is the main driver of growth in Europe. The fragmented nature of European debt markets is an obstacle for investment particularly in smaller Member States. The benchmark character of the German Bund allows German borrowers to raise credit at low cost, while peripheral debt markets are handicapped. This disadvantage does not only apply to countries with high public debt.

The benchmark function of the German Bund generates a competitive advantage for the German economy that seems to justify German policy makers in imposing their policies on the rest of Europe. However, in fractured credit markets, peripheral borrowers will never be able to access capital at the same conditions as German borrowers. This is of particular importance for sovereign borrowers, who need to cut services in order to be able to service the high cost of debt. A political backlash against this system, including against European integration as such, is then increasingly possible. The solution is to fully integrate Europe's financial markets and abolish their fractured nature.

Problems with the liquidity and sustainability of public debt are not unique to Europe. They are inherently linked to the process of monetary integration. An early historical example is the United States. In 1790, Alexander Hamilton, the first Secretary of the Treasury of the United States, managed to make a famous deal, whereby the federal government would assume state debts incurred during the Revolution. The initiative placed the country's most serious financial obligation in the hands of the federal, rather than the state governments. Hamilton encountered a lot of resistance, but he established a clear and discernable reimbursement policy that inspired investors' trust and laid the foundations for the United States' economic future (Ellis, 2000). Europe has its Hamiltonian moment now.

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ANNEX 1: CHANGE IN PUBLIC INVESTMENT RATIO RELATIVE TO DEBT LEVELS (EU12)

Dependent Variable: DGOV

Method: Least Squares

Sample (adjusted): 4 33

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVG_DEBT	-0.032227	0.007946	-4.055603	0.0004
C	2.583628	0.496406	5.204666	0.0000
R-squared	0.370049	Mean dependent var		0.813325
Adjusted R-squared	0.347551	S.D. dependent var		1.602932
S.E. of regression	1.294757	Akaike info criterion		3.418864
Sum squared resid	46.93910	Schwarz criterion		3.512277
Log likelihood	-49.28296	Hannan-Quinn criter.		3.448748
F-statistic	16.44791	Durbin-Watson stat		2.258394
Prob(F-statistic)	0.000362			

ANNEX 2: ECONOMIC GROWTH AND GOVERNMENT AND PRIVATE INVESTMENT

Dependent Variable: DLOG(GDP_R)

Method: Two-Stage Least Squares

Date: 02/28/11 Time: 09:07

Sample (adjusted): 1993 2011

Included observations: 19 after adjustments

Instrument specification: DLOG(E_GOV(-1)) DLOG(E_PRIV(-1))

Constant added to instrument list

Lagged dependent variable & regressors added to instrument list

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(E_GOV)	-0.041650	0.031229	-1.333685	0.2010
DLOG(E_PRIV)	0.286814	0.035032	8.187221	0.0000
AR(1)	0.914462	0.073281	12.47879	0.0000
R-squared	0.940022	Mean dependent var		0.015335
Adjusted R-squared	0.932525	S.D. dependent var		0.017260
S.E. of regression	0.004483	Sum squared resid		0.000322
Durbin-Watson stat	2.243365	J-statistic		2.315929
Instrument rank	4	Prob(J-statistic)		0.128055
Inverted AR Roots	.91			

ANNEX 3: GRANGER CAUSALITY TEST FOR PRIVATE AND PUBLIC INVESTMENT AND GROWTH

Pairwise Granger Causality Tests

Date: 02/18/11 Time: 17:31

Sample: 1990 2011

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG(EURO_GOV) does not Granger Cause DLOG(GDP_R)	19	0.14977	0.7039
DLOG(GDP_R) does not Granger Cause LOG(EURO_GOV)		0.22224	0.6437
LOG(EURO_PRIVAT) does not Granger Cause DLOG(GDP_R)	19	9.41682	0.0073
DLOG(GDP_R) does not Granger Cause LOG(EURO_PRIVAT)		10.2927	0.0055
LOG(EURO_PRIVAT) does not Granger Cause LOG(EURO_GOV)	20	9.23253	0.0074
LOG(EURO_GOV) does not Granger Cause LOG(EURO_PRIVAT)		2.79085	0.1131

ANNEX 4: GARCH ESTIMATES

Dependent Variable: GERMANY
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 02/28/11 Time: 18:14
 Sample: 1/01/1999 1/28/2011
 Included observations: 631
 Convergence achieved after 9 iterations
 Presample variance: backcast (parameter = 0.7)
 $GARCH = C(3)*RESID(-1)^2 + (1 - C(3))*GARCH(-1)$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
LOG(GARCH)	0.025021	0.003674	6.809776	0.0000
C	4.138974	0.021305	194.2710	0.0000
Variance Equation				
RESID(-1)^2	0.489200	0.026451	18.49452	0.0000
GARCH(-1)	0.510800	0.026451	19.31112	0.0000
R-squared	-0.009200	Mean dependent var	4.074372	
Adjusted R-squared	-0.010805	S.D. dependent var	0.742082	
S.E. of regression	0.746081	Akaike info criterion	1.303724	
Sum squared resid	350.1242	Schwarz criterion	1.324868	
Log likelihood	-408.3250	Hannan-Quinn criter.	1.311937	
Durbin-Watson stat	0.017757			

Dependent Variable: EUROBOND
 Method: ML - ARCH (Marquardt) - Normal distribution
 Date: 02/28/11 Time: 18:17
 Sample: 1/01/1999 1/28/2011
 Included observations: 631
 Convergence achieved after 34 iterations
 Presample variance: backcast (parameter = 0.7)
 $GARCH = C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + (1 - C(3) - C(4))*GARCH(-1)$

Variable	Coefficient	Std. Error	z-Statistic	Prob.
LOG(GARCH)	-0.012769	0.004603	-2.774357	0.0055
C	4.116084	0.023174	177.6137	0.0000
Variance Equation				
RESID(-1)^2	0.900789	0.025925	34.74589	0.0000
RESID(-2)^2	-0.829082	0.047928	-17.29854	0.0000
GARCH(-1)	0.928292	0.025141	36.92289	0.0000
R-squared	-0.105824	Mean dependent var	4.317457	
Adjusted R-squared	-0.107582	S.D. dependent var	0.649153	
S.E. of regression	0.683180	Akaike info criterion	1.016666	
Sum squared resid	293.5762	Schwarz criterion	1.044858	
Log likelihood	-316.7582	Hannan-Quinn criter.	1.027616	
Durbin-Watson stat	0.019469			



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

Eurobonds: Concepts and Implications

Note

Guillermo DE LA DEHESA

Abstract

This note starts by displaying the pros and cons of Eurobonds and then continues to describe the different Eurobonds concepts developed so far by different authors. The note finds more benefits than downsides in well designed Eurobonds and argues that, in the medium term, Eurobonds are going to be the key element for the success of the euro area and the euro. But, in the short term, they may be difficult to implement. The author claims that Eurobonds already exist in the form of EFSF bond issues which only have a proportional guarantee but not the joint guarantee of a proper Eurobond.

CONTENTS

EXECUTIVE SUMMARY	43
1. PROS AND CONS OF EUROBONDS	44
1.1 Benefits	44
1.2 Costs	44
2. DIFFERENT EUROBOND PROPOSALS DESIGNED TO AVOID MORAL HAZARD	45
2.1 Gros/Micossi	45
2.2 De Grauwe/Moesen	45
2.3 Delpla/von Weizsäcker	46
2.4 Juncker/Tremonti	48
3. COMMENTS ON THESE PROPOSALS	50

EXECUTIVE SUMMARY

Eurobonds are today a subject of heated debate among euro area policy makers when trying to find a proper exit to the present Euro sovereign debt crisis, even if it is quite clear that they have more pros than cons. There is wide agreement on the fact that, in the medium term, Eurobonds are going to be the key element for the success of the euro area and of the euro. But, in the short term, they may be difficult to implement until those Member States with the highest credit rating feel comfortable with a new and stricter fiscal framework for the euro area which avoids moral hazard by any euro area Member State or, even better, a proper design of Eurobonds which also would avoid moral hazard.

