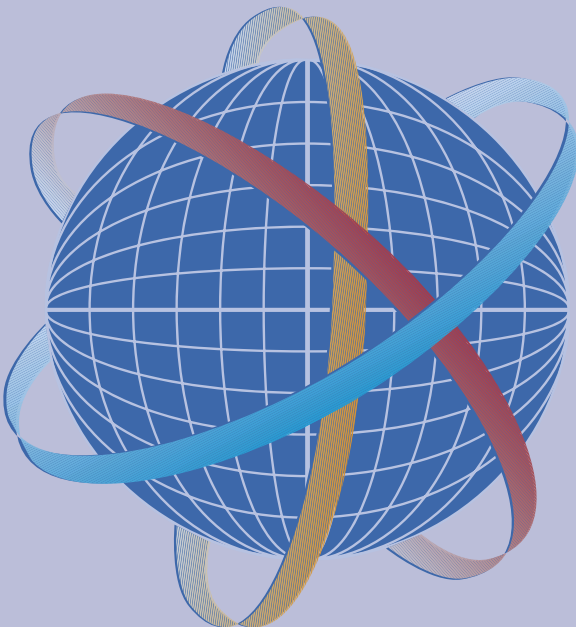


40th ECONOMICS CONFERENCE 2012

European Monetary Union: Lessons from the Debt Crisis



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Ewald Nowotny

Governor
Oesterreichische Nationalbank



Opening Remarks

Ladies and gentlemen,
Let me warmly welcome you to the 40th Economics Conference of the Oesterreichische Nationalbank.

In particular, I would like to welcome Austrian Federal Chancellor *Werner Faymann* and this year's keynote speakers, *Peter Praet*, Member of the Executive Board and Chief Economist at the European Central Bank, and *Klaus Regling*, CEO of the European Financial Stability Facility. And it is a great pleasure to welcome all other high-level speakers, representing the European economic and financial architecture, academia and European institutions.

Over the past four decades this conference has offered a platform for discussion between policymakers and economists with an institutional and academic background. It has played a useful role in creating new ideas and stimulating political reactions to ever-changing economic environments.

This year's conference, entitled *European Monetary Union: Lessons from the Debt Crisis* focuses on economic developments in Europe and the corresponding policy reactions from 2007 until today. Recent developments in international bond markets indicate that unfortunately, the fiscal problems in the euro area cannot be considered to be completely solved yet. The aim of the conference is to identify possible further policy responses to the crisis and to offer a forum for discussion on how to tackle future challenges.

From a historical perspective, sovereign debt crises are clearly recurrent phenomena. Going back to the pre-World War II period, various European states ran into difficulties servicing

their debt and some of them defaulted (Reinhart and Rogoff, 2008)¹.

Since World War II, however, there have been no cases of sovereign default in Western Europe.

Rather, sovereign default became a phenomenon typical of emerging and developing countries. Due to their high dependency on international lending and their high responsiveness to changes in the monetary policy of creditor countries, fluctuations in exchange rates and commodity prices, many of these – mostly African or Latin American – countries encountered severe financing problems. Hence, debt restructuring in Latin American countries has been the topic of numerous economic publications.



Thus, it was quite an unhappy innovation when, in the aftermath of the financial market turmoil, which had resulted in a severe recession, a sovereign debt crisis emerged in several – by international standards comparatively wealthy – EU Member States from spring 2010 on.

In early 2010, Greece's increasing financing problems marked the beginning of a previously "unthinkable" development, a sovereign debt crisis of a

¹ Reinhart C. M. and K. S. Rogoff. 2008. *This Time is Different: A Panoramic View of Eight Centuries of Financial Crises*. NBER Working Paper 13882. March.

euro area country. Financial market players started to reconsider the “habit” of demanding undifferentiated risk premiums for the sovereign bonds issued by different euro area Member States. By the way, this lack of differentiation is not stipulated in the EU Treaty, which includes several provisions to enhance *market discipline* in public finances, such as the prohibition of monetary financing, the prohibition of privileged access of public finances to financial institutions, and the no-bail-out rule. But as we know with the benefit of hindsight, for a long time market forces did not perform the desired function of signalling concerns about fiscal sustainability to borrowing governments at an early point. But once sustainability was doubted, markets – as usual – reacted collectively and very abruptly, driving up risk premiums and the financing costs in the countries considered as vulnerable.

As a result, the Greek debt crisis quickly spread to other euro area Member States. This happened through various channels, including trade links, cross-border financial exposures, but also fire sales, flight to quality, emergency reform-induced political instability and expectation effects. By the end of 2010, Ireland (on November 21, 2010) and, shortly afterwards, Portugal (May 17, 2011) required emergency lending, which was provided by financial assistance packages negotiated by the IMF, the EU and the ECB. By mid-2011, the confidence crisis spilled over to Spain and Italy. Their sovereign yields rose to pre-EMU levels. Prior to EMU, in the 1980s and early 1990s, exchange rate expectations were the major drivers of interest rate spreads between EU Member States, and both inflation and real GDP growth tended to be higher in Southern Europe. In the current crisis, by contrast, the assess-

ment of a country’s political reform capacity and stability as well as perceived sovereign default probabilities were drivers of yield spreads.

