



# RUHR

ECONOMIC PAPERS

Christoph M. Schmidt  
Benjamin Weigert

## Weathering the Crisis and Beyond: Perspectives for the Euro Area

RUHR  
UNIVERSITÄT  
BOCHUM

RUB



#409

# Imprint

## Ruhr Economic Papers

Published by

Ruhr-Universität Bochum (RUB), Department of Economics  
Universitätsstr. 150, 44801 Bochum, Germany

Technische Universität Dortmund, Department of Economic and Social Sciences  
Vogelpothsweg 87, 44227 Dortmund, Germany

Universität Duisburg-Essen, Department of Economics  
Universitätsstr. 12, 45117 Essen, Germany

Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI)  
Hohenzollernstr. 1-3, 45128 Essen, Germany

## Editors

Prof. Dr. Thomas K. Bauer  
RUB, Department of Economics, Empirical Economics  
Phone: +49 (0) 234/3 22 83 41, e-mail: [thomas.bauer@rub.de](mailto:thomas.bauer@rub.de)

Prof. Dr. Wolfgang Leininger  
Technische Universität Dortmund, Department of Economic and Social Sciences  
Economics – Microeconomics  
Phone: +49 (0) 231/7 55-3297, email: [W.Leininger@wiso.uni-dortmund.de](mailto:W.Leininger@wiso.uni-dortmund.de)

Prof. Dr. Volker Clausen  
University of Duisburg-Essen, Department of Economics  
International Economics  
Phone: +49 (0) 201/1 83-3655, e-mail: [vclausen@vwl.uni-due.de](mailto:vclausen@vwl.uni-due.de)

Prof. Dr. Christoph M. Schmidt  
RWI, Phone: +49 (0) 201/81 49-227, e-mail: [christoph.schmidt@rwi-essen.de](mailto:christoph.schmidt@rwi-essen.de)

## Editorial Office

Joachim Schmidt  
RWI, Phone: +49 (0) 201/81 49-292, e-mail: [joachim.schmidt@rwi-essen.de](mailto:joachim.schmidt@rwi-essen.de)

## Ruhr Economic Papers #409

Responsible Editor: Christoph M. Schmidt

All rights reserved. Bochum, Dortmund, Duisburg, Essen, Germany, 2013

ISSN 1864-4872 (online) – ISBN 978-3-86788-464-8

The working papers published in the Series constitute work in progress circulated to stimulate discussion and critical comments. Views expressed represent exclusively the authors' own opinions and do not necessarily reflect those of the editors.

---

**Ruhr Economic Papers #409**

Christoph M. Schmidt and Benjamin Weigert

**Weathering the Crisis and Beyond:  
Perspectives for the Euro Area**

RUHR  
UNIVERSITÄT  
BOCHUM **RUB**

 **RWI**

## Bibliografische Informationen der Deutschen Nationalbibliothek

---

Die Deutsche Bibliothek verzeichnet diese Publikation in der deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über:  
*<http://dnb.d-nb.de>* abrufbar.

<http://dx.doi.org/10.4419/86788464>

ISSN 1864-4872 (online)

ISBN 978-3-86788-464-8

---

Christoph M. Schmidt and Benjamin Weigert<sup>1</sup>

## Weathering the Crisis and Beyond: Perspectives for the Euro Area

### Abstract

*The euro area is experiencing a severe and highly complex crisis. It comprises three problem areas, the difficulties of some highly indebted European sovereigns to ascertain funding at palatable cost, the disconcerting fragility of the European banking system and disappointing growth prospects in the euro area periphery. To make matters even worse, these problems have developed into a systemic crisis of the European Monetary Union (EMU), since observers have apparently developed fundamental doubts over its integrity. To overcome this systemic crisis, it would not be sufficient, if only the stronger euro area economies provided more solidarity, nor would it be sufficient, if only all of Europe adhered to ironclad budgetary discipline from now on. A European Redemption Pact could be a strong political commitment to the EMU and offer a bridge between the proponents of fiscal discipline and structural reform and those governments advocating for more support. This pact would entail two indispensable aspects, the codification of a credible and coherent reform path and a temporary and limited instrument for joint refinancing.*

*JEL Classification: E60, E42, H6, G28, F24*

*Keywords: Euro crisis; governance of the euro area; debt sustainability; financial market regulation; European redemption pact*

*March 2013*

---

<sup>1</sup> Christoph M. Schmidt, RWI, Ruhr-Universität Bochum and German Council of Economic Experts; Benjamin Weigert, Scientific Staff of the German Council of Economic Experts. – This paper is based on the keynote lecture held at the 68th annual congress of the IIPF in Dresden, on August, 17th 2012. This paper would not have been possible without the valuable input of the members of the German Council of Economic Experts and its scientific staff. – All correspondence to Christoph M. Schmidt, RWI, Hohenzollernstr. 1–3, 45128 Essen, Germany, E-Mail: praesident@rwi-essen.de.

“... from any danger one never escapes without danger.”  
Nicollò di Bernado dei Machiavelli (1525)

## 1. The euro area in crisis

The euro area is currently suffering from a severe systemic crisis, nurtured by several fundamental problems which are deeply entangled with one another. On the financial markets, the severity and complexity of these underlying problems have eroded the confidence in the overall integrity of the European Monetary Union (EMU). The root causes of this crisis of the euro area are problems in three different areas – (i) a serious overhang of sovereign debt in several member states, whose governments face difficulties in ascertaining financing at palatable rates, (ii) ailing banks in some member economies whose balance sheets are loaded with non-performing assets and whose equity is insufficient to withstand further severe shocks, and (iii) deficient competitiveness leading to low potential growth in the euro area periphery. These problems do not tend to only reinforce one another, but also provide a challenge to economic policy: Possible actions taken to alleviate the situation in one problem area might tend to exacerbate the situation in others.

So far, the most visible and highly discussed problem of the euro area crisis has certainly been the severe sovereign debt crisis. In fact, most European sovereigns are highly indebted, either as a reflection of measures taken to alleviate the crisis or of earlier fiscal profligacy. And many member economies currently display low international competitiveness and, thus, at least for the next couple of years their growth prospects look dim. Financial markets therefore have considerable doubts that all sovereign debt issued will be honored. Structural reforms would be needed to enhance competitiveness and thus to increase growth. But not only would these reforms take considerable time to deliver success, they are also difficult to implement, because in the short-term austerity, if pursued adamantly, will make it difficult to avoid recession.

Similarly important and complex are the problems harbored in the balance sheets of European banks. Threatening the stability of the financial markets as well as the solvency of some euro area sovereigns, banks and governments tend to be heavily entangled. Many banks in the euro area are holding substantial amounts of their respective governments' debt and, since national governments have the responsibility to restructure or resolve ailing banks to ascertain stability, it will be precisely these governments whose indebtedness will rise even further. During the crisis, banks in the European periphery have turned to deleverage their positions, thereby dampening economic growth. This inherently fragile situation has been stabilized only superficially by the European Central Bank (ECB) whose rescue operations have increasingly blurred the previously sacrosanct dividing line between fiscal and monetary policy.

Drawing on several contributions by the German Council of Economic Experts (GCEE), this paper argues that, European policy-makers still have not formulated any credible and coherent strategy that truly has the potential to take the euro area out of this crisis. This strategy would have to be as comprehensive as the crisis is complex. It would have to clearly state how the governance structure of the Euro area in both the fiscal realm and the financial markets should be reformed so as to ensure long-term stability. And it would have to specify concretely, both, how debt-to-GDP ratios in the euro area will be reduced to a more palatable magnitude, and how the resilience of the financial sector will be strengthened, in order to allow the reformed long-term governance structure to operate. Such a bridge towards the long term would have to consciously balance the short-term effects of stabilization measures with their long-term

consequences. Finally, this encompassing strategy would have to be codified and translated into institutional arrangements to be convincing for potential investors on the financial markets.

Yet European policy-makers, instead of devising and implementing such a coherent strategy, have relied on a sort of piecemeal engineering, with a series of frantic rescue operations, widening rescue schemes at each step, and with a stepwise augmentation of the governance structure. At every new escalation of the crisis, this piecemeal strategy is testing the devotion of all participants to prevent a break-up of the common currency. By contrast, with its “three pillars of stability” (GCEE 2010), the GCEE has provided a coherent proposal for a sustainable long-term governance framework for the euro area. And with its concept of a European Redemption Pact (ERP), it suggested a viable fiscal bridge towards this stable long-term structure. Balancing conditionality and solidarity, this pact could ascertain a breathing space for distressed euro area economies to revitalize their international competitiveness. It would also help restoring the separation of fiscal and monetary policy, and it would make the true scale of risks involved transparent, by contrast to the *de facto* debt mutualisation by the ECB.

The plan of the paper is as follows: The second section characterizes the current situation, explaining how the variegated crisis plaguing the euro area has transmuted into a systemic crisis, and concluding that it would be unwise to allow the current lack of confidence in its integrity to unravel the EMU. The third section discusses the key elements of a sustainable long-term governance framework for the euro area. It is vital for sustainability that this stable architecture is forged both in the fiscal realm and in regulatory structure of the financial sector. The fourth section argues that the current stabilization strategy, engaging the ECB in an amalgamation of fiscal and monetary policy, carries high risks, and suggests in more detail a concrete alternative, the GCEE’s ERP. The fifth section concludes with a discussion of the political economy of the European debates on structural reform and crisis management.

## **2. A variegated crisis turned systemic**

### **2.1 Three crises reinforcing one another**

In hindsight, one can dissect quite easily how the crisis potential in the euro area was accumulated. As the creation and introduction of the Euro had initiated a process of nominal convergence, nominal interest rates of EMU member countries converged rapidly to the level of German yields. This did not strike many observers as odd at the time, since with the introduction of the Euro bilateral exchange rates were ultimately fixed, thereby ruling out any future realignment of nominal exchange rate within EMU. The consequence of this convergence was a surge in cross-country lending, with cheap credit flowing from the core countries like Germany to the peripheral countries like Portugal, Spain or Ireland (cf. Blanchard and Giavazzi, 2002; Lane, 2012). In addition, the demand for credit in the private sector was amplified in peripheral countries by inflation rates that exceeded the Euro area average, translating into very low real interest rates.<sup>2</sup>

In Spain and Ireland this process led to a vast private sector credit boom that resulted in a deteriorating international investment position of those countries. In Greece both the private sector and the public sector borrowed extensively and piled-up enormous amounts of foreign

---

<sup>2</sup> Maveyraud-Tricoire and Rous (2009), e.g., document a structural break in the real interest rate parity caused by the introduction of the Euro

debt (Chart 1). All of these countries experienced a sectoral shift in favor of non-tradable goods, and sustained a real wage growth that substantially exceeded productivity growth<sup>3</sup>. These alterations contributed to a noticeable loss in price competitiveness compared to other Euro area countries (Chart 2), and compared to economies in other parts of the world. The accumulation of high private and public sector debt and allowing competitiveness to decline made the situation unsustainable, and eventually had to lead to disaster.<sup>4</sup> These problems are now also the root causes of the remarkable persistence of the current crisis.