The present euro sovereign debt crisis is mainly the result of a poor and badly designed fiscal governance of the euro area which was criticised, from the very beginning, by a large majority of academics who saw the potential dangers of having a monetary union without even a light fiscal union or a large fund to attend to asymmetric shocks, being real or financial. These dangers have lately become apparent for financial markets, which have lost trust in the future of the euro area and are even showing doubts about the survival of the euro as it is designed today. This lack of trust may become endemic unless the euro area leaders come with solutions that can regain their confidence, which is not being the case today and, unfortunately, the inflexible attitude of a minority of Member States could end up producing even greater mistrust by markets unless a reasonable solution is agreed at the end of March. Going forward, Eurobonds are going to be essential to regain confidence from the markets and from the large majority of euro area citizens.

Eurobonds already exist, given that the EFSF bond issues are practically the same except that their guarantee is proportional to the Member States' participation in the capital of the ECB and is not a joint guarantee, a feature proper Eurobonds need to have for being successful. The quickest way to avoid moral hazard is a full fiscal union where high debt Member States lose fiscal sovereignty, but, at the same time, the best way to reach in the future a fiscal union is by making more debt partially guaranteed by an increasing number of euro area Member States. This way would produce the right incentives to get present levels of debt down and a common fiscal policy and not the other way round.

1. PROS AND CONS OF EUROBONDS

1.1 Benefits

First, Eurobonds would be a decisive step towards a necessary medium term fiscal union and a first step towards a longer term political union.

Second, they could reduce and even stop the present series of self-fulfilling attacks to fiscally vulnerable Member States and contagion to other Member States with less fiscal vulnerability.

Third, they could, eventually, bring back financial stability to the euro area, given that joint guaranties or liabilities could convince markets that its Member States are really serious about achieving a proper fiscal union and a stable euro.

Fourth, they could reduce the cost of debt of most euro area Member States and eventually of all of them through the much larger size, depth, liquidity and diversification of such a market which could reach the same status than the US Treasury bond market.

Fifth, lower cost of debt and very large attraction to large government and private investors that need to diversify their investments beyond US dollars could help the euro area Member States to achieve earlier sustainable debt levels, faster recovery of economic activity and higher economic growth potential by returning faster to more normal levels of public investment.

1.2 Costs

First, a Eurobond, jointly guaranteed by euro area Member States, contains an implicit insurance for all participating Member States and some of them may have an incentive to issue too much debt to profit from such an implicit guarantee (when they could only issue too little debt before the existence of the Eurobond) creating a 'moral hazard' issue and its consequent rejection by the most fiscally responsible Member States.

Second, some AAA rated Member States, such as Germany, may have temporarily to pay a slightly higher interest rate on its debt, given the inclusion in the jointly guaranty of other Member States with lower ratings.

Third, the same Member States rightly claim that Eurobonds require as a prerequisite to their issuance to achieve a very high harmonisation of fiscal policies by all euro area Member States.

2. DIFFERENT EUROBOND PROPOSALS DESIGNED TO AVOID MORAL HAZARD

There are two precedents: in 1989, the creation of the “Brady Bonds” to solve the Latin America debt crisis and, in 1993, the proposal by Jacques Delors, of “Union Bonds”, whose repayment would be guaranteed by the Community budget. The newer proposals are the following ordered by date:

2.1 Gros/Micossi

The first proposal of a bond-issuing EU stability fund was made by Daniel Gros and Stefano Micossi in the Spring 2009 issue of *Europe's World* (3 March 2009). Both economists were the first to argue that investors had developed a strong preference for public debt, because governments can always force their central banks to print the money needed to meet their obligations, but this was not the case in Europe where no national government can force the ECB to print money. They realised that, on one side, there was a very strong demand for European bonds from investors to diversify away from the US dollar, and on the other side, Europe needed massive government capital infusions to prevent the crisis getting worse, mainly in the banking sector and in the euro area periphery.

This is the reason why they were the first to propose the creation of a massive European Financial Stability Fund (EFSF) that would be at least on the scale of the US TARP, around EUR 500-700 billion which will issue bonds on the international markets with the explicit guarantee of Member States to face the necessary crisis management and would be wound down after a pre-determined period, perhaps of five years. For global investors, EFSF bonds would be practically riskless as they would have the backing of all Member States. They both affirmed that until the EU does not develop a unified market for bonds denominated in euro, backed jointly by EU Member States, the euro cannot become a leading reserve currency with the present privileges of the dollar.

Setting up this fund with a common guarantee would not imply that stronger Member States would have to pay for the mistakes of the others, because at the end of its operations, losses could be distributed across Member States according to where they arose. In all likelihood, though, the fund would not lose, but rather make money because its funding costs would be much lower than those of individual Member States' fiscal stimulus and because its existence would stabilise European financial markets. They were in favor of using the EIB as the agency hosting the EFSF because its board of governors included the finance ministers of the EU Member States.

At 24 May 2010, more than one year later, an EFSF, with the same name and with a similar size to that proposed by the two economists, was created, but late, on an early morning of a Monday, after long urgent meetings over the weekend and under huge pressure from financial markets.

2.2 De Grauwe/Moesen

A second proposal for issuing Eurobonds has been made by Paul De Grauwe and Wim Moesen in the *Intereconomics* issue of May-June 2009. Both economists show that the dramatic increase in the spreads of some Member States debt would create huge distortions such as a growing perception of default, low response to fiscal stimulus and negative externalities and spillovers, making it extremely difficult to solve their banking crises and exit from recession.

This situation could only be solved either by the ECB buying the debt of these Member States to reduce their high yields or, preferably, by issuing Eurobonds, collectively guaranteed by euro area governments. They consider the EIB the institution better suited to issue them or even alternatively, directly by the euro area governments. In order to avoid that countries with lower spreads, especially Germany, object to Eurobond issues, they make the following proposals:

First, each euro area government would participate in the issue on the basis of its equity shares in the EIB. Second, the coupon on the Eurobond would be a weighted average of the yields observed in each government bond market at the moment of the issue weighted also by their equity shares in the EIB. Third, the proceeds of the bonds would be channeled to each member government according to the same EIB share weights. Fourth, each government would pay the yearly interest rate on its part of the bond, using the same national interest rate used to compute the average interest of the euro bond. Greece, for instance, would have to pay a yearly interest rate on its part of the outstanding bond of 5.7% while Germany would have to pay only 3.1%.

The advantage of this scheme is that Greece would pay the interest rate it faces today in the market, thus the incentive to free ride Germany would be very small or zero and Germany would pay the same interest it pays when issuing its own bonds, so it would not be penalised by a potentially higher interest rate. Why then Greece would participate if it keeps paying the same interest rate? Because it would avoid being shut out of the market and can continue to have access to funding without imposing a burden on other participants in the scheme.

Both economists alert about this system having two practical problems. The first is how to share the collective responsibilities underlying the bond issue. They would be the same that they already share when the EIB issues today in the markets. The second is that the yield of the euro common bond may differ from the weighted average of the yields of national bonds constituting the common bond as it happened with the ECU-bonds in the past. Nevertheless, given that the liquidity of the common euro bond would be much higher than in the individual national bond markets, the Eurobond would have a lower yield than the weighted average, so Member States with lower liquidity in their national bond markets will benefit from the lower yields that the higher liquidity of the euro bond produces.

2.3 Delpla/von Weizsäcker

The Blue and Red Eurobond proposal by Jacques Delpla and Jacob von Weizsäcker, published in May 2010 by Bruegel, is the most elaborated proposal known up to date. Both economists have come up with a design which avoids most if not all the Eurobond potential cons. Their main idea is to have both a senior and a junior debt tranche in the euro area Eurobonds. They call them Blue and Red Eurobonds.

The Blue or senior bond tranche will be constructed by pooling up to 60% of GDP of the national sovereign debt of the euro area Member States (which is considered, according to the Treaty, the maximum level up to which debt is sustainable or not excessive) under joint and several liability of all its members to ensure that it will be a triple A asset. This Eurobond will have a substantially lower yield than the weighted average of the national bond yields, given that the size and the liquidity of its market will be similar to those of the US Treasury bond.

This Blue bond will strengthen the confidence in the euro and will help to end the actual sovereign debt crisis. Moreover, interest rates on these Blue bonds will be even lower than those of the German Bunds today.