While before 2009 the market underestimated the importance of heterogeneous developments within the euro area, since the onset of the EU debt crisis, markets have tended to exaggerate and amplify their importance. The lack of confidence in the sustainability of public finances led to a situation where short-term developments or negative economic surprises caused strong market reactions. From a medium-term to long-term perspective, the size and intensity of the reactions appear to be – in part – unjustified. Recent sovereign bond auctions that led to negative interest rates on German short-term bonds (the same development can be observed for Austrian government bonds with very short maturities) are market distortions triggered by a massive flight to quality. The strong reactions to the political developments in Italy during the summer of 2011 highlighted the new regime of extremely nervous financial markets.

In such a sensitive environment, both policy reactions and the absence of such reactions may lead to severe consequences. During the different stages of the crisis, a great variety of economic policy measures were implemented.

Confronted with a global economic downturn in 2008, European governments took massive expansionary fiscal policies to stimulate economic growth. While the discretionary measures were of significant magnitude, a large part of the following deterioration in public finances was caused by automatic stabilizers. Corporate tax revenues collapsed throughout Europe. Countries which had experienced significant property bubbles before the crisis were also faced with a strong decline in tax

revenues related to property (such as transaction taxes, capital gains taxes, VAT on newly-built houses, etc.). Both factors revealed the reliance on large windfall revenues before the crisis, which were previously mistakenly judged as structural. This development was exacerbated by a strong increase in unemployment, which in turn reduced revenues from income taxes and social contributions and at the same time raised expenditures on social transfers. Unfortunately, especially in the most affected countries, these strong increases in unemployment and the implied deterioration in public finances via automatic stabilizers have persisted until now, and the growth prospects for many euro area economies have been revised downward substantially (implying also a deterioration in governments' revenue prospects). Furthermore, governments throughout Europe had to tackle problems in the financial sector by providing capital and taking over bad assets (via "bad banks"); in several countries, this also contributed substantially to growing government debt (and deficit) figures and further weakened the sustainability of public finances.

As a reaction to the lack of compliance with existing rules in the past, and in order to tackle substantial macro-economic imbalances and heterogeneous economic developments within the EU, the economic governance framework was substantially revised in 2011. The so-called "Six Pack" introduced stricter rules for public finances and addressed structural heterogeneities via a new scoreboard evaluating structural developments and emerging imbalances. The fiscal compact signed by all EU Member States with the exception of the UK and the Czech Republic went one step further, requiring the structural balance and debt rules to be incorporated into national law "of

binding force and permanent character," preferably constitutional.

The unfolding of the economic and sovereign debt crisis and, in particular, the limitations experienced in stopping the spillovers to other EU Member States have sparked criticism of the ef-



ficiency and effectiveness of the euro area's and the EU's economic governance and the decisions taken over the past three years. However, an adequate assessment must consider the constraints and limitations that the decision-making bodies were faced with.

At the recent IMF meeting, there was an intense debate, the bottom line of which the press described in the following – overly simplified – way:

- IMF and the U.S.A. promote a growth strategy
- EU and the ECB advocate austerity

In fact, the discussion as such was and is more differentiated in Washington; and I expect that we will see a similar debate also at this conference.

As to fiscal consolidation, a first and basic aspect refers to meeting refinancing needs:

- Sovereign rollover needs (Q2 – Q4 2012) in the euro area: EUR 912 billion
- Sovereign rollover needs (Q1 – Q4 2013) in the euro area: about EUR 880 billion

In “normal times” markets would be able to refinance even such impressive amounts. In “nervous” times, as we are experiencing now, much depends on the credibility of borrowers in the eyes of private lenders.

However, *credibility* is a difficult concept, based on many ingredients. One element, clearly, is the trust of investors in the political stability of a country and its preparedness to undertake the necessary reforms. Another aspect concerns the credibility of fiscal consolidation programs. This is not only a political challenge, but also an economic issue. Fiscal consolidation is not just an accounting procedure, it has to be seen in the context of macroeconomic developments and potential repercussions. If consolidation programs have to be revised because of overly ambitious timetables or the failure to take into account macroeconomic effects, inves-



tor confidence may dwindle. One lesson that had to be learned the hard way is that consolidation programs must be seen in the context of growth prospects.

As to economic growth:

It is true that some fiscal consolidation measures may have negative effects on economic growth in the short term, but positive ones in the long term. Still, it is important to have a clear idea of

what constitutes a “short term”, because if this implies too long a period, there may be lasting negative effects on potential output growth via hysteresis effects, the aging of capital stock, etc.

In any case, there is a growing consensus that successful stabilization programs will need not only an *austerity part* but also a *growth part*. The latter may encompass *structural reforms* with regard to the labor and the goods and services markets or/and special measures to fight youth unemployment, e.g. by enhancing vocational training or launching special job programs. Experience shows that in emerging or “quasi-emerging” economies foreign direct investment may play a special role as a vehicle for export-led growth, obviously implying the need for competitive unit labour costs and a well-functioning physical and institutional infrastructure.