[Insert Chart 1 about here]

[Insert Chart 2 about here]

The crisis broke out in late 2009 in Greece. The developments there, as much as they were deplorable, were considered at that time as regionally limited. Yet, already in spring 2010 it became evident that Greece had slipped into a severe crisis which potentially threatened to destabilize the euro area as a whole: The combined effort of Euro area member countries, the European Union (EU) and the IMF, meant to stabilize the Greek economy as an answer to this threat, resulted in one of the most ambitious macroeconomic adjustment programs to date (Antzoulatos (2011), provides a concise overview on the Greek crisis). Unfortunately, as we know today, this adjustment program proved insufficient. Since then two other member countries, Ireland and Portugal, also slipped into crisis and have received financial support from European rescue facilities after accepting a macroeconomic adjust program.

Today the euro area faces three severe and closely interrelated crises<sup>5</sup>: a sovereign debt crisis, a banking crisis and a macroeconomic crisis. What is especially dangerous here is that these crises are mutually reinforcing one another, forming a vicious circle (Table 1). Together these problems have culminated in a fundamental crisis of confidence regarding the very existence of the monetary union itself. Within this vicious circle, the strong connection between the sovereign debt crisis and the banking crisis is most obvious and most widely discussed. Specifically, by contrast to the case of Greece, in Ireland and Spain it was the escalating crisis in their banking sectors that prompted rescue measures by national governments. Since these bail-out measures were financed by the national sovereign, its fiscal position was impaired as a consequence.

[Insert Table 1 about here]

And as a result of the increasing public debt levels and worsening fiscal budgets, interest rates for governments increased, sometimes up to levels that possibly question debt sustainability. This negative consequence was very pronounced in the case of Ireland: The government's rescue packages for the domestic banking sector led to a dramatic rise in the level of public debt and, finally, the Irish sovereign lost access to financial markets, making it necessary to apply for an EFSF rescue package. Today, the uncertainty over the future scale of write-downs required, e.g. in the Spanish financial sector, is still fueling doubts in the sustainability of Spain's public-sector debt. Consequently, despite comparatively low debt-to-GDP ratios

---

<sup>3</sup> See for example Lane (2011) for description of the sectoral shift to the construction sector in Ireland and Bielsa and Duarte (2011) in Spain.

<sup>4</sup> In a comment to Blanchard and Giavazzi (2002), Gourinchas (2002) already questioned the sustainability of the growth model – in retrospect he was right as Blanchard (2007) acknowledges.

<sup>5</sup> Shambough (2012) also provides a very concise and detailed description of the three different crises.



before the crisis, both countries face very high refinancing costs for their public debt (Chart 3).

[Insert Chart 3 about here]

And in the reverse direction of causality, the substantial loss in the value of government bonds which results from the considerable increase in their yields has directly impaired the balance sheet of the national banking system to the detriment of the banks' capital levels. In the first half of 2012, the banking systems in the major crisis countries became even more exposed to sovereign risk, as above all Italian and Spanish banks used the liquidity generously made available by the European Central Bank (ECB) under the auspices of its three-year Long Term Refinancing Operations (LTRO), to acquire government bonds of their national sovereign.

Turning to another serious link of the vicious circle, the negative feedback-loop between the sovereign debt crisis and the macroeconomic crisis, one can detect its most important origin in the necessity of the public sector to engage into serious consolidation efforts. Unfortunately, stringent fiscal consolidation programs may in the short run harm the already weak domestic growth prospects, resulting in lower tax revenue and rising public expenditures for unemployment. This may even lead to a situation where despite consolidation efforts the respective government's fiscal position deteriorates further and reinforces the sovereign debt crisis. This feedback mechanism tends to be much more pronounced, where both the private and the public sectors need to consolidate at the same time, as in Greece, Ireland, and Spain. Yet, as financial markets tend to doubt the solvency of some European sovereigns, engaging into fiscal consolidation now is an inevitable decision.

The negative feedback loop between the banking crisis and the macroeconomic crisis is operating quite similarly. The economic recession, with rising unemployment, worsening growth prospects and sharp reduction of domestic asset prices, most notably house prices, has led to an overall deterioration in the quality of banks' credit portfolios, increasing the volume of non-performing loans and eventually leading to significant losses that impair the banking sector's capital base. In this situation, banks will tend to resort to deleveraging, especially as regulatory requirements currently demand a strengthening of the bank's equity ratio. Thus, in these countries, the credit volume will be depressed, undermining the investment activities of corporations and private households, and ultimately economic growth. And indeed negative loans growth can be observed in all the countries in crisis, with the exception of Italy (chart 4).

[Insert Chart 4 about here]

Nevertheless, despite these negative feedback loops, it is absolutely crucial that the crisis countries swiftly reduce the current substantial overhang of their national debts – private and public. This objective requires major reform efforts. First, to achieve the current account surpluses which are necessary to successfully service these foreign claims, these countries need to shift resources from oversized domestically-oriented sectors, like the construction sector in the case of Ireland or Spain, to more export-oriented sectors. As members of a currency union, they will be unable to support this sectoral restructuring directly by an external devaluation of their currency. As a consequence, restructuring requires a painful and potentially long lasting internal devaluation, which is all the more difficult in comparatively rigid labor and product markets. Therefore, structural reforms in their factor and goods markets are of vital importance in the crisis countries.

And second, if ailing banks that carry toxic assets on their balance sheets are not restructured or wound-up by the national supervisors, they will persistently pose a serious threat to the rebalancing process of the domestic economy (Hoshi and Kashyap, 2010; Giannetti and Simonov, 2013). A well-functioning financial system is a necessary precondition for a swift and successful sectoral realignment of the economies, as investments in the export-oriented sectors need to be financed smoothly. Unfortunately, the financial system is the most fragile precisely in those countries, where high foreign debt had previously sparked speculative developments in the property sector, resulting in a high share of non-performing assets in the banks' balance sheets (chart 4). And these countries recently also experienced "sudden stops" to their private capital flows. This reversal of private capital flows was mitigated by the ECB's unconventional measures and emergency liquidity assistance (ELA) of national central banks, reflected in the substantial divergence of the Eurosystem's Target2-balances across EMU member countries (Sinn and Wollmershäuser, 2012).

Still, it is first and foremost the responsibility of individual member states to address each of the interconnected domestic crises - the sovereign debt crisis, the banking crisis and the macroeconomic crisis - which afflicts them. Even though the precise mixture of these issues tends to differ across member countries, there is a common array of measures to be taken: Crisis countries will need to spur structural reforms on labor or product markets and to initiate administrative reforms in the public sector to foster economic growth. They will also need to initiate a restructuring process in the banking sector and to even wind up ailing banks, if legacy problems question their solvency. Most countries will also need to rebalance their fiscal position and to sketch out a credible path for the reduction of public debt ratios.

## 2.2 The systemic nature of the crisis

As the experience of past financial and currency crises – the Asian crisis in the 1990ies or the crisis in Argentina in the early 2000 – has vividly shown, breaking a vicious circle of interconnected crises is always a herculean task for the country involved. Yet, in these cases governments had the complete arsenal of policy instruments and adjustment mechanisms at their disposal. In the case of the euro area, matters get even more complicated. Most specifically, all individual members of the currency union have forfeited control over their own currency. Thus, in effect they are indebted in foreign currency and, as a consequence, face the risk that a phase of mere illiquidity might eventually lead to sovereign default (De Grauwe, 2012). And due to the ever tighter connection between governments and banks, reflected in the remarkably increased association between the interest rates for corporate loans and sovereign yields (table 2), problems of the sovereign tend to directly spill over to the private sector, possibly rendering traditional monetary policy ineffective.

[Insert Table 2 about here]

Yield spreads for some member countries like Spain and Italy skyrocketed at the end of 2011 – temporarily stopped by the ECB's three-year LTRO – and again in summer 2012 – also stopped hitherto by the ECB's announcement of its outright monetary transactions (OMT) program. These developments have not only instigated questions about debt sustainability in these countries alone, but also led to a discussion about a systemic crisis of the Euro area. Based on data from the internet platform INTRADE – a virtual prediction market where participants are trading securities whose predefined pay-off is conditioned on a particular real-world event to occur until maturity of the security – chart 5 documents that up to the end of 2012 market participants were assessing the probability that any one member country will declare its exit from EMU by the end of 2013 as quite substantial.

[Insert Chart 5 about here]

But if investors perceive the integrity of the currency union to be endangered, sovereign yields of all EMU members might be affected by this perceived systemic risk (GCEE 2012b). In fact, doubts about the integrity of the currency area might become self-fulfilling, as individual countries – unable to generate their own currency – cannot on their own guarantee that a break-up will never occur. Indeed, such possibly self-fulfilling expectations can only be countered by the combined action of all members of the Euro area. Correspondingly, counteracting this perception of growing systemic risk has been the major motive for the ECB's announcement of its OMT program. Recently, Klose and Weigert (2012) have provided evidence that these considerations are more than a mere theoretical contingency. Specifically, some euro area sovereigns were recently confronted with higher yields than would be justified by their fundamental characteristics alone.

In the absence of any systemic risk, the major determinants of sovereign yield spreads are the expected loss that would materialize in case of default, a liquidity premium, and the investors' degree of risk aversion (Bernoth, von Hagen, and Schuknecht, 2012). The expected loss is the product of the probability of default of the sovereign and the expected haircut on the principal value and interest payments which both depend on the sovereign's fundamental characteristics such as its debt level, budget balance and expected economic growth. Accordingly, investors will demand higher yields if expected losses increase. As these characteristics can typically be influenced by the member country itself, through sound economic policy and fiscal discipline, sovereign yield spreads are typically considered as a disciplining device for individual sovereigns in the currency union.

But differences in these expected losses can also readily be approximated by the corresponding differences in the market prices of credit default swaps (CDS). After all, these contracts provide insurance against any losses resulting in an event of default of the issuer of the underlying asset. Accordingly, all recent information about the respective sovereign that somehow has an influence on either the probability of default or the potential haircut on the future payments should be reflected in CDS market prices (Aizenman, Hutchinson, and Jinjark 2011). In particular, rising governmental deficits or lower growth rates should lead to higher CDS spreads and thus increasing yield spreads (Bernoth, von Hagen, and Schuknecht, 2012, Aizenman, Hutchinson and Jinjark 2011; Dötz and Fischer 2010; Haugh, Ollivaud, and Turner 2009).

As we have an (imperfect) measure of expected sovereign losses at our disposal, contrasting bond yields and CDS premia will reveal the importance of other factors like the liquidity premium which also influence sovereign bond spreads. Choosing Germany as the reference country, chart 7 documents the difference in the bond yield spreads and the CDS spreads (as compared to German figures, respectively) for the period between December 2007 and August 2012. To ascertain high comparability between the two measures, we calculate the difference between three-year yield spreads and CDS spreads of the same maturity for France, Italy and Spain. The chart vividly illustrates that up to summer 2010 yield spreads seem to mostly reflect expectations about expected losses, as they move in close alignment with the corresponding CDS spreads. This pattern slightly changes for Italy and Spain in summer 2010, right after the first bail-out package for Greece, up to autumn 2011 with a dramatic 250 basis-point increase at the end of 2011 and again in spring and early summer 2012. Interestingly, for France the contrast between the two spreads was more or less unaffected during this recent period.