From an investor's perspective, their joint and several liability will reduce the risk even further because defaults risks tend not to be perfectly correlated, lowering even more the yields on the Blue or senior tranche bond.

The Blue bond market would reach an amount of around EUR 5,600 billion which is about five times the current market size of the German Bund and close in size to the US Treasury bond market which is around USD 8,300 billion. Greater size and liquidity bring down borrowing costs given that large public investors, such as central banks and sovereign wealth funds, greatly value safety and liquidity. Only the increase in liquidity could reduce the debt cost of the Blue Bond by 10%, which is equivalent to reducing the net present value of the debt stock by 10% as well. Assuming a legacy debt stock of 60% of GDP, the liquidity advantage generated could amount to an average net present value of 6% of GDP of the euro area Member States.

Government and public investors and large private investors in public debt, such as banks, insurance companies and pension funds not only invest in very deep and highly liquid bond markets but they also try to invest in highly diversified debt, so that the pooling of the debt of 17 quite different Member States reduces the default correlation risk and may win another added reduction to debt costs. Moreover, most of these investors need to diversify their investments away from the US Treasury bond market and away from the US dollar, so they can get a natural exchange rate hedge, given the very high inverse correlation between both currencies movements. These are the main reasons why the euro will never be able to compete with the US dollar as a leading world reserve currency if such a Blue bond market is not created.

The Red or junior bond tranche is constructed by the excessive debt above the 60% level of debt to GDP and it will be issued by the Member States themselves. In this way, the junior tranche would pay a much higher interest rate than the present weighted average, because of its higher risk of default and its larger illiquidity. The average cost of borrowing for each Member State would be higher, the higher its amount of debt rises above 60% of GDP and the more worrying its borrowing path.

By disentangling sovereign debt responsibilities within the euro area, the 'no-bailout' clause of the Treaty would become more credible not only *de jure*, but *de facto* since the higher rates of the Red bonds will send a warning signal to those Member States on an unsustainable fiscal path, discouraging them from reaching excessive debt levels above 60% of GDP and avoiding a situation like the present one, with high negative externalities and contagion to other Member States with a lower debt levels.

At the same time, it would be also less disruptive for a Member State issuing Eurobonds to default on its Red junior tranche, because the borrowing capacity of its senior Blue tranche would not be destroyed, as it would happen today. But from an investor's perspective the prospects of a less disruptive default on the junior tranche increases the risk of default, thereby calling for an additional risk premium, thus maintaining the Member State's incentive to avoid a level of debt close to default.

Moreover, the ECB will, most probably, take a prudent stance regarding the eligibility of Red bonds for its repo facility and, in order to qualify for the Blue bond tranche, national governments could be obliged to introduce a standardised collective action clause (CAC) in their Red bond borrowing, which would make any debt default or restructuring simpler and shorter.

Debt discipline would be encouraged because this model would bring down the cost of debt servicing at the margin, bringing down overall debt and reducing the cost of debt on the Red tranche and on the overall debt. It would also encourage Member States not to reach

the 60% of GDP debt levels because they borrow much cheaper and therefore they can keep their debt levels more sustainable and lower than in today's situation.

The Blue and Red bond differential borrowing costs would help not only to give incentives to recover the credibility on the Stability and Growth Pact, but also to reduce the risk of a necessary bail-out of fiscally vulnerable Member States. Moreover, if necessary, the allocations of Blue bonds borrowing quotas could also be differentiated allowing fiscally prudent members to borrow up to their 60% of GDP, but not as much for members reaching vulnerable fiscal positions, in order to increase their incentives to be fiscally prudent. As Blue Bonds imply a guarantee by all euro area national taxpayers, their allocation should be decided ultimately by national parliaments or by an Independent Stability Council which decisions would be compulsory.

2.4 Juncker/Tremonti

Finally, Jean Claude Juncker's and Giulio Tremonti's proposal was published on 6 December 2010 by the Financial Times. The importance of their proposal, which is similar to the Blue and Red bond above, is that it has been the only one which was officially rejected by Germany and France at the bilateral summit on 10 December 2010 in Freiburg, even if the President of the Euro-Group was one of the two proponents. Nevertheless, European Commission President Barroso promised to defend it speaking at the plenary of the European Parliament in Luxembourg on 15 December 2010 after knowing about its rejection by the heads of both leading euro area Member States.

Both important ministers propose to launch Eurobonds issued by a European Debt Agency (EDA), as a successor of the EFSF, to be created within one month by the European Council (the creation of EDA had been proposed previously by Yves Leterme, Belgium Prime Minister, on 5 March 2010). The EDA should have a mandate to issue Eurobonds gradually up to reaching an amount of outstanding debt equivalent to 40% of the total GDP of the European Union (not of the euro area) and of each Member State's GDP.

First, the EDA should finance up to 50% of issuances by EU Member States to create a deep and liquid market. In exceptional circumstances, for Member States whose access to markets is impaired, it could finance up to 100% of issuances. Second, the EDA should offer a switch between Eurobonds and existing national bonds. The conversion rate would be at par, but the switch would be made through a discount option, where the discount is likely to be higher the more a bond is undergoing market stress. Knowing in advance the evolution of such spreads, Member States would have a strong incentive to reduce their deficits.

These Eurobonds would halt the disruption of sovereign debt markets and stop present negative spillovers across national markets. In the absence of well-functioning secondary markets, investors are weary of being forced to hold their bonds to maturity and therefore ask for increasing prices when underwriting primary issuances.

With a single European market, primary market disruptions are in effect precluded, reducing the present emergency interventions by the ECB. This new market would also ensure that private bondholders bear the risk and responsibility for their investment decisions, providing clarity about a future permanent mechanism to deal with debt restructuring and helping restore confidence by allowing markets to be exposed to losses and ensuring market discipline.

Allowing investors to switch national bonds for Eurobonds, which might enjoy a higher status as collateral for the ECB, would help to achieve this market. Bonds of Member States with weaker public finances could be converted at a discount, implying that banks and

other private bondholders immediately incur related losses, ensuring transparency about their solvency and capital adequacy. Eurobond markets would also help Member States in difficulty without leading to moral hazard. Governments would have access to sufficient resources at the EDA's interest rate, to consolidate public finances without being exposed to short term speculative attacks. They could honor all their obligations and avoid excessive interest rates on their borrowing that is not covered by Eurobonds.

Ultimately, the EU would benefit too, given that profits from conversion would accrue to the EDA, reducing effective Eurobond interest rates and avoiding that EU taxpayers and Member States under attack would have to foot the bill. All these benefits could be extended to Member States that remain outside the euro area.

3. COMMENTS ON THESE PROPOSALS

1) The pioneer proposal by Gros and Micossi has proved very successful because they did anticipate, more than one year earlier, the design and creation of the present EFSF and also did anticipate the idea that the Eurobonds could exist with the creation of the EFSF (which are today issued by the EFSF). Moreover, they thought about the EFSF as a temporary fund to last a maximum of five years to treat crises management of the EU, not only the banking crisis but also the present EU periphery sovereign debt crisis and also that the losses of the fund would be distributed among the Member States according to their use. Finally, they were also the first to say that until the EU does not develop a unified market for Eurobonds, jointly backed by EU Member States, the euro cannot become a real leading international reserve currency.

2) The Eurobonds proposal by De Grauwe and Moesen is based on using the EIB as their issuer, their guarantee should be according to their participation in the capital of the EIB and their allocation should also be according to their same participation. But it is a very rigid proposal, given that it establishes that Member States pay exactly the same interest rates than before such a new scheme is created. Their proposal is penalising Greece and other Member States with weaker fiscal positions and is favouring members with better fiscal stances, to avoid any possibility of moral hazard. The only reason why Greece would join this scheme is because it avoids to be shut out from financial markets. The only benefit is that the liquidity of the Eurobond market will be much higher than that of the national bond markets, so that small Member States with lower liquidity would benefit more than those with larger size and liquidity.