Summing up, it is possible and necessary to combine consolidation and growth strategies. But one has to be aware that there may be different time lags as to when the different strategies are showing effects. This could create *credibility gaps*. To overcome these gaps is the role of external policy intervention, e.g. by the European Systemic Risk Board (ESRB). But it is important, as has been underlined frequently, also by ECB President Mario Draghi, that strategies to restore confidence and to ensure refinancing are consistent, oriented toward the long term and based on a reliable political support by the country concerned.

As to politics:

Financial assistance packages that include guarantees and the provision of funding through the European rescue facilities impose a financial burden or at least a financial risk on the citizens of the guarantee-providing or creditor

countries. Obviously, it is not always easy to find a majority of voters (tax-payers) willing to shoulder the financial liabilities of another country. It seems that the citizens in the EU still do not identify themselves strongly enough with the – still relatively young – project of European integration to fully support unlimited supranational financial assistance to individual Member States. In the end, we are still dealing with sovereign democracies in the EU and in the euro area. The heterogeneity of income levels within the euro area creates additional obstacles. Solidarity among EU nations continues to be limited.

As a result, in contrast to inter-regional transfers that we see in a number of fiscally federal countries, the EU seeks to overcome the present divergences in the euro area by providing loans subject to strict and controlled conditions, which supplement the general system of EU regional and structural funds.

To the recipient countries this might seem to be an infringement of important aspects of their political independence. However, I do not see a credible alternative to the procedures developed in the context of specific aid programs. But this leads us to the broader problem of the political legitimacy of EU and euro area action during the crisis, e.g. with regard to the role of external control of fiscal policy decisions by national parliaments or decisions regarding the operational structure of instruments like the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM).

Of course, all these problems are part of the age-old question of how to combine relatively short-term election cycles with the need to ensure sustainable long-term economic growth. One traditional way of dealing with this

problem is, for instance, requiring a two-third majority for certain decisions. In the EU, this is the case by including certain provisions in the EU Treaty that are extremely difficult to change. In this context the ECB can be seen as the most independent central bank in the world, as its independence is enshrined in the EU Treaties.

However, in the current institutional structure of the EU it is still unclear as to who has the mandate – and obligation – to take binding decisions in economically difficult times like the ones we are currently experiencing. The current crisis has shown the need for close cooperation within the EU, but also a tendency of re-nationalization of important aspects of crisis management, where a number of actions are based on intergovernmental arrangements rather than Community law.

This is not the place to discuss these problems in more detail. But to me it is obvious that the process of European integration has reached a crossroads where the future form and degree of European cooperation are up for decision.

The current debt crisis heralds a new era for the European economic and political architecture. The difficulties are hard to overcome but certainly also imply enormous potential.

The strong interdependence of markets within the euro area facilitates financial contagion and spillovers. To safeguard the financial and macroeconomic stability of the euro area the problems of individual countries have to be tackled by common supranational political and economic initiatives. An important lesson to be learned from recent developments is that a currency union in the end also amounts to some form of political union. This understanding has led to a revision of the

European economic governance framework. Stricter rules and the more immediate threats of financial sanctions were formulated to prevent unsustainable public finances and macroeconomic imbalances in the future. While such rules have the ability to give guidance and to deliver benchmarks, it will never be possible to force countries to fully comply with them as long as the countries involved are sovereign nations. In the end, what it all boils down to is that a political union needs more than a tight set of rules and restrictions, namely central decision-making in fiscal policy, or, at least a strong say for Community institutions in recipient countries' budget policies. The developments over the past two or three years indicate that even in the face of a severe sovereign debt crisis with potentially devastating consequences for the euro area as a whole, the time is not (yet?) ripe for such a far-reaching change in governance and sovereignty.

Let me in this context also briefly touch on the often raised call for "solidarity." In the context of the EU debt crisis, for most people the picture that comes to mind is "rich" European countries paying for transfers to the troubled "poor" countries. However, this is only one side of the coin.

Solidarity also implies the willingness of the recipients of transfers to take maximum effort to improve their own financial situation.

Whatever decisions governments make, it is vital that the majority of voters ultimately support these decisions. This applies both to recipient and to creditor countries. Rescue packages or

intergovernmental transfers that do not have public support certainly lead to unsustainable political developments, which in turn have the potential to trigger a new confidence crisis. The potential of the current crisis lies in the momentum for change. The crisis could be used to overcome the dominance of national interests and create an even more strongly integrated EU.

The debt crisis also reminds us of the importance of maintaining financial stability. Banking crises have a strong potential for seriously harming the real economy. In order to reflect their probability and, if they occur, their negative real impact, the provision of sufficient liquidity and an adequate capitalization of the banking sector as well as mechanisms to facilitate the liquidation of insolvent banks are key. The first requirement has to be met through backstop facilities by the central bank while the second and the third issues have to be addressed through financial market regulation and supervision.

Ladies and gentlemen,
I have certainly not been able to cover all aspects relevant in the context of the debt crisis or to do justice to the complexity of the issue at hand. But this is the very reason why we need this conference. I am confident that the broad diversity of speakers – ranging from representatives of academia and international institutions to policy advisors and decision-makers – will be able to provide a broad picture of the relevant issues, possible trade-offs and options for solutions.