Some commentators attribute the dramatic increase in yield spreads to a change in fundamental factors and to bail-out packages that increased the liability of the credit countries (Steinkamp and Westermann, 2012). However, the figures documented in chart 7 already account for these factors, as they will tend to be differenced out in the contrast of sovereign yield spreads and CDS spreads (Klose and Weigert, 2012). Rather, for some countries the observed increase in yield spreads apparently reflects an increase of the importance of other factors. A serious candidate factor might be variations in the expectations of investors that some countries could withdraw from the euro area (Eichler, 2011), an event that would arguably lead to an eventual complete break-up of the currency union. Thus, the probability that any one country might leave the euro area will affect the sovereign yield of each member country, albeit in a heterogeneous fashion: Those countries which are more likely to depreciate their currency vis-à-vis the Euro would be charged a redenomination risk premium.

Using INTRADE quotes for the perceived probability of an exit of any one country from the EMU by the end of 2012, Klose and Weigert (2012) explore this redenomination component in yield spreads between member countries and the ECB's deposit rate during the recent crisis. Using a rolling regression approach (Aßmann and Boysen-Hogrefe, 2012; Bernoth and Erdogan, 2012) they conclude that in recent months a substantial share of the observed increase in sovereign yield spreads among EMU members can be attributed to the systemic risk component. In the case of Spain, for instance, the new currency to be introduced after a break-up of the euro area would likely be depreciated vis-à-vis other currencies, and this assessment has already led, even though EMU integrity has not been breached so far, to higher sovereign yields for Spain than would otherwise have been the case. Thus, there seems to be credible evidence that the crisis has genuinely turned systemic, making it even more difficult to tailor an encompassing solution to the crisis.

### **2.3 The fundamental decision: trying to save EMU**

As a consequence of this systemic crisis, the very existence of the euro area is at stake. Its break-up may be initiated in different ways. It could well be that a struggling member country, Greece say, would decide to exit the EMU. Contagion could trigger a kind of domino effect as other peripheral countries might follow and exit as well. Alternatively, a major creditor country, Germany say, which would decide to exit, might induce a similar chain of events. Arguably, such a break-up would probably be extremely costly to all economies involved. It is particularly the indirect cost arising from the reaction of the financial markets which are so incalculable. Yet, although no credible estimates exist regarding these costs and who would be bearing what share of them, and although their potential magnitude seems prohibitively high, the likelihood that domestic political pressures in debtor or creditor countries might enforce such a disruptive event is far from negligible (Eichengreen, 2008).

This mélange of uncertainty basically offers two fundamental options to European policy makers. One is to stipulate any long-term reform which they are able to agree upon in their summit meetings and to hope for the best regarding the stabilization potential of the ad hoc rescue operations enacted in the short-term. This is the strategy pursued so far. This approach is not only betting that the long-term changes to European institutions which so far culminated in the fiscal compact will be sufficient to restore confidence of potential investors, despite the substantial overhang of sovereign debt, despite the fragility of the financial system, and despite the lack of international competitiveness in the euro area periphery. It also excludes any destabilizing effects to emerge from the rescue measures themselves, in

particular from the increasing amalgamation of fiscal and monetary policy which is the side-effect of the stabilization efforts of the ECB.

To be complete, this approach would have to entail a plan for the worst, devising the least disruptive way to dismantle EMU in case the bet will fail. The alternative, of course, is to find a way to tweaking the bet in favor of restoring euro area stability. To this end, a sustainable long-term governance structure would have to be spelled out in much more detail that covers both the fiscal realm and the financial sector. And European policy makers would have to become explicit about the path out of the crisis. That is, they need to detail a bridge reaching over the gap between today's crisis situation and a long-term situation in which the newly introduced governance structure is able to prevent a similar crisis from happening once again. Thus, a solution to the crisis needs to address both the long term and the short term in a package deal which strikes a very delicate balance between all relevant aspects of the crisis.

### **3. A stable architecture for the euro area**

#### **3.1 Prerequisites for any sustainable governance structure**

The previous section has clarified that the crisis of the euro area can only be overcome, if the solution concept pursued will be as multi-faceted as the crisis itself. Specifically, we have argued that the current serious crisis of confidence in the integrity of the euro area is the result of an amalgamation of three problem areas each requiring a serious effort aiming at their individual solution: In the long run, an economic and monetary union will only be sustainable, if sovereign debt and private debt will not exceed a magnitude backed up by an economy's income prospects, and if the banking sector is robust enough to withstand serious shocks to its asset base. Fiscal discipline and a prudent financial sector are therefore lying at the heart of a sustainable governance structure for the EMU.

Consequently, any viable solution concept for the current crisis should be directed at eventually providing a stable architecture for the euro area. Most importantly, it must be comprehensive, integrating all relevant aspects of this crisis in an internally consistent package. For trying to design such a governance structure, but failing to address one of the problem areas in the process, would not only be insufficient, it might even lead to an exacerbation of the current crisis. In its quest for devising a blueprint for the European Monetary Union, the GCEE has repeatedly suggested a comprehensive concept of "three pillars for stability" as such a viable framework for the long-term governance of the euro area. In its earlier contributions, much of the emphasis has been on the aspects of fiscal policy and sovereign debt (GCEE 2010, GCEE 2011, GCEE 2012a). In its most recent annual report (GCEE 2012b) the GCEE placed more attention the concrete structure of a European banking union.

In all these contributions one ironclad principle has guided the considerations of the GCEE regarding the stable architecture for the euro area: Liability and control must be closely aligned with one another to ascertain long-term stability. In hindsight, this principle was not implemented in a credible fashion in the original design of the framework governing the euro area, leading to decisions by governments and by individuals on which made the situation unsustainable. Most specifically, as a reaction to the escalating crisis the original no-bail-out principle of the Maastricht Treaty was tossed overboard in order to prevent a complete collapse of the euro area. If and when the current crisis will be overcome successfully, it is absolutely vital to learn from this fundamental mistake and implement a different and

sustainable governance structure instead. Only then could one be confident that the euro area will avoid running head on into its next major crisis.

Consequently, the future governance structure of the euro area must ascertain a proper alignment of liability and control in all relevant fields of action. As a general principle, any form of joint liability requires that joint control is exercised in a credible fashion. If this is not feasible, sovereign liability emerges as the only viable option. But on the other hand, truly stable sovereign liability is also not easy to implement, as it needs to be backed up by credible mechanisms preventing the need for a bailout in case of crisis. Thus, designing a sustainable governance structure will always be a balancing act. These considerations regarding the choice between joint and sovereign liability pertain to both, the fiscal realm and the governance of the financial sector. It is argued in the following sub-sections that the ideal choice of liability-control-alignment might well be different in these two areas, depending on the possibilities to genuinely establish joint control and to ascertain sovereign liability.

### **3.2 Fiscal discipline requires national responsibility**

Currently the most prominently discussed aspect of the crisis is the sovereign debt crisis holding some economies of the periphery of the euro area firmly in its grip. Typically starting from already elevated debt levels relative to GDP, these euro area member countries have seen their debt ratios rise during the few years of the crisis to values high enough to question their very ability to serve this debt in full. If the euro area wasn't in any serious systemic crisis, it would be relatively easy to devise avenues out of this problem, addressing one ailing country at a time.

In principle, the two suggestions that one would make under calmer circumstances would be the consolidation of public households on the one hand and the stimulation of economic growth on the other. More specifically, one would urge governments in the European periphery to design the return to solid public finances as a "qualitative consolidation", favoring public investment over public consumption, and to conduct structural reforms by enhancing the flexibility of factor and product markets and by privatization of key industries. But since the crisis has evolved into a systemic crisis of the euro area, all problem countries' individual success or failure in this endeavor determine the fate of the EMU as a whole.

Thus, it has become clear that all member countries need to combine their forces in a joint effort directed at overcoming the crisis. Yet, throughout the process, there has been an intense discussion regarding the form and the intensity of this mutual support. As measures taken to alleviate the acute crisis might tend to evolve into elements of a new long-term governance structure, the obvious impasse between European policy makers regarding the ideal architecture of the euro area has turned out to be a serious obstacle to breaking the crisis' vicious circle. While considerations regarding the governance structure pertain to the distant future, perhaps some decades hence, important elements of it will be determined today, in the midst of the crisis. To take the most contested example, introducing a joint vehicle for state refinancing, aka Eurobonds, today would certainly imply that joint liability would become the guiding principle for fiscal policy in the long term.

Thus, one should ideally determine from the outset, what long-term architecture should be envisaged for the euro area in the future. Fortunately, economic principles can serve as a guide in this endeavor. The overarching criterion for choosing between candidate governance structures is their sustainability. Governance structures which promise to be stable in the long term need to align two core aspects, liability for the consequences of fiscal policy and control



over the planning and the execution of public budgets. The governance structure which was implemented at the start of EMU certainly fails to satisfy this sustainability criterion. After all, while in this structure public budgets are, despite all attempts at their coordination at the European level, ultimately a national affair, as the situation became serious, the consequences of fiscal policy were mutualized, most importantly via the recent ECB interventions, in order to avoid the EMU's collapse. Thus, returning to the original governance structure cannot be a recipe for ascertaining fiscal discipline in the future.

A more serious candidate structure is that of a fiscal union which tries to balance joint liability by joint control of public budgets, executed by a European finance minister, say. To be a successful guardian of fiscal discipline, this new European authority would need to, first, display the insight that more fiscal discipline is needed whenever national governments are failing to comprehend this necessity. One only has to recall the episode during the earlier years of this century, when Germany and France were pushing to alter the rules of the original Stability and Growth Pact (SGP) in order to avoid to be reprimanded for their fiscal indiscipline, to develop serious doubts in this insightfulness. After all, the question, whether an economy is just experiencing a temporary, albeit protracted cyclical downturn or indeed entered a phase of low long-term growth might ultimately remain contested. This impasse might only be broken by relying on pre-determined rules – but this arrangement would certainly face substantial resistance among European policy makers outside Germany.

The new European fiscal authority, once it were to realize that more fiscal discipline would be required, would need to, second, display the political determination to insist, against the resistance of the nation states, on correcting the fiscal behavior which they were originally aiming at. The disconcerting history of the SGP's corrective arm, where potential sinners have been requested to judge the behavior of actual sinners, suggests that such a hope might be overly optimistic. By contrast to the anonymous markets, requesting more discipline with little consideration for special circumstances such as being in an election year, is probably much more difficult among peers who might find themselves in similar circumstances somewhat later.

Finally, the new European fiscal authority would have, third, to possess the means for transforming its superior insights into action. This is quite difficult to imagine, though, since the desired joint control would require national authorities to transfer sovereignty to the European level regarding two similarly important aspects, namely both with respect to the planning and to the execution of public budgets. The available historical and contemporaneous evidence, for instance regarding the debt situation of the German Länder, suggests that this will simply not happen in reality. Therefore, the GCEE has rejected this candidate structure of joint liability coupled with joint control as illusionary.

The GCEE instead advocates a consequent, albeit appropriately adapted return to the spirit of the original Maastricht treaty. In essence, this arrangement envisaged the alignment of liability and control for fiscal policy at the national level. Returning to this principle would constitute the first of the GCEE's "three pillars of stability". It would be quite naïve, though, to presume that simply appealing to the forces of market discipline would suffice to ascertain stability. The original framework will have to be modified sufficiently to make this adamant exclusion of a bail-out of one member state by other members truly credible. The current sovereign debt crisis provides strong evidence that such a promise to adhere to the no-bailout principle under any circumstance would need to be sustained by providing the appropriate institutional arrangements.