3) The Juncker and Tremonti proposal is the only one of the four that may not reduce or avoid moral hazard, which is the most important issue for France and Germany in order to accept Eurobonds. The EDA only issues Eurobonds up to 40% of the total GDP of the EU, but these Eurobonds should finance up to 50% of total issuances, and, in exceptional circumstances, the EDA Eurobonds can even finance up to 100% of the issuance for Member States whose access to debt markets is impaired. This is the main reason why it may have been rejected by Germany and France because the rest of the EU members believe that these Member States with no access to debt markets may free-ride on them. Moreover, their proposal is for the whole European Union, not only for the euro area Member States, which makes their proposal more difficult to implement, given that it states that their benefits could also be extended to other EU Member States that remain outside the euro area.

4) The most elaborated and comprehensive proposal is that of Delpla and von Weizsäcker which seems to be the best and a more balanced option because it avoids moral hazard and has the highest chance of getting a consensus among euro area Member States. Therefore, it should deserve a serious debate at the next ECOFIN and European Council meetings as well as at the European Parliament. My only critique is that it proposes that national parliaments should decide the Eurobond allocation, which will be cumbersome and difficult. I would rather let this decision in the hands of an independent agency, also proposed by them, the Independent Stability Council (ISC).



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

Eurobonds: The Blue Bond concept and its implications

Note

Jacques DELPLA and Jakob VON WEIZSÄCKER

Abstract

According to the Blue bond proposal, sovereign debt in euro area countries is to be split into two parts. The first part, the senior tranche of up to 60% of GDP, would be pooled among participating countries and jointly and severally guaranteed. The second part, the junior tranche, would keep debt in excess of 60% of GDP a purely national responsibility. This paper outlines the details of this proposal and discusses its implications.

CONTENTS

EXECUTIVE SUMMARY	53
1. INTRODUCTION	53
2. BLUE AND RED BONDS: BASIC CONSTRUCTION AND KEY FEATURES	54
2.1 Blue debt	54
2.2 Red debt	55
2.3 Blue bonds and the 'exorbitant privilege'	55
2.4 Reinforcing the Stability and Growth Pact	56
3. FREQUENTLY ASKED QUESTIONS ABOUT THE BLUE BOND PROPOSAL	57
3.1 Wouldn't borrowing costs increase for stronger countries when borrowing in Blue bonds?	57
3.2. Wouldn't borrowing costs for Red bonds of weaker countries in the euro area become prohibitive?	57
3.3. How can the 60% GDP limit for Blue bonds be maintained politically?	58
3.4 How would Blue and Red bonds be introduced?	58
3.5 Would the prospect of an orderly default on Red debt be any more credible than the now defunct no bailout clause for existing national debt?	58
3.6 How could the Blue and Red bonds be used to complement the new ESM crisis architecture?	58

EXECUTIVE SUMMARY

Background

The Blue bond proposal, first published in May 2010, has shaped the current debate on Eurobonds. The present paper revisits the original proposal, attempts to explore its various implications, and addressed the most pertinent questions that have been raised during the recent debate.

Aims

- Present a coherent non-technical account of the Blue bond proposal.
- Capture essential features about the ongoing debate regarding the feasibility and desirability of the introduction of the proposal.
- Identify ways in which the Blue bond proposal could not only be attractive as a medium to long run prospect but might also be able to complement current crisis resolution efforts.

1. Introduction

In May 2010, we put forward the idea that euro area countries should divide their sovereign debt into two parts. The first part, up to 60% of GDP, should be pooled as 'Blue' bonds with senior status, to be jointly and severally guaranteed by participating countries. All debt beyond that should be issued as purely national 'Red' bonds with junior status.²⁷ While not a panacea for the current euro crisis, our proposal has two appealing features:

- First, the Blue bonds would constitute an extremely liquid and safe asset on par with the US Treasury bond. This should help the rise of the euro as a major reserve currency, enabling the entire euro area to borrow part of the sovereign debt at interest rates comparable to, or hopefully even below, the benchmark German bond.
- Second, the Red bonds would help to enforce fiscal discipline. They would make borrowing more expensive at the margin and strengthen market signals in the absence of a credible fiscal stance, thereby complementing the Stability and Growth Pact rules. Furthermore, according to our proposal, Red bonds should be largely kept out of the banking system so that Red bonds could plausibly form the basis for the planned orderly default mechanism in the euro area.

On the basis of these two main features, we believe an attractive policy package could be constructed for fiscally stronger and weaker countries alike. Thereby, the Blue and Red bond mechanism could become a permanent feature of sovereign debts in the euro area. Blue debt would be a super safe 'eurobond' that should never default. Red debt would be the part of the sovereign debt that would bear the lion's share of sovereign risk and which would be subjected to investor participation in case of crises.

In section 2 we outline the main feature of the Blue bond proposal and the key properties of this mechanism. Section 3 concludes by looking at 'frequently asked questions' we have received to date, thereby highlighting some of the policy issues at stake

²⁷ Jacques Delpla and Jakob von Weizsäcker, 'The Blue Bond Proposal', Bruegel *Policy Brief* 2010/03, May 2010.

2. Blue and Red bonds: basic construction and key features

As indicated above, the basic idea is to create two different sovereign assets for two different objectives. First, the Blue bond would make the lion's share of sovereign borrowing in the euro area more affordable (up to the Maastricht debt limit of 60% of GDP) by creating an asset that satisfies the demand for super safe and ultra liquid investment opportunities, including from Asian central banks and other large investors looking for super safe assets. Second, the Red bond would make borrowing more expensive at the margin, especially for countries pursuing unsustainable fiscal policies or lacking fiscal credibility, thereby reinforcing the rules-based Stability and Growth Pact through market signals.

2.1. Blue debt

Super safe: The Blue debt is the senior tranche (repaid before any other public debt – excepting only the IMF which enjoys super seniority) of the sovereign debt of the euro area participating countries. It is the part of any euro area sovereign debt that will be repaid under virtually all circumstances since it is issued only up to 60% of GDP, which is the Maastricht limit. As the debt-carrying capacity of any developed EU member state, even under extreme stress, stands well above that level and on top of this the Blue debt is jointly and severally guaranteed, it will enjoy super-safe AAA status, which we would like to call AAAA.

Joint and several guarantee: Blue debt is covered by joint and several guarantee, i.e. each country, each year, guarantees all the Blue debt of all other participating countries to be issued the following year. This guarantee may seem extreme, but it is restricted to the safest sovereign debt component of each country, the one deemed to never default.²⁸ The joint and several guarantee will ensure that Blue debt would be considered even safer than the current benchmark bond, namely the German Bund. Of course, for participating countries to merit such mutual guarantees, they must all commit to strict conditions, which will be explained below.

60% GDP limit: The most important safeguard to guarantee the quality of the Blue bond is the upper limit of 60% of GDP to be borrowed in Blue debt by any participating country. What is more, the allocation of Blue bonds as determined by the Blue bond governance mechanism may be decreased to well below the 60% limit in case of reckless fiscal policies, strengthening even more the fiscal sustainability incentives.

Governance mechanism: The annual allocation of Blue bonds would be proposed by an independent stability council staffed by members who would enjoy a similar degree of professional independence to the board members of the European Central Bank (ECB). This allocation would then be voted on by the national parliaments of participating countries, having the ultimate budgetary authority required to issue the Blue bond mutual guarantees. Any country voting against the proposed allocation would thereby decide

²⁸ For instance, the current Greek debt crisis is due to the size of the debt (150% of GDP). Had Greece entered the crisis with a Blue debt of 60% of GDP, it would have been able to fully service it (3% of GDP at most), as its fiscal revenues were 35% of GDP; the debate about Greek debt would have focused only on Red debt. One of the main requirements of AAA status is that debt service be below 10% of total tax revenues; every year since 1992, Greek Blue debt would have easily met this requirement (including in 2009, 2010 and 2011).

It is true that Spanish sovereign debt, despite being below 60% of GDP, is not AA now and bears spreads of more than 200 bps. The reason is not the sustainability of the current debt level but uncertainties about Spain's future sovereign liabilities (banks recapitalisations, skyrocketing unemployment and future pension liabilities, given Spain's low birth rates).

neither to issue any Blue bonds in the coming year nor to guarantee any Blue bonds of that particular vintage. Since the decision of any major participating country to ease itself out could undermine confidence in the entire scheme, the independent stability council would have a strong incentive to err on the side of caution, thereby safeguarding the interests of the European taxpayer.