Werner Faymann

Austrian Federal Chancellor



Providing Solidarity, Maintaining Discipline: Economic Policy Challenges in a Monetary Union

Gouverneur, presidents,
directors, members of parliament,
distinguished guests,
ladies and gentlemen!

“The future interests me far more than the past, as I intend living in it,” Albert Einstein once said.

Of course, Einstein did not say that he was not interested in the past, but only that his focus is more on shaping what is going to happen than on what has already happened. But, nevertheless: We all need to analyse where we come from in order to know the direction we want to take.

So what did happen? In 2008 and 2009, we were hit by the most profound financial crisis since the Great Depression in the 1930s. This financial crisis developed into an economic crisis which turned into a sovereign debt crisis. Five years ago, the accumulated debt of all euro area Member States was less than EUR 6,000 billion. This year it will reach EUR 8,500 billion – this is an increase of EUR 2,500 billion.

As regards the future, my main concern is that we have not learned enough lessons from the past. My task is to convince people that all bank packages, all economic stimulus packages, financial market stabilisation measures, fiscal packages, stability mechanisms and debt brakes were implemented above all to safeguard the future of Europe and of European citizens. And we want to ensure that this is a Europe that remains worth living in. Our focus is on ensuring social balance and fairness – two key elements we are particularly proud of here in Austria.

And obviously these measures have started to take effect. We hear good

news saying that we have already overcome the peak of this crisis. The forecasts speak of a medium-term recovery. Optimism is fine. But optimism should not make us inactive.

With its consolidation activities, Europe has indeed demonstrated that it can join forces and take determined action. For instance by adopting the fiscal package under which 25 EU Member States commit themselves to implement debt brakes at national level. We have also made our protecting walls both higher and stronger. This is all very important and absolutely necessary, however only the first pillar that will enable us to successfully manage the crisis.

The second and equally important pillar is measures that promote employment, growth and competitiveness. We have to undertake every effort to put the brake on rising unemployment rates and decreasing incomes. We need to



promote education and training, research and development, innovation and green technologies, to improve infrastructure networks, and invest into healthcare, social well-being and social peace.

In this context, stability and consolidation play a crucial role. Considering that the euro area Member States spend close to EUR 300 billion every year just on paying interest rates on government debt, it is obvious that investment in all these areas is only possible if fiscal discipline is observed and interest rates on government debt are kept from skyrocketing. This holds true for both Austria and Europe.

Some very concrete – and I believe – good proposals aimed at stimulating employment and growth have already been presented at European level.

For instance the so called project bonds. By providing public guarantees they are to improve the conditions for private investments into infrastructure. Europe requires investments in energy networks, in telecommunication connections and in transport networks that promote development and the creation of new jobs. This is a positive initiative which has to be supported.

In my view a strengthening of the European Investment Bank's (EIB) capital base would also have a very positive impact. If all Member States jointly increased the EIB's capital base by EUR 10 billion, the bank would be able to make available additional loans of EUR 60 billion for projects in the whole of Europe. According to calculations by the EU Commission this would trigger investments of EUR 180 billion – and this is precisely a stimulus Europe needs.

I could add a number of further examples, but all concepts have one thing in common – they are based on two pillars: on the one hand we need to observe fiscal discipline and develop new

sources of income, like the financial transactions tax, that will enable us – on the other hand – to invest into the future of our continent, in a targeted and sensible manner and with a focus on full employment.

Financial markets should also share in covering the costs resulting from the crisis. That is a matter of fairness and a question of economic reason. The financial transactions tax represents a contribution to both. Many of you are certainly aware of the studies that show what a positive impact such a financial transactions tax may have on the entire economic development by transferring funds from the financial markets to the real economy, to real companies, real products and real consumers.

One of the most challenging national economic problems is youth unemployment. In the euro area the youth unemployment rate currently stands at 22% . In 8 out of 17 euro area countries it is over 25% – with peaks of 50%. Only five years ago, not a single euro area Member State was faced with such rates. The risk of “a lost generation” is imminent in Europe. This is unacceptable.

Citizens in Austria and in Europe at large thus expect answers. When addressing these issues, your tasks as economists, ladies and gentlemen, will certainly differ from the tasks facing us as politicians. But our common goal is to strengthen democracy by taking the correct economic steps, learning the right lessons from the past and shaping the future together.

In this spirit, I wish you interesting discussions and a pleasant stay here in Vienna.

Session 1:

Links between Financial System and
Sovereign Debt Crises

Peter Praet

Member of the Executive Board
European Central Bank



Managing Financial Crises: The Role of the ECB¹

Ladies and gentlemen,
It is a real pleasure for me to share my thoughts on the role of the European Central Bank (ECB) in managing financial crises at the 40th Economics Conference of the Oesterreichische Nationalbank.

1 Introduction

We meet here to discuss this subject at a time when it has already preoccupied us for almost half a decade. And yet, it could not be more topical today. What started as a liquidity crisis in the money market in 2007 quickly morphed into a full-blown financial crisis following Lehman's collapse in autumn 2008, and finally into a sovereign debt crisis starting in May 2010. We have been facing a situation in which all these elements rapidly and profoundly reinforce each other, thus combining to create a challenge far bigger than the sum of its individual parts.