Specifically, the original Maastricht treaty did neither offer any possibility of an exit of the EMU, nor did it stipulate any viable provisions for sovereign insolvency. As these two release valves were excluded altogether, as the crisis escalated, the only sensible possibility appeared to be tweaking the no bail-out-promise. Clearly, all the initiatives for tightening of the rules in the revised SGP, such as a closer monitoring of debt levels and the quasi-automatic nature of possible sanctions for non-compliance are steps in the right direction. Similarly, deeper coordination of European fiscal policy and the implementation of national debt brakes might be helpful preventive devices. After all, the more these provisions operate in the direction of solid fiscal policy, the better. But given previous experiences and following the reasoning guiding our assessment of joint control, one should not expect too much from these preventive arrangements, once a serious situation happens to materialize.

Rather, the future governance structure needs to ensure that the alignment of liability for and control of fiscal policy at the national level is also retained in cases of serious crisis by corresponding institutional arrangements. That is, any curative arrangements which will be triggered as a reflection of European solidarity in case of crisis have to provide both relief ex post and the right incentives ex ante to discipline governments. Sovereigns will have strong incentives to display prudent behavior in their fiscal policy ex ante, thereby avoiding the accumulation of any crisis potential, if they know that ex post, crisis relief would unavoidably come with perceptible cost. As a specific proposal along these lines, and serving as the second of its “three pillars of stability”, the GCEE suggested implementing an insolvency regime for ailing sovereigns, backed by a crisis mechanism like the already implemented ESM (Table 3).

The principal reasoning behind this idea runs as follows: Arguably, even a solvent sovereign might experience a liquidity crisis which might be overcome quickly and successfully, if prompt crisis relief is available (de Grauwe, 2012). Thus, the GCEE welcomes the implementation of a European crisis mechanism which provides ailing sovereigns with access to continuing funding. Yet, under most realistic circumstances, a country can only run into a liquidity crisis, when either its own debt ratios are comparatively elevated or when contagion occurs in the wake of a sovereign insolvency in the euro area. To insure member countries against the risk of such contagious effects a flexible credit line should be created, with sufficient ex-ante conditionality to limit moral hazard. However, it will be highly advisable to tie crisis relief at higher debt levels to a macroeconomic adjustment program which enables the ailing sovereign to regain complete market access. But as soon as debt ratios become pathological, the sovereign’s solvency is endangered, necessitating its debt to be restructured. In order to design a crisis mechanism which combines access to funding sufficiently tightly to these elements of conditionality requires a firm agreement on rules of conditionality ex ante.

That is, the requirement to implement a macroeconomic adjustment program and, if necessary, even debt restructuring, must not be an issue of political discussion, but rather an inescapable element of the governance of the crisis mechanism. To implement such a rule-based crisis relief, the GCEE concretely proposes that a country’s access to the ESM should primarily depend on the level of its debt ratio. Most specifically, a country with a debt ratio below 60 % that is suffering from a liquidity crisis should have access to a flexible credit line, conditional on a proven track record of compliance with the rules of the SGP. By contrast, countries with debt levels exceeding 60 %, the prominent threshold of the SGP, should receive ESM assistance only, if it simultaneously accepts a macroeconomic adjustment program. Furthermore, a country whose debt ratio even exceeds 90 % should receive assistance by the ESM only, if both its debt is restructured and a macroeconomic adjustment program is implemented. Backed up by such a mechanism with a rule-based step-wise



escalation of conditionality, the no-bailout clause of the SGP would not any longer be a toothless tiger.

Such an insolvency regime could arguably be the corner stone of a sustainable long-term institutional framework. But clearly, if it were introduced today, this move could even exacerbate the crisis: Investors would immediately be concerned that those countries with debt ratios close to 90 % would be potential candidates for an imminent debt restructuring. Therefore, debt ratios need to be reduced well below 60 % before such an insolvency regime could be implemented. Incidentally, the same caveat would also hold for implementing joint liability, if that were indeed possible in a credible fashion: For what incentive should highly indebted countries have to reduce their debt ratios, once joint liability was installed permanently? No long-term governance structure will be able, in and of itself to reduce the current overhang of sovereign debt.

[Insert Table 3 about here]

### **3.3 Requirements for a European banking union**

The disconcerting fact that in several member countries the banking sector has to be regarded as very fragile has recently been discussed with more fervor under the heading “European Banking Union”, after receiving comparatively limited attention in the public debate and at summit meetings during much of the crisis. This discussion is marked by considerable uncertainty, as until the present time, it is still not clear to what extent individual banks are holding bad assets on their balance sheets, nor whether their equity is sufficient to withstand further serious shocks to their asset base. This uncertainty is reflected in the behavior of the European banks. By contrast to previous tendencies, we have recently seen something like a renationalization of credit relations. Most importantly, banks in the periphery of the euro area have increasingly needed to refinance themselves through their national central banks and, thus, in effect through the Eurosystem. This is reflected in the increase of the Eurosystem’s balance sheet and the imbalances in the TARGET-2 system, even though in the case of ELA these claims are effectively guaranteed by the respective national sovereign.

Similarly to the sovereign debt crisis, if there wasn’t any systemic crisis of the euro area, one would merely have to suggest that the banks themselves would have to raise additional equity capital from private sources and, if this didn’t turn out to be possible, the national governments would have to engage into the recapitalization and, in some instances, even resolution of individual banks. But due to the serious negative externalities which the collapse of banks in any European country might exert on other member economies, it is once again clear that the euro area governments need to address this problem together. As for the case of sovereign debt, in principle the ESM might support governments whose fiscal capacities will be exhausted by these measures of recapitalization and restructuring. Yet, the precise form and intensity of joint support is a similarly contested issue as in the case of sovereign debt relief, since crisis measures tend to foreshadow the future long-term framework for regulating financial markets.

Thus, also in this realm of financial market regulation European policy makers should clearly delineate at the outset their concrete vision of the long-term architecture which shall characterize the euro area. It is once again helpful to seek guidance in economic principles, since the overarching criterion for choosing between candidate governance structures should arguably be their sustainability. The experience of the current crisis has taught us that this objective requires that two core aspects are closely aligned, control over individual risk-taking

behavior and the liability for its consequences. The governance structure which was implemented at the start of EMU certainly fails to satisfy this sustainability criterion.

During the crisis a range of reforms has already addressed many of the regulatory deficits that had led private and public actors to take excessive risks. Specifically, it has turned out in hindsight that capital requirements for banks were too low and that they were even designed to induce pro-cyclical effects. In addition to these insufficient requirements, national supervisors failed to prevent the accumulation of risks in banks' balance sheets. Finally, the excessive risks of banks and the imprudent indebtedness of states have become mirror images of one another, endangering the stability of the system even further. The stricter capital requirements of the Basel III framework which is destined to become fully operational in 2019 are an important regulatory improvement able to partially address these weaknesses. In addition, the GCEE has suggested that government bonds should be risk-weighted as well, and that banks satisfy a leverage ratio of at least 5 %.

These reforms aim at increasing the resilience of individual banks and, thus, certainly point in the right direction. Nevertheless, as these current reforms have been concentrated on the national level, the necessarily remain incomplete. At the present time, many financial institutes in the euro area operate at an international level, and this has generally been regarded as a reflection of European integration. After all, monetary policy in the euro area is following a common approach. But this circumstance has not found its reflection in the supervisory setup, since the authority to supervise and restructure banks has not been transferred to the European level. This imperfect alignment between the levels of activity and supervision has generated its own unfortunate incentives for excessive risk taking: As banking distress in one country impairs the stability of financial systems in other countries, imprudent financial institutes relying on being bailed out ex post, might tend to take excessive risks ex ante.

In principle, if the governance of financial regulation in the euro area complied with the rules of a well-designed banking union, the financial sector would provide stability in the long term. The GCEE (2012b) has discussed extensively the three constituent elements of such a properly designed European banking union. It would rest on banking supervision being organized at the European level, on the existence of an operative European authority for bank restructuring and resolution, and on the implementation of a bank resolution fund to finance restructuring and resolution (Table 3). Overall, the implementation of such a well-functioning banking union will require modifications of the European treaty.

According to the GCEE's proposal, European supervision should be comprehensive, including all banks in the euro area be in its perimeter. In addition, banks outside the euro area should receive the option to participate in the European banking union as well. Following the principle of comprehensiveness intends to reduce the risk of regulatory arbitrage and to obligate all euro area banks to the same supervisory standards. Yet, following this principle does not necessarily impair practical implementation, as the delegation of supervisory tasks to the national authorities is open to the European supervisory institution, wherever and whenever this might turn out to be sensible.

Moreover, the institutional arrangement of European supervision should ascertain the separation between monetary policy on the one hand and both banking supervision and the competence for restructuring and resolution on the other. If these responsibilities became too intertwined, there would be the lurking risk that virtually insolvent banks might be refinanced instead of being restructured or resolved. After all, any drastic curative steps will always tend to throw a critical light on previous supervision, tempting supervisors to gamble for the

resurrection of ailing institutes, if they are given the chance. Unfortunately, current European plans regarding the fast implementation of a banking union do not adhere to this principle of separation. Instead, supervision is envisaged to be organized within the ECB, and even more disconcertingly restructuring is not discussed at all.

The European resolution authority is the second necessary element of a well-designed banking union. To be fully operational, this authority would need to have the competence to take the initiative in restructuring and perhaps resolving financial institutes, whenever it assesses the stability of the European financial system to be at risk. It should also be hierarchically senior to the national restructuring and resolution authorities. The European resolution authority should be preferentially funded through bank levies accruing to a European resolution fund, which forms the third element of the complete banking union. Only if this fund should turn out to be insufficient in case of actual distress, additional funding should be provided via the ESM. More generally, any rules for fiscal burden sharing which might arise in this context should be determined *ex ante*.

In the distant future, such a joint funding of bank restructuring via the ESM would easily be acceptable as an element of the sustainable long-term governance structure. After all, at that time the problems to be addressed would have been accumulated under joint supervision. Liability and control would be aligned at the same level. In consequence, a well-designed European banking union can only be implemented, after (!) current problems in the banking sector have been resolved. Most importantly, to comply with this ironclad principle of proper alignment, all currently existing problems of the financial sector need to be addressed under national responsibility: They have their roots in a regime of national supervision, and thus the responsibility for the consequences of excessive risk taking should remain with the national governments.

Since national fiscal means might turn out not to be sufficient in any case, the ESM in principle already entails the option of providing funds for bank recapitalization. The principle of aligning liability and control would be respected as long as national governments receiving support from the ESM for bank restructuring were to retain the responsibility to redeem this debt later on. But instead of this, not too few European policy makers currently seem to prefer using the quick implementation of joint supervision as a pretext to circumvent these sensible arrangements, enabling national governments to tap the ESM directly (President of the European Council 2012). This is not at all a promising avenue out of the crisis, since the easy availability of fiscal resources at the European level would entail serious incentives for national governments to ignore the necessity of cleaning up their financial sectors (Buch and Weigert, 2012).

Similar considerations pertain to the currently intensely discussed introduction of European-wide deposit insurance. By contrast to much of the current political debate, the GCEE (2012b) is adamant that a European deposit insurance fund is not necessarily an element of a well-defined banking union. To adhere to the overarching principle of alignment of liability and control, a necessary pre-condition to be fulfilled before any European deposit insurance should be implemented, would be the prior establishment of an effective and powerful European resolution authority. Introducing any European-wide deposit insurance now would instead seriously undermine incentives to display prudent behavior in the financial markets. Instead, it seems more sensible to arrange for the introduction, where still lacking, and harmonization of national deposit insurance systems, which should be based on risk-adjusted insurance premia. To conclude, the same insight that holds for the realm of fiscal policy also characterizes the regulation of financial markets: No long-term governance structure will be able, in and of itself, to reduce the current debt overhang in the financial sector.