Entry: Full participation in the Blue bond scheme should not be regarded as an entitlement but as something earned through enhanced fiscal credibility, by means of low debt levels or credible institutional guarantees (credible national fiscal rules in particular) that put public finances on a sustainable path.

Blue debt agency: From a bond market perspective, Blue bonds need to be the operational equivalent of plain national sovereign debt. This necessitates the creation of a joint debt agency to which tax revenues would be transferred directly to avoid the holding discount customary for multilateral debt.

2.2. Red debt

Juniority: Red debt, consisting of the remainder of the sovereign debt, would be the junior tranche. In other words, it could and would be honoured only after the entire Blue debt has been fully serviced.

National responsibility: Red debt can never be guaranteed by another country; it cannot be bailed out by EU mechanisms (European Financial Stability Mechanism (EFSM), European Financial Stability Facility (EFSF), or the future European Stability Mechanism (ESM)). The 'no bail-out' clause would apply only and strictly to the Red debt. Red debt would be issued by national Treasuries. As a result, the size of the future ESM would remain low, as it would have to finance only primary deficits and not the roll-over of Red debt.

Not in banking system: In order to allow for an orderly default of Red bonds, we propose that Red debt should largely be kept out of the banking system. This would be achieved through two measures. First, Red debt should not be eligible for ECB refinancing operations. To avoid disruptions, this restriction could be implemented gradually when Red bonds are introduced. Only Blue debt, the safe asset, should be eligible for ECB refinancing operations. Second, regulators need to assure that holdings of Red bonds in particular should be backed up by painful capital requirements in the banking system.

2.3. Blue bonds and the 'exorbitant privilege'

One key advantage of the Blue bond scheme is that it could help the rise of the euro as a reserve currency during a critical period where confidence in the USD, the leading global reserve currency, is somewhat in decline.

The Blue bond market would be extremely large (EUR 5,000 billion to EUR 6,000 billion, against EUR 7,250 billion for the US Treasury bond market) which should help the Blue bond enjoy the 'exorbitant privilege' previously exclusively enjoyed by the US. This exorbitant privilege consists of selling at low rates super safe and ultra liquid debt to world investors, especially the central banks and sovereign wealth funds of emerging markets. Warnock and Warnock (2009)²⁹ estimate the 'exorbitant privilege' for the US Treasury at about 0.80% per year. Even if we take into account that the German Bund already enjoys a somewhat privileged position, it would appear entirely possible that even Germany could reap greater benefits in the future, let alone other euro area countries. In our first paper,

²⁹ Francis Warnock and Veronica Warnock, 'International Capital Flows and U.S. Interest Rates', *Journal of International Money and Finance* 2009.

we provided a more conservative guesstimate of the possible gains: with Blue bonds, euro area countries might save up to 0.30% each year on the stock of debt,³⁰ amounting to perhaps as much as a 10% reduction in the net present value of debt servicing costs. This is an order of magnitude we still find plausible.

2.4. Reinforcing the Stability and Growth Pact

Despite all its recent changes, the Stability and Growth Pact continues to suffer from significant problems:

- Its sanctions are not entirely credible.
- There are few positive incentives to encourage compliance with the SGP.
- In particular, incentives to run budget surpluses during good times remain weak.

Our proposal would help to strengthen the incentives of the Stability and Growth Pact. Blue and Red debts impose a double control on fiscal policies. First, there is an institutional control: the independent stability council allocates Blue bonds according to the principles of the Stability and Growth Pact and notions of general fiscal sustainability, exemplified by national fiscal rules in particular. Second, borrowing costs for Red bonds would be high, very high for countries in breach of the Stability and Growth Pact, thereby imposing market discipline on countries that lack fiscal credibility. By keeping Red bonds largely out of the banking system, the prospect of an orderly default would become credible – unlike what we observe today.

³⁰ This estimate is the difference between swap spreads in Germany and in the US, in the ten years before 2007.

3. Frequently asked questions about the Blue bond proposal

In this section, we attempt to address the most common criticisms we have received in response to our original Blue bond proposal. Typically, we received critical reactions from fiscally stronger countries arguing that access to borrowing in Blue bond was overly generous towards weaker countries. And also typically, the critical reactions from weaker countries argue that borrowing in Red bonds would end up being far too expensive. Finally, we received some challenging questions regarding the credibility of the institutional setup. We have attempted to condense these criticisms into a number of representative questions, as follows:

3.1. Wouldn't borrowing costs increase for stronger countries when borrowing in Blue bonds?

According to some reports in the German media, borrowing costs would increase by as much as EUR 17 billion per year with the introduction of 'eurobonds'. This calculation was based on the observation that the average (weighted by debt volumes) interest rate for euro area sovereign borrowing stands some 160 basis points above current German borrowing costs. It turns out that this calculation would only make sense if our proposal had been to pool, without conditions, the entire debt stock of the euro area. However, we have proposed to pool only sovereign debt stocks below the 60% of GDP threshold – and with many stringent conditions.

Since debt levels below that threshold are – under most circumstances – easily sustainable, default probability on the Blue bonds would be very low. Furthermore, the Blue bond would not only be a very safe but also an exceedingly liquid asset. Against this background, it would appear likely that borrowing costs in Blue bonds will be attractive even when compared to the German Bund.

3.2. Wouldn't borrowing costs for Red bonds of weaker countries in the euro area become prohibitive?

Rates on Red bonds will of course be high, but that is, by itself, a deliberate and desirable feature of our proposal, because Red debt concentrates all the sovereign risk. From a static point of view, the differentiation between Blue and Red debt does not change the overall risk on a country's sovereign debt. The whole difference lies in the political dynamics implied by the introduction of the Red bond.

In the past, stability oriented countries have attempted to impose fiscal discipline on fiscally weaker countries from the outside, with mixed success. The Red bond would fundamentally alter this political set-up. In order to reduce borrowing costs for Red bonds, weaker countries would start to develop a keen interest in institutional set-ups, such as credible fiscal rules, which enable them to signal to markets that they are indeed pursuing sustainable fiscal policies. Stronger countries and European institutions will then be happy to help with this endeavour by making available some of their institutional credibility. For example, the pre-screening of budgets during the European Semester could evolve into a much more powerful mechanism in that context than it currently is.

In short: Red bonds will force weaker euro area countries to change some of their old habits and acquire fiscal credibility. But once this is achieved, borrowing costs even in Red bonds are set to become quite reasonable.

3.3. How can the 60% GDP limit for Blue bonds be maintained politically?

Some critics fear that the 60% of GDP limit for borrowing in Blue bonds will not hold out against massive incentives by many countries to see the limit increased to substantially higher levels. Those critics are right that such attempts are likely to be made and that they must be prevented from succeeding in order to ensure the credibility and maintain the good incentives of the entire scheme. In this respect, the scheme's governance structure is key. In our proposal, the independent stability council would assure that no Blue bond allocations are ever put to vote in national parliament beyond the 60% limit according to its statutes. And, as a further safeguard, the opt-out mechanism for national parliaments would make it very hard to tamper with this set-up against the wishes of the stability oriented participant countries.

3.4. How would Blue and Red bonds be introduced?

The introduction of Blue and Red bonds could either occur gradually, with Blue and Red bonds replacing legacy debt as it is rolled over, or in a big bang in exchange for the entirely legacy debt stock. The main advantage of the gradual approach is that it would allow the system to establish its credibility gradually with markets and European citizens, with some adjustments readily possible during the five to ten year introductory period. The main advantages of a big bang solution are twofold. First, a deeply liquid pool of Blue debt would be created overnight, rather than having to wait for many years for the full benefits of the system. Second, the big bang exchange could potentially be used for a comprehensive debt restructuring if the market view on debt sustainability in some of the crisis countries was to turn out to be accurate. However, the current IMF analysis of debt sustainability in Greece in particular comes to a different assessment right now.

3.5. Would the prospect of an orderly default on Red debt be any more credible than the now defunct no bailout clause for existing national debt?