Since the onset of the crisis, financial market turbulence and the associated deterioration in credit conditions and overall economic confidence have dragged down the real economy. The resulting downward impact on economic activity has led to an erosion of tax bases and taken a massive toll on public finances. The concomitant threats to debt sustainability, in turn, have required several governments to adopt ambitious fiscal consolidation measures during the downturn to regain control of their fiscal positions. Furthermore, the financial and economic crisis forced many governments to intervene in domestic banking sectors, again placing severe strains on fiscal positions in several cases. Vice versa, fiscal sustainability concerns have rapidly spilled over to

the financial sector, thus giving rise to a vicious cycle that is difficult to break.

Disentangling this web of mutually reinforcing risk factors is the number one challenge that we, as economic policy-makers, are facing. As I will



show, the ECB has played an important role in confronting this challenge. By cutting its main policy rates and introducing additional measures to directly address liquidity and funding constraints in the banking sector, it has bought time to facilitate the structural adjustment of the financial industry. It belongs to governments to continue their efforts to ensure fiscal discipline, restore competitiveness and to remove remaining shortcomings in economic governance at the European level.

Identifying and addressing these shortcomings is key for the future.

2 Lessons from the Past – Risks for the Future

A central observation regarding the period before the crisis is that most countries did not do enough to ensure resilience in the face of adverse economic shocks. For example, while headline fiscal balances in many countries im-

¹ I would like to thank Frédéric Holm-Hadulla for his contribution to the preparation of this speech.

proved over the period between the introduction of the euro and the start of the crisis, this improvement was driven to a considerable extent by very favourable cyclical conditions. These in turn disguised the vulnerabilities originating from expansionary expenditure policies. Moreover, despite benign economic conditions, half of the euro area Member States were already recording deficits before the crisis. This failure to sufficiently consolidate public finances in good times left little or no room to absorb the fiscal burden arising from the recession and bank rescue measures. In addition, rather than using the cyclical upswing to implement far-reaching structural reforms, a number of countries witnesses a sharp deterioration of their competitiveness, as evidenced, *inter alia*, by sharp increases in unit labour costs. The reliance on demand-side expansion, often fuelled by public sector deficit spending, exacerbated the downturn in these countries when credit conditions took a turn for the worse.



While responsibility for addressing these developments was – and continues to be – for the most part on the side of national governments, the situation has wide-ranging implications for financial and economic conditions in the euro area as a whole. And it thus cre-

ates substantial challenges for monetary policy in EMU.

The ECB's monetary policy is firmly and unambiguously anchored in our primary objective of maintaining price stability in the euro area which is defined by keeping euro area HICP inflation below, but close to, 2% over the medium term. The credibility of this commitment is corroborated by medium-term inflation expectations for the euro area economy, which remain in line with our objective.

This mandate has also guided the ECB's policy response throughout the crisis. When confronted with acute downside risks to price stability, the ECB reduced its main policy rates and adopted a range of additional policy measures, often referred to as "non-standard" measures. These have served as a complement to the changes in interest rates when the channels by which, in normal times, the central bank transmits policy signals to the broader economy were seriously impaired. As I will discuss in more detail below, these policies were devised in such a way that the ECB's capacity to ensure price stability over the medium term was preserved, thereby contributing to the overall stability of the financial system in the euro area.

However, the central bank's contribution to fighting the impact of the crisis entails a delicate balancing act. On the one hand, the risks to price stability emanating from a possible financial meltdown call for decisive action from the central bank. On the other hand, the resulting mitigation of a crisis which, to a considerable extent, reflected shortcomings in other policy areas and excesses in the financial sector, can alter incentives for the different actors to correct the imbalances that undermined financial stability in the first place. If the central bank does

not react forcefully, it risks losing its ability to deliver on its mandate of price stability. At the same time, monetary policy cannot address the root causes of the crisis; this can only be done by policy-makers at national level and actors in the different sectors of the economy that have built up excessive leverage. This in turn requires a broad range of measures usually comprising growth-enhancing structural reforms, fiscal consolidation, restructuring of the domestic banking sector and balance sheet repair. But such measures are likely to prove challenging and politically costly to implement.

If domestic policy-makers and other economic actors delay necessary reforms and adjustments on the expectation that the central bank may have to provide renewed support should market conditions deteriorate, monetary policy may end up being subject to a short-term bias. Such a strategy could give rise to a regime of “financial dominance”, which Hervé Hannoun, the Deputy General Manager of the Bank for International Settlements, recently described as a situation in which “monetary policy becomes increasingly dominated by short-term concerns about adverse financial market developments”.²

To avoid such a situation, extraordinary monetary policy interventions have to be temporary in nature and tied to a commitment of swift reversal as soon as conditions improve. But would this commitment be sufficient to align the incentives of the different actors involved? This question relates to the concept of “time inconsistency”, which describes conditions in which a policy-maker states its intention to follow a specific course of action in the future

but cannot credibly commit itself to this course. As a consequence, other economic agents expect the policy-maker to deviate from its stated intention and adjust their actions accordingly.