## **4 A fiscal bridge towards the future: The European Redemption Pact**

### **4.1 Buying time via ECB interventions is risky**

Arguably, providing a vision for the sustainable governance structure of the euro area is a necessary condition for sound economic policy during the crisis. Most importantly, knowing which elements of the regulatory framework promise to serve as anchors of stability, such as a viable sovereign insolvency mechanism, and which are better avoided, such as unconditional joint financing with Eurobonds, will help to prevent unsustainable elements from being introduced today. This is so critical, since if the wrong instruments were introduced today, it would be very difficult to abolish them again. But aiming at a stable long-term architecture is by no means sufficient for expedient economic policy. Rather, any comprehensive proposal for the solution of the crisis in the euro area needs to address the crucial aspect of system migration: How can the euro area reach the new stable architecture?

This transition path has to be specified in such explicit detail because the crisis is running so deep and because it is so complex. In fact, the sovereign debt crisis and the banking crisis, taken by individually and in their combination, would not be as serious, if highly indebted euro area countries were on a solid growth path. Yet, it is precisely these euro area members in which enterprises have persistently been lacking competitiveness on the international markets, with little hope for a very quick recovery. To make matters worse, recently some member states have slid into a serious recession as a consequence of the austerity measures implemented to address their excessive sovereign debt. While it seems paradoxical to tolerate that fiscal consolidation is associated with rising debt ratios, there is no alternative to the eventual consolidation of public budgets.

Similarly, it is precisely the banking sector of the euro area members with low growth prospects whose fragility raises the most serious concerns. Shouldering the burden associated with bank recapitalization and bank restructuring is particularly cumbersome, if the economy is on a flat growth path. And to even exacerbate matters, as argued in the second section, these fundamental problems of the euro area have combined into a serious crisis of confidence in its integrity, questioning the whole institutional arrangement and making the refinancing of problem countries particularly difficult. Thus, precisely those economies needing more breathing space to recover are those under the strictest scrutiny of the financial markets.

European policy makers therefore have to seek for a device ascertaining this breathing space in a way that retains the pressure to engage into the reforms needed, i.e. adamant fiscal consolidation, cleaning up the financial sector, and implementing structural reform. Most importantly, the breathing space must be substantial enough to make the insistence on continued reform efforts credible. This is quite difficult in practice: While devising reforms for the individual problem areas might seem straightforward theoretically, they will be difficult to implement politically, and they will almost certainly take considerable time to show any measurable effects. This is most obvious for the structural reforms designed to enhance economic growth.

Moreover, the problem areas are deeply entangled, and it might not even be so straightforward to devise the right measures. For a start, as the recession in some countries demonstrates, measures taken to alleviate the situation in one problem area might exacerbate the situation in another. Finally, European policy makers appear deeply divided about the future governance structure of the euro area. Most critically, since crisis measures might have a highly persistent character, once they are introduced, there is an impasse between

proponents of national and of joint liability for the consequences of fiscal policy. In effect, European policy has been to follow a highly indirect approach at devising a plan for system migration, namely to remain completely passive in this respect.

In the meantime, some European policy makers are apparently waiting for yet another opportunity to vehemently argue for the introduction of joint financing instruments, aka Eurobonds, while others are merely hoping for the continuing liquidity provision by the European Central Bank (ECB) to bridge the time until recovery and the implementation of refreshed market discipline. Once this recovery is under way, so it seems to be the implicit assumption, transmuting into the stable governance structure will then be happening automatically. Interestingly, while the visions regarding the precise nature of the stable governance framework are so divergent among European policy makers, this implicit assumption seems to be shared quite unanimously.

In fact, for the time being, the adamant resistance of the German government and the German constitutional court against unconditional joint financing instruments has identified the ECB as the only European institution to provide effective crisis relief, over and above the limited funds available under the euro area rescue schemes. And indeed, the actions and statements of the ECB have so far prevented the system from collapsing altogether. At the end of 2011 and the beginning of 2012, the ECB was able to stabilize financial markets with its massive injection of liquidity into the banking system under the auspices of its three-year LTROs. Later in 2012 the ECB was able to convince the financial markets that it will guarantee the euro areas integrity, announcing its Outright Monetary Transactions program (OMT).

But these achievements come at a serious cost: The division between the fiscal and the monetary realm has been blurred, to say the least. The liquidity provided under the three-year LTROs has seriously bolstered the balance sheets of European banks with the bonds issued by their respective sovereigns, exacerbating the already imprudently high mutual dependence between banks and sovereigns. And many critics would conclude that the OMT program was the last step towards outright state financing which should be avoided according to the original spirit under which the EMU was initiated. By contrast, proponents of these ECB actions tend to argue that one can already observe the structural reforms in the problem countries to bear first fruits, and that the ECB will be able to easily exit from the fiscal realm after sufficient time has been won.

While the jury is still out on this latter question, there is a serious risk that the strategy of buying some time will eventually transmute into a persistent approach, since withdrawing the drug of cheap credit will be highly difficult in practice. Consequently, if the euro area was protracting its current low growth prospects into the future, the ECB engagement would be requested to continue. Europe would then face a Japanese scenario with low growth and deflationary tendencies. And if growth was picking up instead, chances are that the ECB's withdrawal would come too feeble and too late, generating serious inflation potential. And even more disconcertingly, as long as the stabilization of the euro area is resting on high liquidity provision instead of on strong fundamentals, the crisis might flare up again. Thus, it would certainly be preferable, if fiscal policy were to take the responsibility for formulating a direct approach to system migration instead.

## **4.2 Principles of a European Redemption Pact**

While unquestionably it will be difficult to forge an agreement which will be able to serve as the fiscal bridge out of the current crisis and towards a sustainable architecture of the euro

area, it is quite transparent from the outset what balancing act this agreement would have to achieve. In the end, all participants would have to engage in a kind of mutual exchange, with the objects of this exchange being either monetary funds or reform efforts. By contrast, unconditional joint support would not be sufficient as a fiscal bridge, since neither would it help to address the root causes of the crisis by itself, nor would lending governments believe that it would be utilized to this effect. Thus, such an agreement would only stand a chance in the political sphere, if it would respect the overarching principle of proper alignment of liability and control, implying in this case genuine joint control.

It is quite obvious, why this conclusion is inevitable: From the perspective of the member countries lending support, the transfer of funds to others – or, quite equivalently, the engagement into joint financing operations – will only make sense, if the recipients utilize the associated gain in financial leeway to engage into reforms aiming to regain their desperately needed competitiveness. The nature of the political process implies that this request will make it indispensable to insist on tying financial advantages to strict conditionality a priori and to insist adamantly on adherence to the promised adjustment measures during the process. This is the reason, why especially Germany as the major backstop in the euro area had already been insisting so relentlessly on proceeding *quid pro quo* throughout the crisis. So far this conditionality had to be wrenched from the European partners at every step, making a more persistent type of support, specifically Eurobonds, quite unthinkable.

Consequently, either member countries in need of financial support find a way of tying themselves to a convincing reform path, or the German government will not be able to convince the German public or the German constitutional court to enter into another costly agreement. From the perspective of the member countries receiving support, this insistence on refusing unconditional joint refinancing is understandably frustrating. After all, some of them already started the serious consolidation of their public budgets, cutting public employment and wages, and also enacted drastic structural reforms in their pension systems and their labor markets. While these measures promise to bear fruit in the future, in the short term these governments have risked entering a severe recession. Thus, their desire to receive a sizeable reduction of their refinancing costs is more than real.

For two reasons, finding a way to balance these needs with conditionality and structural reform is in the interest of the member countries lending support. First, without sufficient breathing space, it will be prohibitively difficult for ailing member economies to establish the long-term strategy of consolidation and reform which is needed to actually overcome the systemic crisis. Second, if these governments were able to point at the conditionality of such a joint agreement serving as the fiscal bridge out of the crisis, this would help them convince their voters to comply with this strategy, despite any possible short-term setback. Thus, while countries making financial concessions need to insist on strict conditionality, countries requiring financial support need to insist on joint support being truly substantial.

Striking a concrete balance between conditionality and solidarity, the GCEE suggested its concept of a European Redemption Pact (ERP) in the fall of 2011. Corresponding to the fundamental trade-off just outlined, it comprises two indispensable pillars. One pillar of the ERP is the embodiment of conditionality, since participating member countries would have to agree on strong commitments, promising to engage into fiscal consolidation, to restore resilience to their financial sectors, and to implement structural reforms to boost economic growth. Moreover, participants must take decisive steps towards the stable long-term governance structure. They should, in particular, introduce national debt brakes at their respective constitutional levels. And, finally, there must be an unyielding commitment by all



partner countries to regard this pact's elements of joint liability in the fiscal realm as a temporary device.

The second pillar of the ERP is the European Redemption Fund (ERF). Its principal idea is to reduce financing cost for distressed member countries by financing the debt overhang accumulated in the past under joint and several liability. It is expected that under these arrangements, refinancing costs of the participating problem countries of the euro area would be reduced, giving them sufficient breathing space to honor the commitments they make under the conditionality pillar. Most importantly, they would need to be committed to use their reduction in financing cost to effectively reduce of their sovereign debt overhang. Consequently, all participant countries would have to accept the obligation to individually redeem of all their debt that they are allowed to transfer to the fund; this transfer of liability must not be rolled over perpetually. Additionally, ERF bonds will help to stabilize the European banking system as during the roll-in phase national government bonds will be steadily swapped with ERF bonds.

As the ultimate aim of the ERP is to lead each participant economy back to an innocuous debt-to-GDP ratio and to resilient financial markets, the ERP and its central element, the ERF, would have to be specified adamantly as being temporary and limited in magnitude. Nevertheless, it will take substantial time to rid the system of the problems accumulated over years, and it will be an operation enormous in size, since the accumulated problems are so massive. According to the GCEE' suggestion which oriented itself along the lines of the reformed SGP, the ERF would have to operate over the course of as long as approximately 25 years. And at its maximum its magnitude would, if the fund were to be initiated now, be slightly less than 2.6 trillion Euro: The pact would allow member countries not yet supported by the European rescue funds to refinance via this joint refinancing scheme all of their debt currently reaching beyond the 60 % debt-to-GDP threshold.

The actual operation of the pact will proceed in two different regimes. In a "roll-in phase" of roughly 5 to 6 years, participant countries will transfer their eligible debt to the fund. The concrete path of this transfer will be determined differently from country to country, according to the structure of outstanding debt. Apart from short-term debt being issued with a duration of up to 2 years, participant countries will be taken off the financial market during that time, since the ERF will buy their long-term debt in the primary market, at the rates set by the fund. Participant countries will have to start redeeming their transferred debt immediately. This roll-in phase will be decisive in three respects. First, these initial years will be a practical test of the commitment of all participant economies to the more painful aspects of the pact. Secondly, the roll-in years must be used to reduce the participant economies' structural deficits. And third, these years must be utilized to initiate the structural reforms which are necessary to restore the currently lacking competitiveness.