Arguably, the single most important reason why the no bailout clause was *de facto* overruled in May 2010, when the Greek rescue package was adopted, was the fear of another serious banking crisis. In response, our proposal contains provisions that would make the holding of Red debt by banks comparatively unattractive in order to make an orderly default on Red debt credible. Disincentivising banks from holding Red bonds could be done in two ways. First, we propose that Red bonds do not qualify for the ECB's repo facility. If need be, access to the repo facility could be phased out over several years in order to avoid market disruptions. Second, because Red debt will be risky and with ratings below the current sovereign debt, holding Red bonds will be expensive for banks in terms of capital requirements. These provisions stand to make an orderly restructuring on red debt a realistic proposition.

3.6. How could the Blue and Red bonds be used to complement the new ESM crisis architecture?

While the Red bond creates the possibility for orderly losses as described in the previous sections, it does not provide the proper infrastructure to deal with crisis events. In our mechanism, the ESM would continue to exist in case of an IMF/EU programme. It would provide fresh money but only for primary deficits, as Red debt would be on hold (coupons suppressed and maturities automatically lengthened). As a result, ESM size would not be large within our mechanism – the current EFSF size would be enough.



DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES

Eurobonds – Concepts and Implications

Note

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Abstract

The main advantages of Eurobonds are increased liquidity of European bond markets (conditional on participation), protection from large market shocks and erratic market discipline, guaranteed funding for all Economic and Monetary Union (EMU) countries and an improvement in the international position of the Euro. The main disadvantages are possible free-riding problems, tensions with the no-bailout clause, credibility and political viability. By presenting the various proposals for introducing Eurobonds with their advantages and disadvantages, we hope to have clarified the messy discussion on Eurobonds in a more structured way. Especially the political viability may prove to be a large hurdle to be taken before starting any Eurobond scheme. As the author has argued before (Eijffinger, 2010), the Member States of EMU will first have to build a strong enforcement mechanism of fiscal discipline into the Stability and Growth Pact (SGP). That implies to strengthen the SGP's preventive arm by, amongst others, the introduction of a European Semester, as well as to strengthen the SGP's corrective arm by the enforcement of (semi-)automatic sanctions. In spite of all the possible benefits of Eurobonds, proper fiscal coordination and discipline will have to be agreed upon before embarking on a journey towards further European bond market integration, including the introduction of a Eurobond scheme.

CONTENTS

1. INTRODUCTION	61
2. OVERVIEW OF THE VARIOUS PROPOSALS FOR INTRODUCING EUROBONDS	62
3. IMPLICATIONS FOR FINANCIAL MARKETS AND ECONOMIC GOVERNANCE	68
4. ARGUMENTS AGAINST THE INTRODUCTION OF EUROBONDS AND ALTERNATIVES	69
5. CONCLUSIONS	70
REFERENCES	71

1. INTRODUCTION

After last year's sovereign crisis, the euro area is still far from sailing in safe waters. Severe reforms have to be undertaken to guarantee the future of the Economic and Monetary Union (EMU). This has to start with the enlargement of the temporary stability fund to at least EUR 700 billion. Fortunately, this is currently a major point on the EMU political agenda. However, we simultaneously need a strengthening of the fiscal rules in the Stability and Growth Pact (SGP), especially when it comes to enforcement³¹. This should be a prerequisite for moving to the last reform, namely a permanent defense mechanism for the euro area. This would be a move towards making EMU a more integrated fiscal union. In December 2010, the European heads of state and government and the economics and finance ministers decided to introduce a permanent European Stability Mechanism (ESM) from 2013 on to replace the European Financial Stability Facility (EFSF). Recently, though, other ideas to guarantee the stability of the euro area have been put forward. In what follows, I am focusing on 'Eurobonds', to be defined as 'pooled' sovereign debt instruments of the Member States of the euro area. These have been the object of intense political debate lately. Proposals span from the possibly most cited Blue-Red Bond proposal by Bruegel to political manifests such as the one in December 2010 by Tremonti and Juncker. However, there is a need to understand the features and the policy implications of the different proposals, including their differences, more fully. To this end, let us first establish what a Eurobond solution should offer. Boonstra³² has summarised this in five points. The introduction of Eurobonds could contribute to the better functioning of EMU in different ways:

- 1) Market discipline: the markets should be able to correctly discipline governments for good and bad behavior, instead of acting very erratically as they did last year. However, some authors doubt whether or not the markets are able to correctly discipline governments.
- 2) Fiscal discipline: these bonds will have to contribute to strengthening the enforcement of budgetary rules, i.e. those from the SGP. Some authors believe that Eurobonds could also weaken fiscal discipline.
- 3) Speculation deterrence: by guaranteeing stability of the Euro, the bonds should help to shelter from speculation in financial markets. However, Blommestein³³ concludes that there is no solid empirical evidence against speculation ('short-selling') and that it should be banned.
- 4) Market stability: the market for government bonds will be larger and more stable, sheltering from large swings in market sentiment.
- 5) Benefits for both strong *and* weak Member States: this is very important politically, as a large participation rate is vital for the Eurobond proposals to succeed.

All proposals discussed in this paper satisfy these demands, at least to some degree. In the next section, the most important proposals will be analysed and discussed with their advantages and disadvantages respectively.

³¹ Eijffinger, 2010.

³² Boonstra 2010.

³³ Blommestein 2010.

2. OVERVIEW OF THE VARIOUS PROPOSALS FOR INTRODUCING EUROBONDS

Favero and Missale³⁴ have summarised the most recent proposals for Eurobonds. They conclude that the proposed Eurobonds can improve on liquidity and default risk over sovereign debt, while these bonds also ensure continued market access for all Member States. Moreover, they are able to protect against speculative attacks and improve the position of the Euro as an international reserve currency. Concerning economic governance, the bonds can lead to improved budget discipline, reduce the probability of a bailout and, ultimately, lower costs for the taxpayer. However, the realisation of these benefits hinges on credible cooperation and commitment, a high enough participation rate and the credibility of fiscal discipline and the no-bailout clause. Additionally, flexibility in debt management is reduced and set-up costs may be very high.

Let us now consider the various Eurobond proposals, and describe their basic concepts and differentiating features (summarised in Table 1). The first proposal for the introduction of Eurobonds has been made by Boonstra.³⁵ It is also one of the most detailed and analysed proposals. He proposes to move from national to central financing for all public debt, thereby abolishing the possibility for countries to separately raise debt on financial markets. A newly to be established independent 'EMU fund' will issue Eurobonds, and lend the funds raised to the participating EMU countries at a premium over the Eurobond rate. This premium will be based on deficit and debt deviations from the average levels of Germany and France. Only countries performing worse than Germany and France will pay a premium. The formula for this premium looks as follows:

$$R(i) = a[O(i) - O(m)] + b[S(i) - S(m)],$$

where

$R(i)$ is the margin payable by country i over the funding costs of the EMU fund,

$O(i)$ is the government deficit ratio of country i ,

$S(i)$ is the government debt ratio of country i ,

the variables $O(m)$ and $S(m)$ represent the average for French and German government deficit and government debt, and

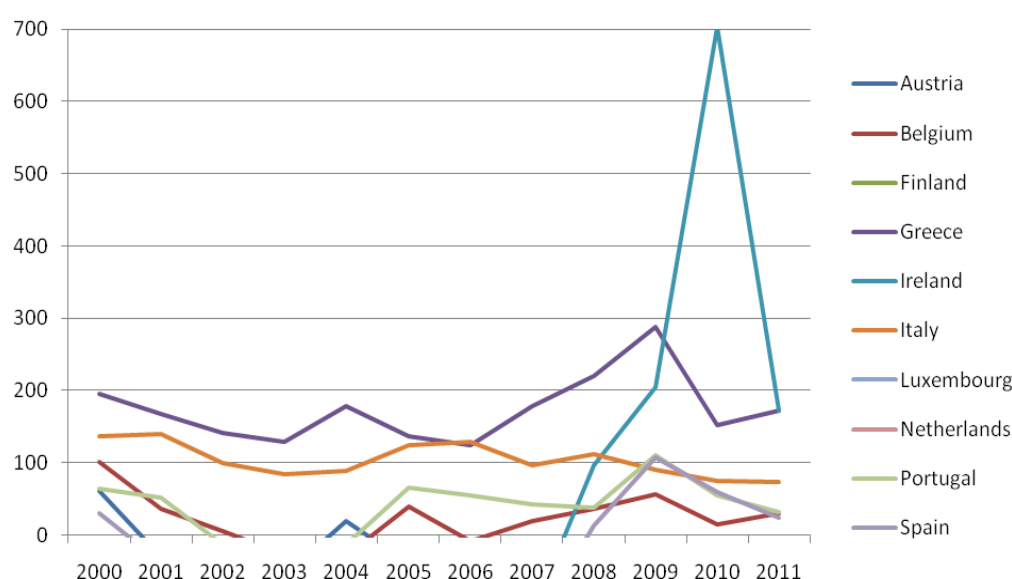
the parameters a and b are coefficients, used to determine the weight of the relative performance. These coefficients have to be determined ex ante; see also below.