The solution proposed in the economic literature to this type of problems is based largely on two elements: institutional frameworks setting out clearly defined objectives for key policy areas and the adoption of “rule-type behaviour” that consistently and predictably determines the response of policy-makers to specific circumstances. These elements increase the credibility of policy commitments, thereby allowing a policy-maker to steer expectations of other actors in line with its long-term intentions and overcoming the short-term bias resulting from the time inconsistency problem.

Both of these crucial elements are in place in the euro area as regards the single monetary policy. The Treaty on the Functioning of the European Union establishes a strong institutional framework for monetary policy in the euro area based on central bank independence and a primary objective of price stability, as enshrined in Articles 130 and 127, respectively. Together with the prohibition of monetary financing of public debt, laid down in Article 123, this framework provides an important safeguard against monetary policy being dominated by fiscal policy considerations. And the ECB’s monetary policy strategy, which builds on a comprehensive analysis of risks to price stability via its two pillars and is communicated to the general public in a regular and transparent manner, entails “rule-type behaviour” on the part of the ECB. These elements provide a frame-

² Hannoun, H. 2012. *Monetary policy in the crisis: testing the limits of monetary policy*. Speech at the 47th SEACEN Governors’ Conference. 13 to 14 February.

work which is geared towards the medium term and which counteracts short-term bias towards fine-tuning macroeconomic and financial developments.

The current crisis has instead exposed severe shortcomings in the institutional architecture of EMU as regards the areas of fiscal, structural and financial stability. These shortcomings have made it possible for national authorities to often pursue economic policies that finally led to strong negative externalities on the euro area as a whole. Besides inducing a build-up of risks, this also indirectly affected the smooth functioning of EMU by exacerbating heterogeneity between countries. In particular, misaligned budgetary policies, unsustainable wage developments and structural rigidities in product and labour markets, as observed in several countries, constitute a source of persistent inflation differentials within the currency union. These in turn represent also a challenge for monetary policy.

As regards the origin of such institutional shortcomings, there are four factors that play a particularly prominent role: *first*, weakly enforced fiscal rules incapable of promoting prudent fiscal policies in times of favourable economic conditions; *second*, the absence of a mechanism to prevent and correct macroeconomic imbalances within the EU; *third*, insufficient coordination of macro and micro-prudential supervision of financial sectors at the EU level; and *finally*, the absence of a crisis management framework to avoid contagion between countries and sectors.

In response to these problems, policy-makers have set in motion ambitious reforms to strengthen economic governance at the EU level, and many national governments have committed

to ambitious fiscal and structural reforms. All these measures should contribute to addressing the underlying causes of the crisis, thereby also supporting the smooth functioning of EMU in the future. But let me first explain, in more detail, the ECB's policy since the start of the current crisis.

3 The ECB's Response to the Financial and Sovereign Debt Crisis – Measures and Guiding Principles

Since the intensification of the financial crisis in September 2008, and against the background of rapidly receding inflationary pressures, the ECB has implemented monetary policy measures that are unprecedented in nature and scope. This has included a swift reduction in our key interest rates to historical lows, with the rate on the main refinancing operations now standing at 1% as compared with 4.25% in summer 2008. These steps are often referred to as “standard” policy measures, since changes in short-term interest rates are the main tool adopted by the ECB to achieve its price stability objective.

However, besides triggering a sharp fall in global economic activity, the crisis severely affected the monetary transmission channels. In particular, central banks around the world were confronted with repeated waves of market turbulence, in which liquidity in overnight and longer-term money markets was sharply falling, in view of heightened uncertainty about counterparty risk between banks. As consequence, the functioning of the interbank market was seriously hampered and the ability of banks to provide credit to the real economy was at risk. These developments severely jeopardised the ECB's ability to affect economic magnitudes and ulti-

mately to contain downside risks to price stability.

In response, the ECB embarked on a series of “non-standard” measures with the aim of relieving liquidity and funding constraints in the banking sector and mitigating impairments to the monetary policy transmission channels. In particular, they have taken the form of: provision to euro area banks of unlimited liquidity at a fixed rate against adequate collateral; a substantial lengthening of the maximum maturity of refinancing operations; the extension of the list of assets accepted as collateral; and the provision of liquidity in foreign currencies. These measures have served to improve financing conditions and credit flows above and beyond what could be achieved through reductions in the key ECB interest rates.

While these measures clearly differ in their specific design and scope, they all follow the same guiding principle: a clear focus on the ultimate objective of price stability, supported by the intermediate target of ensuring depth and liquidity in dysfunctional market segments to restore the proper functioning of the monetary policy transmission mechanism. To that effect, they serve as complements to our standard monetary policy tools and can be unwound should upward pressures on price stability materialise.

Let me provide an example of this guiding principle, by looking at the most recent non-standard monetary policy measures taken by the ECB, i.e. the long-term refinancing operations (LTROs) decided in December 2011.

The second half of 2011 was characterised by a renewed intensification of turbulence in sovereign debt markets, which quickly spilled over to the banking system. As a consequence, the access of euro area banks to market-based funding came under strain, as re-

flected, for instance, in a substantial surge of euro area money market spreads since July 2011. In the ECB bank lending survey more than half of all participating euro area banks reported a deterioration in wholesale funding conditions.