In the subsequent "redemption phase", the fund will shrink continuously, as participants redeem the transferred debt. Consequently, the individual governments will be refinancing a declining amount of transferred debt via the fund, while the share of their payments to the fund which is used for redemption is continuously increasing. Throughout this period, the remaining debt which was not transferred to the fund needs to be financed via the financial markets. That is, at the end of the roll-in phase participant economies will, once again, be confronted with the full force of market discipline. In the meantime, the short-term debt remains the object of market scrutiny throughout the process. Since the remaining debt henceforth has to be retained within the 60 % limit, at the beginning of the redemption phase effective debt brakes need to replace the consolidation agreements which are operative during

the initial roll-in phase. In addition, the reform plans for ascertaining competitiveness will have to extend well into the redemption phase.

It is obvious that the implementation of the ERF will make the pact highly attractive to those countries in the euro area which currently are under the intense scrutiny of the financial markets. But, respecting the aim of aligning liability and control at the joint level implies that sufficient commitment devices would need to be put into operation to ensure compliance with the conditionality pillar of the pact. Only then will it be possible to convince skeptics, not least in Germany, that all participants will indeed utilize the support received under this agreement to redeem their debt overhang, to restore the resilience of their financial markets, and to boost their economic growth. Ascertaining compliance seems all the more difficult, since the "redemption phase" will span more than two decades. Recognizing the sensitivity of this issue, the GCEE (2012) detailed number of "safety valves" to be installed in the pact and suggested to buttress the governance of the fund.

According to these considerations, the overall balance between solidarity and incentives should rest on the concrete arrangements in three areas, (i) taxes and interest advantages, (ii) sanctions and market discipline, and (iii) governance and parliamentary rights. First, as an important part of their consolidation efforts, participant economies will be supposed to pledge raising earmarked "redemption taxes" whose proceeds directly flow into the payments to the fund. Together with the interest advantage conveyed by the fund, the pact enables participant sovereigns to realize a positive primary surplus and thus to reduce their debt overhang. Clearly, participant countries have an incentive to convince the fund by their strict adherence to their commitments to pass to them the maximum interest advantage made possible by the low refinancing cost of the fund. Both during the roll-in and during the redemption phase, the fund could reduce the difference between its own and the interest rate which it charges the participant country, enabling it to reward particularly compliant behavior.

Second, the pact should include a number of possible sanctions for non-compliant behavior. These sanctions would have to be more drastic, if the compliance failure was more severe. As a mirror image of possible interest rate reductions vis-à-vis the typical rate, the fund could sanction insufficient compliance by applying interest rate surcharges. Selling government bonds at the open market could serve as a variant of this idea, since this activity would increase the refinancing cost for the debt not being transferred to the fund. In addition, participant countries would have to pledge gold or currency reserves or covered bonds when entering the pact. The ERF could then enact direct sanctions by seizing part of this collateral. The GCEE suggests that for each participant country, pledges should be made in the order of magnitude of 20 % of transferred debt, respectively. The most drastic form of a sanction would certainly be the exclusion of a participant country during the roll-in phase. Naturally, such a sanction would have to be reserved for highly severe compliance failures.

Third, the governance of the fund will be decisive for its ability to effectively impose sanctions in due time and of sufficient severity. In principle, devising this governance structure is a problem similar to devising the governance of the rescue operations under the auspices of the ESM, say. Consequently, it will be important to ascertain substantial influence of the stronger economies, such as Germany, on decisions of the fund, up to reserving an effective right to veto decisions. Moreover, if open market operations should ever be used as an instrument to invoke market discipline, the governing body of the fund needs to be independent of political influence, similar to the ECB.

Needless to say, the pact would fail, if only parts of these specifications were entering into the agreement to be forged by participant economies, since it is the balance between



conditionality and solidarity which creates its potential as a bridge towards the future. If European policy-makers want to make it work, they need to embrace the whole package. Arguably then, and only then, it would be possible to convince skeptics, in Germany and elsewhere, of its potential.

### 4.3 Quantitative Aspects of the European Redemption Pact

Three principal factors determine the evolution of a country's gross public debt-to-GDP ratio  $d_t$ ,

$$d_{t+1} - d_t = -p_t + (i_t - g_t)d_t,$$

with  $i_t$  denoting the sovereign's year  $t$  average nominal interest rate applying to its existing debt,  $g_t$  denoting the nominal growth rate of GDP in year  $t$ , and  $p_t$  denoting the fiscal balance before interest payments, i.e. the primary balance, relative to GDP. This account abstracts from any stock-flow adjustments, i.e. any financial transactions that affect the debt level but not the official deficit figure. Abstaining from declaring a sovereign default, there are basically two avenues to a reduction of debt ratios: First, fiscal consolidation will improve the primary balance, thus contributing to a reduction in the debt ratio directly. Second, narrowing the differential between the interest rate and the growth rate through higher economic growth will also help to reduce the debt ratio.

Ideally, one would choose a convex combination of both strategies – a credible path of both fiscal consolidation and structural reforms to foster long-term growth – qualitative consolidation. The design of the ERP exactly follows this spirit. Fiscally, the long-term goal of the ERP is to diminish public debt ratios below 60%, respectively, in all participating countries within the next 25 years. For a given path of aspired debt ratios over the course of the next 25 years, we can calculate for each participating country the primary balances that would be required under the auspices of the ERP at projected growth rates and interest rates. To this end, growth rates of nominal GDP for 2013 are taken from the AMECO database, while growth rates from 2014 on are assumed to remain at 3 %, composed of a growth rate of real GDP of 1 % to 1.5 % and an average inflation rate of 1.5 % to 2 %, an assumption which is in line with the inflation target of the ECB.<sup>6</sup>

Any participating country will refinance all its debt up to the national debt ratio of 60 % on the financial markets, while the remaining part of its debt will be financed via the ERF. Thus, the evolution of the country's debt will depend on the average interest rate, which is the weighted average of the yields demanded by the financial markets and the interest rate demanded by the ERF. To isolate the impact of the ERP on the evolution of debt ratios, we contrast two different scenarios in our illustrative calculations: The first scenario ("without ERP") rests on the assumption of sustained high interest rates for most of the member countries. By contrast, the second scenario ("with ERP") describes the interest rates likely to prevail after the introduction of the ERP. We remain cautious with regard to the interest savings possible under the auspices of the ERP, and assume the refinancing cost of the ERF to be 4 %. Compared with the much lower refinancing costs of comparable institutions like the EFSF this rate can safely be assumed as the upper bound of possible interest rates faced by the ERF.

---

<sup>6</sup> A detailed exposition of the calculations and the underlying assumptions can be found in Doluca et al. (2012).

Based on these assumptions we calculate the consolidation requirements for each of the participating countries (Table 4). The primary balance required by each participant country to meet the budget rules set out in the fiscal compact implies that in many countries considerable fiscal consolidation efforts are necessary. Compared to historical episodes of fiscal consolidation, this requirement would be difficult to sustain. Without establishing the ERP, the primary surplus required to meet the budget rules would be specifically high in Italy and Spain, and establishing the ERP would reduce the required primary balance for these countries considerably. The positive impact of the ERP on the evolution of the fiscal position would even be much more pronounced when taking into account the structural reforms implemented by the participating countries, as they would spur economic growth in the medium term. By contrast, the ECB, by announcing its OMT program only lowered sovereign yields, but it did not induce the required consolidation efforts and structural reforms.

[Insert Table 4 about here]

Currently, all potential participants of the ERP accumulated some 2 698 billion Euro of sovereign debt beyond the respective levels marking the 60 % threshold of the Maastricht treaty. In principle, this also represents the amount of debt to be refinanced by the ERF, but the exact number would be slightly higher, as the pronounced economic downswing in some countries would have to be taken into account in the practical implementation. As each participant would refinance for a period of time – the roll-in phase – pre-specified amounts of debt that are becoming due during that time, the ERF would grow during the initial years (Table 5). This roll-in phase would last six years at the maximum, with each participant country building up its stock of debt to be redeemed over the next 25 years. But as participants countries would immediately have to service their debt financed via the ERF, the maximum size of the ERF would finally stand in 2018, the last year of the roll-in phase, at a lower figure than the roughly 2.7 billion Euro quoted above, namely at 2 580,6 billion Euro.

[Insert Table 5 about here]

During the roll-in phase only the amount of maturing long-term debt with an original maturity of more than two years will be refinanced via the ERF. Therefore, each sovereign has to roll-over and issue short-term debt completely on its own. This requirement will expose all participating governments to the financial markets and will thus provide a disciplining device which would be working in addition to the conditionality of the ERP. This conditionality entails the requirement that during the roll-in phase each country would have to rebalance its fiscal budget in order to meet the required primary surplus at the end of the roll-in phase. After reaching its maximum size at this juncture, debt redemption would slowly but persistently diminish the stock of debt.

According to the GCEE's proposal, each participant country would have to pay a fixed percentage of its nominal GDP to the ERF, comprising a redemption payment and an interest payment. With both growing nominal GDP and the amount of debt shrinking successively, interest payments would become successively smaller and redemption would be accelerated over time. Under the stated assumptions regarding GDP growth and interest rates, the projected payments to the fund are calibrated in such a way that the ERF would be wound-up automatically after 25 years, i.e. at the end of 2039 when starting in 2014 (Chart 6). This will be a long time from now, but the redemption of this excessive debt will extricate EMU from problems which also took a long time to accumulate. Only under these circumstances, will European policy makers be able to establish a truly sustainable long-term governance structure of the euro area.

[Insert Chart 6 about here]

## 5 Concluding remarks

This article has argued that the euro area will only be able to recover from its current systemic crisis, if European policy makers formulate and implement a comprehensive solution strategy. It needs to both, address the root causes of the crisis, which are lying in an unsustainable governance structure, and specify a concrete path for the migration of EMU towards a sustainable governance framework. Thus, the proposed solution has to satisfy three principles. First, it needs to provide a package deal tailored to the multi-faceted nature of the crisis, instead of a smorgasbord of isolated ad hoc measures. Most importantly, it would be incomplete, if it were only targeting the fiscal realm and not the regulation of financial markets as well.

Second, the strategy needs to recognize that in both these fields of application a sustainable strategy needs to align liability and control at the same level of action. In lines with the elaboration of the GCEE's concept of "three pillars for stability" as the long-term governance structure for EMU (GCEE 2010, 2011, 2012b), this contribution has argued that the alignment of national responsibility and national control does seem to be a promising approach for fiscal policy. By contrast, aligning responsibility and control at the European level in the form of a European banking union appears to be the best recipe for constructing a stable long-term framework for the regulation financial markets in Europe.

And third, problems of private and public debt overhang accumulated in the past will have to be dissolved, before a sustainable governance framework can effectively be implemented. Again, this insight characterizes both, the substantial overhang of sovereign debt and the feeble state of the banking sector. First, crisis measures might provide relief in the short run at the expense of long-term stability, and might even make desirable aspects of the long-term structure unattainable. Prominent examples would be the introduction of unconditional financing of euro area sovereigns via Eurobonds, or the quick introduction of a European banking union before the banking sector underwent the process of weeding out unsustainable financial institutions. Second, some measures which would provide stability in the long run might not be implemented, since they would tend to exacerbate the crisis in the short run. And third, implementation of any sensible measure might be precluded by an impasse between different visions regarding the stable long-term structure.