Figure 1 illustrates the hypothetical case where the EMU fund is introduced in 2000 and a and b are set to 0.25 and 0.02, respectively. The total premium over the EMU fund rate is for Belgium, Italy, Portugal and Spain since the start of the financial crisis in 2008 around 100 basis points or less. For the countries that were bailed out by the EFSF – Greece and Ireland – the total premium spiked to respectively 300 and 700 basis points in 2009 and 2010 to decline to less than 200 basis points at the beginning of 2011.

It should be noticed that the total premium over the EMU fund rate is very much depending on the setting of the parameters a and b .

³⁴ Favero and Missale (2010).

³⁵ Boonstra 2005, 2010.

Figure 1: Total premium (basic points) over the EMU fund rate

Source: Author's calculations, based on data from OECD Economic Outlook No. 88.

This proposal is very straightforward, and has several advantages: average borrowing costs will decrease, fiscal policy quality is reflected in interest rates, and countries face a more gradual discipline from the EMU fund instead of that of erratic financial markets. However, the proposal also has some strong requirements. First, participating countries have to agree not to engage in monetary financing or directly approach financial markets for funding. This behaviour, like defaulting on the debt to the EMU fund, will be punishable by sanctions imposed by the fund. Second, participation is voluntary. However, Boonstra argues that the large liquidity and stability benefits of participating will ultimately convince all countries to participate. When countries have decided voluntarily to participate, then they are fully committed to the costs and benefits of the EMU fund. Additionally, not joining this program will be a bad signal to financial markets, thereby increasing borrowing costs. Finally, credibility of the EMU fund has to be very high, so as not to break with the no-bailout clause introduced by the Maastricht Treaty. This is also essential to generate enough fiscal discipline. Some other issues with this proposal may be the setting of the parameters and the base rate, and the practical and political implementation; mainly the transition from the current regime to the new one. Fortunately, many studies have looked into the first issue and as such we can draw from this literature to set the values for the parameters.³⁶

The practical implementation will have to be dealt with in the political arena, in particular the setting of the parameters. Notice that these parameters are also depending on the enforcement of the revised SGP (automatic sanctions).

The proposal by De Grauwe and Moessen³⁷ is formulated in a simpler and more modest way. They propose a scheme in which an EU institution, i.e. the European Investment Bank (EIB), issues Eurobonds.

The share of Member States in this scheme will be based on the EIB equity share, and the coupon rate on these bonds is a weighted (by the same shares) average of the yields in the national government bond market. Then, the proceeds from this issue will be allocated to Member States in the same way. Finally, the participating countries will pay the same rate

³⁶ see i.a. Mayordomo et al, 2009.

³⁷ De Grauwe and Moessen 2009.

as they pay on their own government bonds, thereby eliminating free-riding possibilities. This proposal will guarantee funding for all Member States, and safety for investors in these bonds, while there can be no free-riding by weaker countries. However, it may also raise issues such as the sharing of collective responsibilities, the possible existence of implicit guarantees by stronger countries participating in the scheme (they will not want to let it break down) and the determination of the yield to be paid, as national bond markets may be distorted when Eurobonds are introduced.

Furthermore, Delpla and von Weizsäcker³⁸ propose another variant of the Eurobond, in a scheme that lies between the abovementioned two proposals. Their proposal states that EU countries should pool their debt to a maximum of 60% of GDP (the Maastricht limit), in so-called 'blue bonds'. Beyond the 60% level, countries will have to go to the capital market on their own, which will lead to higher borrowing costs. This part of the debt is called the 'red debt'. This leads to a tranching of debt: the blue bonds will be senior, more liquid (as they are pooled) and subject to lower default risk, while the red bonds will be junior, illiquid and subject to the same default risk as before. As the red debt carries higher costs, countries will have an incentive to consolidate their budget as to bring their debt to below 60% of GDP.

Several institutional details will have to be arranged for. First, the distribution of gains and costs will have to be stipulated, preferably on the basis of fiscal positions. This can for instance be achieved by linking the blue bond quota to fiscal discipline, with a minimum of zero and a maximum of 60% of GDP. Second, an agreement to not borrow 'on the side' has to be signed, to guarantee the credibility of the scheme's discipline. Third, an orderly and stable process for allocation of blue bonds has to be set up, preferable in an independent body that can decide on the credibility the participating countries' fiscal policies. This also pertains to the no-bailout guarantees that have to be built into this scheme: an orderly bankruptcy procedure has to be arranged for countries defaulting on their red debt, so as to prevent another sovereign crisis. Finally, the transition from the current situation to the blue/red bond system has to be arranged. Delpla and von Weizsäcker propose a phasing out of national debt, by letting blue and red bond issues replace national bonds. They state that a debt restructuring is also possible if the scheme has to be implemented faster. As a final point, the authors argue that countries have several incentives to participate. First, the liquidity of a large part of their debt improves, leading to lower borrowing costs. Second, countries with weak fiscal policies can use the scheme as a commitment device for improving their budget.

Finally, they state that strong countries do not have to worry about having to pay for a bail-out anymore. However, this advantage completely depends on the credibility of the set-up.

A last proposal has come from the political arena, and is a very practical approach to Eurobonds. Juncker and Tremonti³⁹ propose that an independent European Debt Agency (EDA), a successor to the current stability fund, issues Eurobonds. It should finance up to 50% of EMU member issues, to guarantee a deep and liquid market. Furthermore, the EDA should offer a transition from national bonds to Eurobonds.

This transition should take place at a discount on national bonds (higher for countries with weak budgets), to make the Eurobonds attractive for investors. This will immediately force countries to improve deficits. The proposal again leads to lower borrowing costs, shelter from market shocks and speculation, and reduction of moral hazard through automatic fiscal discipline. Moreover, the authors argue that taxpayers will not have to foot the bill, as

³⁸ Delpla and Von Weizsäcker 2010.

³⁹ Juncker and Tremonti 2010.

the EDA will realise a profit from converting national bonds at a discount. However, the proposal is quite ad hoc: the set-up of an EDA is not discussed in detail, and no estimates of the discount or the EDA's interest rate are given. More in-depth analysis is necessary to assess the merits of this proposal.

Table 1: Comparison of the various proposals for introducing Eurobonds

<u>Boonstra (2005, 2010)</u> <ul style="list-style-type: none"> • Central financing through EMU fund, replacing sovereign bonds • Spread based on deficit and debt deviations from target or average • Clear sanctions when rules are breached, i.e. in case of non-payment • Voluntary participation, but strong signalling effects from participation • Benefits for weak and strong countries 	
<i>Advantages</i> <ul style="list-style-type: none"> + Increase in liquidity, lower costs + More gradual market discipline + Shelter against speculation & shocks + Objective implementation + Early warning for budget problems 	<i>Disadvantages</i> <ul style="list-style-type: none"> - How to set the parameters? - What should be the base rate? - Practical/political implementation - Possible tension with no-bailout
<u>De Grauwe and Moesen (2009)</u> <ul style="list-style-type: none"> • EU institution issues Eurobonds with average yield of participating countries • Governments pay the same rate as before on their national debt • Everything is based on equity share in European Investment Bank • Benefits will realize for weak countries mainly 	
<i>Advantages</i> <ul style="list-style-type: none"> + Increase in liquidity (only for the weak euro area countries) + No free-riding in borrowing rates + Shelter against speculation & shocks + Objective implementation + Guaranteed funding 	<i>Disadvantages</i> <ul style="list-style-type: none"> - How to share responsibilities? - Implicit guarantees by stronger states - National markets may be distorted - No far-going integration - Cutting up of the European market for public debt