Without effective remedies, these developments could have severely undermined bank lending to firms and households and triggered broad-based selling of assets. The LTROs were aimed at alleviating these adverse funding conditions. Banks were able to satisfy their additional liquidity needs, in the context of a net liquidity injection of around EUR 520 billion – taking



into account the shifting of liquidity out of other operations. Moreover, the LTROs provided banks with a more certain medium-term funding situation owing to the longer maturity of the new operations.

The full supportive impact of the three-year LTROs will need time to unfold. Any assessment of their impact on the economy can be only preliminary in nature at this stage.

However, the data available to date give some encouraging signals. Money and credit figures up to March confirm a broad stabilisation of financial conditions and thereby the avoidance of an abrupt and disorderly adjustment in the

balance sheets of credit institutions. Funding conditions for banks have generally improved, and there has been increased issuance activity and a re-opening of some segments of funding markets. At the same time, the demand for credit remains weak in the light of still subdued economic activity and the ongoing process of balance sheet adjustment in non-financial sectors.

Beyond these short-term effects on market conditions, a key aspect in the design of the three-year LTRO is its consistency with the ECB's capacity to ensure price stability in the medium term. Most importantly, the interest rate on the three-year operations is indexed to the ECB's main policy rate, i.e. the rate on the main refinancing operations. Thus, if ECB were to increase this rate, the costs for the remaining period of the three-year LTROs would also rise. Hence, the three-year liquidity allocation does not stand in the way of an increase in short-



term interest rates; rather, it would allow such an increase to be immediately translated into the outstanding liquidity operations.

As in the past, the Governing Council will be vigilant in order to contain upside risks to price stability. In this context, let me point out that what is relevant for measuring mone-

tary liquidity is not the balance sheet of the Eurosystem, but the balance sheet of the euro area banking sector. Only the latter shows the interaction with the real economy. This interaction is captured by monetary and credit data which, despite the recent stabilisation I mentioned earlier, are still very subdued.

If these conditions were to change in a way that entailed upside risks to price stability, the Governing Council would use all the instruments at its disposal to continue delivering on its primary mandate.

The ECB's monetary analysis pillar serves to assess signals coming from developments in money and credit conditions. I would also like to mention that our monetary analysis is not narrowly confined to the analysis of headline money and credit dynamics, but also tries to understand their determinants.

Let me summarise. The ECB has taken an active role in mitigating the financial and economic crisis in the euro area, which has been fully consistent with its mandate. Reductions in the main policy rates have served to counteract acute downside risks to price stability. Non-standard measures have addressed impairments to monetary transmission channels, thereby complementing changes in policy rates when highly dysfunctional and perturbed market conditions impeded their effectiveness. To preserve our primary objective to ensure price stability, these non-standard measures are temporary and will be withdrawn if upward pressures to price stability materialise.

4 The Way Forward and Conclusions

However, the ECB's exceptional measures should not distract from the fundamental causes of the crisis and the adjustments needed in the fiscal, struc-

tural and financial domains. The institutional architecture in the EU has to ensure that Member States live up to their responsibility for restoring fiscal sustainability and competitiveness and for implementing effective financial supervision. It is crucial to clearly separate the central bank's responsibilities from other policy domains, such as fiscal sustainability and financial stability.

Therefore, efforts to reinforce the economic governance framework at the European level are indispensable. In this regard, European policy-makers have made important progress recently. As a result of the strengthening of the fiscal rules of the Stability and Growth Pact and the introduction of the fiscal compact, Member States now face stronger incentives to adopt sound budgetary policies, which are crucial for a smooth functioning of EMU. These derive, *inter alia*, from the requirement for national authorities to legally adopt a fiscal rule, preferably at constitutional level, stipulating that the general government deficit remain below 0.5% of GDP in structural terms. The new Macroeconomic Imbalances Procedure constitutes a useful mechanism requiring governments to adopt competitiveness-enhancing policies and tackle potential sources of financial instability in their domestic economies. The establishment of the European Supervisory Authorities and the European Systemic Risk Board has led to closer cooperation in micro and macroeconomic supervision within the EU that is commensurate to its deep economic and financial integration. Finally, the creation of firewalls in the form of the European Financial Stability Facility and European Stability Mechanism will contribute to isolating the euro area as a whole from financial turmoil affecting individual or a small group of countries. By providing financial assistance linked to

strong and comprehensive conditionality, these mechanisms should also grant recipient countries additional time to overcome structural deficiencies in specific sectors of their economies.

While the EU governance framework thus contains some key elements necessary to overcome the current crisis and mitigate future crises, it is now paramount that all these elements are implemented in a swift and steadfast manner.

Moreover, to meet the challenges with which our economies will be confronted over the coming decades, most notably in the form of population ageing and increasing competition from emerging market economies, structural reform efforts aimed at boosting long-term economic growth should be high on the European agenda. Only if productivity and competitiveness keep pace with these challenges will Europe be able to preserve a standard of living similar to that we enjoy now. To mark this commitment to fostering long-term economic growth, key principles for sound and sustainable growth could be enshrined in the common economic governance framework.