Thus, the encompassing strategy for solving the systemic euro area crisis needs to state explicitly, how a viable bridge between the current crisis and the stable long-term architecture of the EMU should be designed. To this end, the GCEE has suggested (GCEE 2011, 2012a) the concept of a European Redemption Pact (ERP). Relying on the forces of strict conditionality and market discipline, the ERP would provide the breathing space necessary for ailing euro area economies to engage into various reform efforts aiming at stability and competitiveness, thereby paving the way to the introduction of the desired long-term governance structure. In addition, it would help to restore the separation of fiscal and monetary policy, and it would make the true scale of risks involved transparent, by contrast to the de facto debt mutualisation due to the stabilization efforts displayed by the ECB.

The ERP comprises two pillars, one is the embodiment of conditionality, and the other is the European Redemption Fund (ERF). Under this scheme, participant countries would be

allowed to transfer their sovereign debt which is currently in excess of 60 % of GDP to the ERF. This fund will then provide financing under joint and several liability for a temporary, albeit protracted period. Participation in the fund would be restricted to countries that are not already supported by a European rescue scheme. As an expression of its spirit of conditionality, the proposal comprises a series of commitments and sanctions to ensure a successful transition to sound public finances and resilient financial markets. Additionally, an independent European institution should monitor and certify each country's compliance with the commitments made to be allowed entering the ERP.

Overall, the ERP could be a powerful vehicle for breaking the spell exerted on the euro area by the combination of high interest rates, fragile banking systems, and low growth rates, freeing up the fiscal means to resolve – if properly monitored and enforced – these legacies of the past. Most importantly, in devising its proposal the GCEE has placed strong emphasis on striking the right balance between solidarity and conditionality. In fact, it seems to be widely overlooked by many of its alleged supporters in the political sphere that, according to the proposal, temporary mutualisation of European debt would be balanced by very strict conditions regarding structural reform and budget consolidation to be initiated now. To be clear, there is no room in this proposal to procrastinate reform efforts in the euro area member states. It will only have a chance in the political arena, if both its supporters and its critics understand its balanced nature.

## References

- Aizenman, J., Hutchison, M. M., and Jinjara, Y. (2011) *What is the risk of European sovereign debt defaults? Fiscal space, CDS spreads and market pricing of risk*. NBER Working Paper No. 17407.
- Antzoulatos, A. (2011) *Greece in 2010: A tragedy without(?) catharsis*. International Advances in Economic Research 17, (3), 241–257.
- Aßmann, C., and Boysen-Hogrefe, J. (2012) *Determinants of government bond spreads in the euro area: in good times as in bad*. Empirica: Journal of European Economics 39 (3), 341–356.
- Bernoth, K., and Erdogan, B. (2012) *Sovereign bond yield spreads: A time-varying coefficient approach*. Journal of International Money and Finance 31 (3), 639–656.
- Bernoth, K., von Hagen, J., and Schuknecht, L. (2012) *Sovereign risk premiums in the european government bond market*. Journal of International Money and Finance 31 (5), 975–995.
- Bielsa, J., and Duarte, R. (2011) *Size and linkages of the Spanish construction industry: key sector or deformation of the economy?* Cambridge Journal of Economics 35 (2), 317–334.
- Blanchard, O. (2007) *Adjustment within the Euro. The difficult case of Portugal*. Portuguese Economic Journal 6 (1), 1–21.
- Blanchard, O., and Giavazzi, F. (2002) *Current account deficits in the euro area: the end of the feldstein-horioka puzzle?* Brookings papers on economic activity 2002 (2), 147–209.
- Buch, C.M. and B. Weigert (2012), Legacy Problems in Transition to a Banking Union. In: Beck, T. (ed.), *Banking Union for Europe – Risks and Challenges*, VoxEU.
- Council of the European Union (2012), *Spain – Memorandum of Understanding on Financial-Sector Policy Conditionality*, 20 July 2012, Brussels.
- De Grauwe, P. (2012) *The governance of a fragile eurozone*. Australian Economic Review 45 (3), 255–268.
- Doluca, H., Hübner, M., Rumpf, D., and Weigert, B. (2012) *The European Redemption Pact: Implementation and macroeconomic effects*. Intereconomics: Review of European Economic Policy 47 (4), 230–239.
- Dötz, N., and Fischer, C. (2010) *What can EMU countries' sovereign bond spreads tell us about market perceptions of default probabilities during the recent financial crisis?.* Bundesbank Discussion Paper Series 1: Economic Studies No. 2010, 11.
- Eichengreen, B. The breakup of the euro area. In: *Europe and the Euro*, NBER Chapters. National Bureau of Economic Research, Inc, 2010, pp. 11–51.
- Eichler, S. (2011) *What can currency crisis models tell us about the risk of withdrawal from the EMU? Evidence from ADR data*. Journal of Common Market Studies 49 (4), 719–739.
- Eichler, S., and Hielscher, K. Does the ecb act as a lender of last resort during the subprime lending crisis?: Evidence from monetary policy reaction models. Journal of International Money and Finance 31, 3 (2012), 552–568.
- GCEE – German Council of Economic Experts (2010), *Chancen für einen stabilen Aufschwung*, Annual Report 2010/11. Wiesbaden.
- GCEE – German Council of Economic Experts (2011), *Assume Responsibility for Europe*, Annual Report 2011/12. Wiesbaden.

GCEE – German Council of Economic Experts (2012a), *After the euro area Summit: Time to Implement Long-term Solutions*, Special Report, July 2012. Wiesbaden.

GCEE – German Council of Economic Experts (2012b), *Stable Architecture for Europe – Need for Action in Germany*, Annual Report 2012/13. Wiesbaden.

Giannetti, M., and Simonov, A. (2013) On the real effects of bank bailouts: Micro evidence from Japan. *American Economic Journal: Macroeconomics* 5 (1), 135–67.

Gourinchas, P.-O. (2002) *Comments on “current account deficits in the euro area: The end of the Feldstein-Horioka puzzle?”*, by O. Blanchard and F. Giavazzi. *Brookings Papers on Economic Activity* 2002 (2).

Haugh, D., Ollivaud, P., and Turner, D. (2009) *What drives sovereign risk premiums?: An analysis of recent evidence from the euro area*. OECD Economics Department Working Papers 718.

Hoshi, T., and Kashyap, A. K. (2010) Will the U.S. bank recapitalization succeed? eight lessons from Japan. *Journal of Financial Economics* 97 (3), 398–417.

Klose, J., and Weigert, B. (2012) *Determinants of sovereign yield spreads during the euro-crisis – fundamental factors versus systemic risk*. Sachverständigenrat Discussion Paper No. 07/2012.

Lane, P. (2011) *The Irish crisis*. The Institute for International Integration Studies Discussion Paper Series No. 356.

Lane, P. R. (2012) *The European sovereign debt crisis*. *Journal of Economic Perspectives* 26 (3), 49–68.

Maveyraud-Tricoire, S., and Rous, P. (2009) *RIP and the shift toward a monetary union: Looking for a “Euro effect” by a structural break analysis with panel data*. *Journal of International Financial Markets, Institutions and Money* 19 (2), 336 – 350.

President of the European Council (2012), *Towards a Genuine Economic and Monetary Union*, Report of the President of the European Council Herman Van Rompuy, 25 June 2012. Brussels.

Shambaugh, J. C. (2012) *The Euro’s three crises*. *Brookings Papers on Economic Activity* 2012 (1), 157–211.

Sinn, H.-W., and Wollmershäuser, T. (2012) *Target loans, current account balances and capital flows: the ECB’s rescue facility*. *International Tax and Public Finance* 19, (4), 468–508.

Steinkamp, S., and Westermann, F. (2012) *On creditor seniority and sovereign bond prices in Europe*. Institute of Empirical Economic Research Working Papers, 92.

## TABLES

**Table 1**

**A vicious circle – sovereign debt, fragile banks, low competitiveness**

Consequences:			
Causes:	<b>Sovereign debt overhang</b>	<b>Fragile banking system</b>	<b>Low competitiveness and growth</b>
<b>Sovereign debt overhang</b>	--	(Potential) default on government bonds: impairing banks' balance sheets.	Required consolidation of governments' budgets: weakening domestic demand.
<b>Fragile banking system</b>	Bank bail-outs by governments: impairing government budgets	--	Prudent credit policy or even a credit crunch: hampering investments and growth
<b>Low competitiveness and growth</b>	Declining tax revenues, increasing transfers: adversely affecting public households	Recession leading to an increase in debt default	--

Source: Adapted from GCEE (2012a).

**Table 2**

**Correlation between long-term government bond yields, ECB main refinancing rate and interest rates on loans to corporations**

	2003 to 2009		2010 to May 2012	
	Correlation between interest rates on loans to corporations and ...			
	Government bond yields	Main refinancing rate	Government bond yields	Main refinancing rate
Belgium .....	0,599	0,992	0,794	0,787
Germany .....	0,582	0,984	0,084	0,808
Finland .....	0,586	0,985	0,085	0,491
France .....	0,609	0,976	0,004	0,682
Ireland .....	0,005	0,989	0,732	0,506
Italy .....	0,545	0,979	0,916	0,486
Netherlands .....	0,538	0,987	- 0,098	0,591
Austria .....	0,506	0,982	0,093	0,755
Portugal .....	0,557	0,892	0,948	0,604
Spain .....	0,571	0,982	0,888	0,550

Source: Adapted from GCEE (2012b, Table 4).

**Table 3****A sustainable governance framework for the euro area**

	<b>Fiscal policy</b>	<b>Crisis relief</b>	<b>Financial markets</b>
<b>Principal idea</b>	No-bailout principle: <ul style="list-style-type: none"> <li>• No bailout</li> <li>• No exit</li> <li>• Sovereign insolvency possible</li> </ul>	Rule-based relief: <ul style="list-style-type: none"> <li>• Debt ratio &lt; 60 %: Ex-ante conditionality based on compliance with the reformed SGP</li> <li>• Debt ratio 60 %-90 %: adjustment program</li> <li>• Debt ratio &gt; 90 %: also debt restructuring</li> </ul>	Banking union: <ul style="list-style-type: none"> <li>• Joint supervision</li> <li>• Joint restructuring and resolution</li> <li>• Joint restructuring fund</li> </ul>
<b>Level of alignment</b>	National control, national liability	Joint control, joint liability with strong conditionality	Joint control, Joint liability
<b>Additional issues</b>	<ul style="list-style-type: none"> <li>• Reformed SGP</li> <li>• Fiscal compact</li> </ul>		<ul style="list-style-type: none"> <li>• Risk-weighting of sovereign bonds</li> <li>• Leverage ratio</li> </ul>

Source: Adapted from GCEE (2012b).

**Table 4****Consolidation requirements and ERP<sup>1)2)</sup>**

	Primary balance	Primary balance required to meet		Improvement of actual primary	
	in 2011	budget rules <sup>3)</sup> ...		balance required to meet budget rules <sup>1)</sup> ...	
	actual	with ERP	without ERP	with ERP	without ERP
	Percent of GDP	Percent of GDP		Percentage points	
Germany .....	1,1	2,0	1,8	0,9	0,7
France .....	- 3,2	2,4	3,0	5,6	6,2
Italy .....	0,9	4,2	6,8	3,2	5,8
Spain .....	- 4,5	2,5	4,0	6,9	8,5
Netherlands .....	- 2,4	1,5	1,4	3,9	3,8
Belgium .....	- 0,3	2,9	4,2	3,3	4,5
Austria .....	- 0,8	2,2	2,4	3,0	3,2
Cyprus .....	- 4,3	2,3	3,8	6,6	8,1
Malta .....	0,2	2,7	3,3	2,5	3,1

1) European Redemption Pact.– 2) Own calculation, basic Data from EU, November 2011.– 3) Maximum primary balance which is necessary to ensure deficit not exceeding 0.5% of GDP and national debt not exceeding 60% of GDP if ERP would be implemented. Without ERP: Maximum primary balance needed to reach same evolution of debt ratio.