<u>Delpla and von Weizsäcker (2010)</u> <ul style="list-style-type: none"> • Blue (senior) bonds up to 60% of GDP, and red (junior) bonds beyond the threshold • Beyond this margin, fiscal discipline will be needed to reduce debt to below 60% of GDP • Independent administration by a newly to be established stability council • Orderly bankruptcy procedure for red debt to minimise disruptive defaults • Benefits for all countries participating 	
<i>Advantages</i> <ul style="list-style-type: none"> + Simple proposal + Increase in liquidity, lower costs up to 60% of GDP blue bond ceiling + Automatic, explicit fiscal discipline + Less disruptive defaults for red debt + Limited joint guarantees and liability 	<i>Disadvantages</i> <ul style="list-style-type: none"> - Full participation necessary - Credible commitment necessary - Administration must be independent - Transition may be messy - Limit to 'side financing' needed - Cutting up of the European market for public debt
<u>Juncker and Tremonti (2010)</u> <ul style="list-style-type: none"> • European Debt Agency, successor to stability funds, issues Eurobonds • Transition from national to Eurobonds at a discount • Creates a liquid global market for Eurobonds 	
<i>Advantages</i> <ul style="list-style-type: none"> + Simple proposal + Transition is accounted for + Lower rates exercise discipline 	<i>Disadvantages</i> <ul style="list-style-type: none"> - Ad hoc proposal - No institutional details given - Independence necessary

To summarise this section, we can list the differentiating features of the abovementioned proposals. The dimensions on which we can distinguish the proposals are the degree or amount of funding obtained, the institutional set-up of the bond issuer, the way in which participation is organised and the calculation of the borrowing costs. They are summarised in Table 2 below. Since the proposal by Juncker and Tremonti is not very detailed and very similar to the other proposals, this is left out. We can see that most proposals aim at complete centralised funding in the long run, they all require some form of independent issuer, participation is voluntary (but very much encouraged) and that borrowing costs depend on fiscal discipline, in one way or the other.

Table 2: Differentiating features of the various proposals for Eurobonds

	Boonstra (2005, 2010)	De Grauwe and Moessen (2009)	Delpla and von Weizsäcker (2010)
Funding degree	Complete replacement of national markets	Eurobonds are complements to national bonds	Eurobonds are complements, but national debt is made very unattractive
Institutional set-up	Independent institution issues bonds centrally. No individual issuance by members	EU institution issues bonds, making use of existing set-up	Independent institution allocates issuance quota, countries issue themselves
Participation	Voluntary, but staying out is a bad signal (no opting out)	Voluntary, but limits on debt	Voluntary, but limits on debt and opting out is a bad signal
Calculation of rates	Based on deviation from fiscal thresholds	Based on EIB equity share	Based on market rates, different for blue and red bonds

3. IMPLICATIONS FOR FINANCIAL MARKETS AND ECONOMIC GOVERNANCE

As mentioned in the overview above, the different proposals have important implications for borrowing cost, the liquidity of European bond markets and market discipline in general. We can safely state that borrowing costs in all proposals will decrease for all countries with weak fiscal policies. However, depending on the institutional set-up countries with a strong fiscal discipline will not gain (Boonstra) or only little (De Grauwe and Moesen). This implies redistribution from strong countries to weak countries, especially considering the possible tensions with the no-bailout clause that are implicit in all proposals (see also below). The liquidity of European bond markets, however, will improve almost certainly. Although this depends on the degree of participation in the different schemes, a unified bond market for Europe will send a strong signal to financial markets. Finally, market discipline may decline or increase; this differs for every proposal. While Boonstra's proposal replaces market discipline by EMU fund discipline, Delpla and von Weizsäcker argue that market discipline will become stronger, especially at the margin between blue and red debt.

This brings us immediately to the question what the issuance of bonds with joint guarantees implies for economic governance in the euro area and the legislative proposals currently under discussion. Of course, this completely depends on the credibility of the institutional set-up of the scheme. Especially France and Germany are concerned about moral hazard issues, which can ensue when market discipline is not replaced by fiscal discipline through a proper independent institution. This danger is present in the proposal by De Grauwe and Moesen, but less so in the other three. Especially the proposal by Boonstra, if political agreement on this can be reached, will provide strong fiscal discipline as the EMU fund can set independently the importance of deficit and debt consolidation. It follows that Eurobonds can only succeed with a strong underlying economic governance structure that has to be independent, credible and effective in setting sanctions. Otherwise, they will simply lead to a redistribution of costs from weak to strong states and a strong violation of the no-bailout clause. However, the structure has to be agreed upon before setting up any Eurobond issuance scheme. This means that the political discussion has to lead to follow-up of the stability fund, namely a revision of the SGP as I have argued before⁴⁰. This reform has to give the SGP more teeth, so as to be able to enforce the fiscal rules better. When this has been done, one can start thinking about a Eurobond issuance scheme.

⁴⁰ Eijffinger, 2010.

4. ARGUMENTS AGAINST THE INTRODUCTION OF EUROBONDS AND ALTERNATIVES

As mentioned in the section above, there is much (political) opposition against these proposals, mainly from the stronger Northern euro countries. The arguments against focus particularly on the redistribution of costs, the explicit and implicit guarantees from strong to weak countries and the practical hurdles to be taken. Issing⁴¹, for instance, is very worried that the introduction of a Eurobond would lead to moral hazard issues in fiscally weak countries, at least in the short run, and to higher costs for countries with sound fiscal policies. This means that it is politically very hard to 'sell' the proposal to taxpayers in these countries. The only solution viable in the long run is a credible commitment by all EMU members to reform and fiscal discipline. Kösters⁴² agrees with this standpoint, and notes that Eurobonds with joint guarantees by all EMU members will violate the no-bailout clause introduced by the Maastricht Treaty. He argued then that bail-outs have to be ruled out at all costs. Of course, the bail-outs have already taken place.

Becker⁴³ argues the same point, adding that Eurobonds make very explicit the burden sharing among Member States in case of an impending default. He notes that this implies a risk of increasing euro-scepticism in Member States with AAA-rated debt. To resolve this, he suggests several alternatives. A possibility to improve liquidity in the market for sovereign debt is an alliance of countries with the same rating. However, this option is not very likely as these countries cannot gain much from pooling their debt. Another alternative is for small and medium-sized countries to pool their bond issues, akin to the German federal system. This however, hinges again on the imposition of fiscal discipline in these countries. A third option is to have EMU countries qualify for participation in a Eurobond scheme by consolidating in boom times. This may succeed, although it does not discipline Germany or France and requires a reform of the SGP. A last alternative proposal is the creation of a liquid short-term debt instrument by Germany and France, thus competing with US T-bills. This would greatly increase European bond market liquidity, but does not address any fiscal discipline issues nor strengthen the international position of the Euro.

The discussion above leads me to conclude that a thorough reform of the fiscal rules is a firm prerequisite for any Eurobond scheme to succeed. Without a strong fiscal basis, any proposal for joint bond issuance will be built on quicksand.

⁴¹ Issing 2009.

⁴² Kösters 2009.

⁴³ Becker 2010.

5. CONCLUSION

The main advantages of Eurobonds are increased liquidity of European bond markets (conditional on participation), protection from large market shocks and erratic market discipline, guaranteed funding for all EMU countries and an improvement in the international position of the euro. The main disadvantages are possible free-riding problems, tensions with the no-bailout clause, credibility and political viability. By presenting the various proposals for introducing Eurobonds with their advantages and disadvantages, we hope to have clarified the messy discussion on Eurobonds in a more structured way.

Especially the political viability may prove to be a large hurdle to be taken before starting any Eurobond scheme. As I have argued before,⁴⁴ the Member States of EMU will first have to build a strong enforcement mechanism of fiscal discipline into the SGP. That implies to strengthen the SGP's preventive arm by, amongst others, the introduction of a European Semester, as well as to strengthen the SGP's corrective arm by the enforcement of (semi-) automatic sanctions. In spite of all the possible benefits of Eurobonds, proper fiscal coordination and discipline will have to be agreed upon before embarking on a journey towards further European bond market integration, including the introduction of a Eurobond scheme.

⁴⁴ Eijffinger, 2010.

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