Source: Adapted from Doluca et al. (2012).



**Table 5****Financing of general governments via ERF<sup>1)</sup> within the roll-in phase<sup>2)</sup>**

Euro billion

		2013	2014	2015	2016	2017	2018	Total
Germany .....	Financial demand <sup>3)</sup> ....	198,3	214,8	256,3	256,7	188,6	121,7	1.236,5
	thereof via ERF.....	198,3	214,8	169,6	0,0	0,0	0,0	582,8
France .....	Financial demand <sup>3)</sup> ....	156,4	185,6	213,3	185,8	159,1	125,8	1.026,1
	thereof via ERF.....	156,4	185,6	213,3	69,3	0,0	0,0	624,7
Italy .....	Financial demand <sup>3)</sup> ....	163,9	182,7	253,5	139,1	177,0	113,7	1.029,9
	thereof via ERF.....	163,9	182,7	253,5	139,1	177,0	93,4	1.009,7
Spain .....	Financial demand <sup>3)</sup> ....	86,4	110,5	110,2	109,4	76,5	73,4	566,5
	thereof via ERF.....	86,4	110,5	94,0	0,0	0,0	0,0	291,0
Netherlands ...	Financial demand <sup>3)</sup> ....	41,5	50,3	64,0	29,5	29,5	29,5	244,3
	thereof via ERF.....	30,5	18,3	12,2	0,0	0,0	0,0	61,1
Belgium .....	Financial demand <sup>3)</sup> ....	33,3	36,7	41,3	41,3	40,7	21,3	214,5
	thereof via ERF.....	33,3	36,7	41,3	41,3	0,0	0,0	152,5
Austria .....	Financial demand <sup>3)</sup> ....	18,4	33,1	21,7	32,3	27,2	22,0	154,6
	thereof via ERF.....	18,4	16,7	8,8	0,0	0,0	0,0	43,9
Malta .....	Financial demand <sup>3)</sup> ....	–	–	–	–	–	–	0,0
	thereof via ERF.....	0,5	0,3	0,2	0,0	0,0	0,0	1,0
Total <sup>4)</sup> .....	Financial demand <sup>3)</sup> ....	698,3	813,8	960,3	794,2	698,5	507,3	4.472,4
	thereof via ERF.....	687,8	765,7	792,9	249,7	177,0	93,4	2.766,6 <sup>5)</sup>

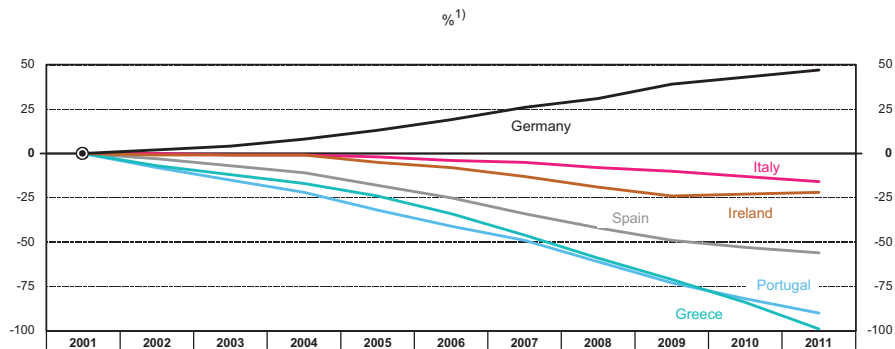
1) European Redemption Fund.– 2) Own calculation, basic data from Thomson Financial Datastream as of 8 June 2012.–  
3) Without short-term debt.– 4) Without Malta.– a) The amount lies above the total overhang of debt exceeding the level of 60% of GDP at the end of 2011 by about 50 billion Euro. That is why the financing amount via ERF for some countries is marginally increased to avoid unrealistic high improvements of primary balances in 2013, while achieving debt to GDP ratio to decline below 60% of GDP at the end of the roll in phase.

Adapted from Doluca et al. (2012).

## CHARTS

### Chart 1

#### Cumulated current account balance for selected countries in the Euro area



### Chart 2

#### Harmonised Competitiveness Indicator for selected countries in the Euro area<sup>1)</sup>

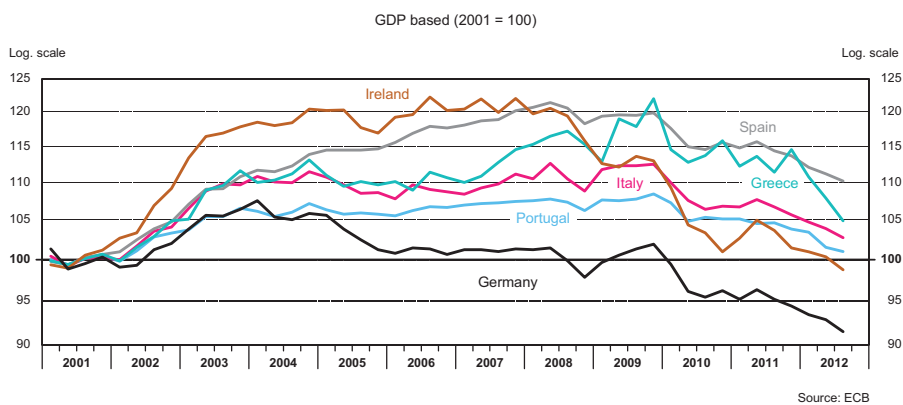
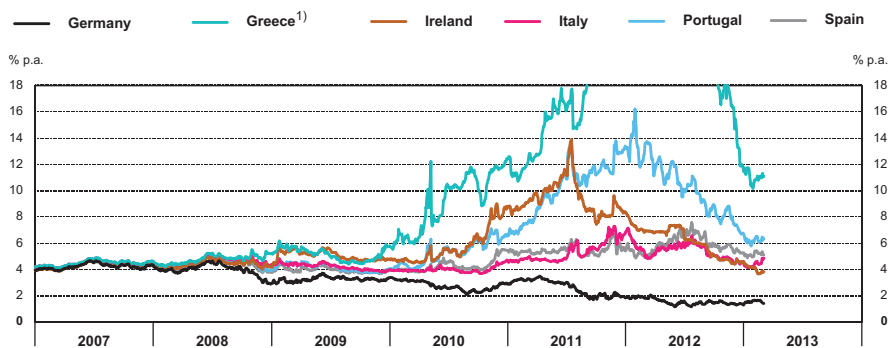


Chart 3

## 10-year government bond yields for selected countries in the Euro area



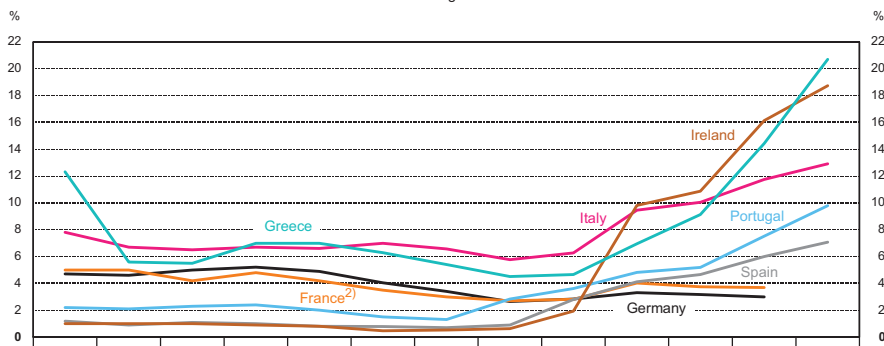
1) As of 5 September 2011, Greece bond yields have remained over 18 % p.a.; figures thereafter have not been given to enhance legibility.

Source: Thomson Financial Datastream

Chart 4

Banks' non-performing loans in selected countries<sup>1)</sup>

as a ratio of gross loans



1) The definition of non-performing loans differs from one country to the next. For this reason it is harder to compare figures between countries than within a single country over time.– 2) For the year 2011, status: as at Q2.

Source: IMF

Chart 5

Market expectation of the probability that at least one Euro area country will have left the currency union at the end of 2013

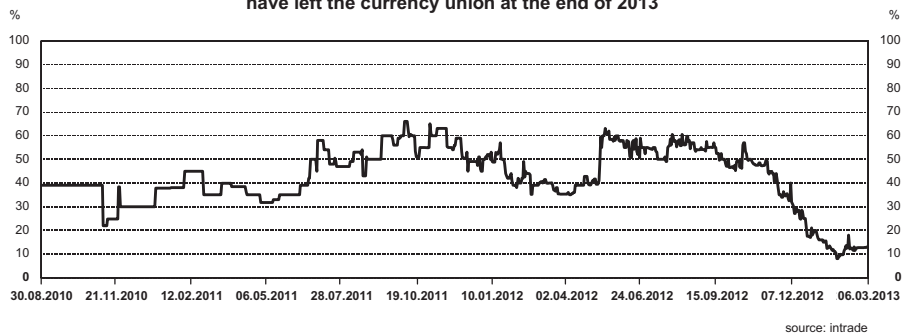
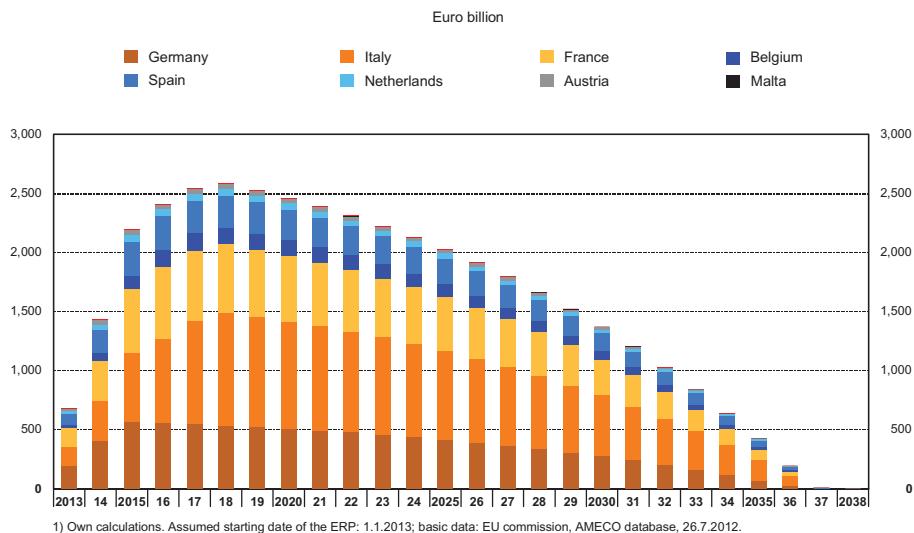


Chart 6

Debts in European Redemption Fund by country<sup>1)</sup>



Source: GCEE (2012a).