All these reform efforts will put the framework for fiscal and macroeconomic policies (the "E" in Economic and Monetary Union) on a stronger footing and will facilitate the conduct of monetary policy – which has been supported by the strong institutional framework provided by the Maastricht Treaty since the very beginning of EMU. A strong institutional framework as regards both Economic and Monetary Union, coupled with an extension of "rule-type behaviour" to other key policy areas, can also make it possible to address the moral hazard problem inherent in any supportive policy measure that needs to be taken during the crisis.

Klaus Regling
Chief Executive Officer
European Financial Stability Facility



Europe's Response to the Sovereign Debt Crisis

Governor Nowotny, distinguished guests,

Thank you for the opportunity to participate in the 40th Economics Conference organised by the Oesterreichische Nationalbank.

In my presentation today, I would like to outline the main reasons for the sovereign debt crisis. I will then elaborate on the response by the euro area Member States and the European Institutions. Finally, I will conclude by indicating potential actions for Europe to go further in tackling the current crisis and creating a stronger euro area. Let me begin with the reasons for the current problems.

The financial crisis— and later the sovereign debt crisis — have exposed weaknesses in the conduct of economic policies and gaps in the design of EMU. Loss of competitiveness and large current account imbalances aggravated the European economies' vulnerability to the financial crisis.

I can identify eight main reasons for the crisis: firstly, Member States did not fully accept the political constraints of being in EMU. The Stability and Growth Pact was met with lax implementation by Member States. The Eurogroup, the cornerstone of coordinating economic and financial policies in EMU, was functioning on the basis of peer pressure. Member States were very cautious in acting against a fellow Member State driven by the fear that “you could be the next in the firing line”. Another reason for not fully accepting the full implications of being in EMU was that Germany and France opposed recommendations by the European Commission on how to reduce their budget deficits. As Germany and France did not seem to be taking the budget requirements seriously, this meant that other Member States did

not see why they should comply with the fiscal discipline required either.

Secondly, economic surveillance had been too narrow. The backbone of EMU was the Stability and Growth Pact but analysis, design and conduct of economic policy remained compartmentalised. Surveillance did not adequately take into account the interaction between fiscal issues and wider macro-economic imbalances i.e. asset price bubbles, competitiveness and external current account balances.

Thirdly, methodological problems with calculating structural fiscal balances made it difficult to have a clear view on the diverging economies. Spain and Ireland were in surplus for many years but their growing real estate bubbles, sparked by a transition to permanent lower interest rates, which was a fourth key reason for the growing imbalances, went undetected by the Stability and Growth Pact.



A fifth reason was the insufficient control of data by Eurostat, which did not have the right to go into national offices and investigate the figures — it could only use numbers that were provided by the national statistics offices.

Sixth, financial market supervision remained mainly national. Due to the

existence of this national supervisory architecture, there was no true data flow between authorities and countries within EMU. This explains why, for example, supervisory authorities were unable to detect a bank's overall risk exposure early enough.

Seventh, we experienced the biggest financial crisis in 80 years. As a result, debt levels across the euro area increased by more than 20 percentage points and reached nearly 90 % of GDP last year. This was unavoidable as public finances had a key role to play to support the economy and the financial sector. But it leaves the euro area more vulnerable than before the crisis.

And finally, eight, there was no crisis resolution mechanism. The rationale had always been that the Stability and Growth Pact would deliver the necessary fiscal discipline within the Monetary Union. Cross-border financing would happen automatically. Therefore a crisis resolution mechanism would not be required.

Member States have reacted to the crisis. European governments have done a great deal to address the problems that accumulated during the first decade of Economic and Monetary Union and which became so visible during the global crisis. They have identified the main weaknesses – at the national and the European level – and they are tackling them in a way that will profoundly change governance and economic policy-making in the euro area.

Let's first look at actions taken at the national level: Member States are making progress on fiscal consolidation and structural reforms. All Member States, not just those Member States in a macro-economic adjustment programme, have budgetary consolidation paths in place with a clear objective to reach a balanced budget during the

next few years, agreed by the EU finance ministers based on an assessment by the European Commission. Furthermore, all Member States have presented national reform agendas in order to improve their competitiveness and their growth potential. Next month, the European Commission will issue policy recommendations for each Member State giving guidance for national policies in 2012/13 and outlining concrete measures to boost economic growth and job creation in the medium-term. Once these recommendations have been endorsed at the European Council in June and formally adopted by the Council of Ministers in July, they will help Member States to prepare their national economic policies and budgets for parliamentary approval in the second half of this year.

Member States whose currency is the euro have in addition committed themselves to a set of far-reaching additional policy reforms under the Euro Plus Pact, aiming to foster competitiveness, promote employment and contribute to the sustainability of public finances.

Of particular concern is the development in the euro area periphery. Ireland, which is receiving financial assistance, has implemented an ambitious reform programme and has proven to be a success story. Structural reforms to enhance competitiveness are significantly advanced, the Irish current account is back in surplus and yields of Irish debt have more than halved. Portugal is also on track. The Portuguese government published consolidated general government results for the first quarter of 2012, which showed that the fiscal situation outperformed the programme guidelines set out by the Troika. Spain and Italy have both started far-reaching austerity and reform programmes to reform labour

markets, pension systems and tackle tax evasion. Clear improvements are visible. Current account deficits are dropping significantly compared to the peak four years ago. Divergences in competitiveness are also in reversal. The gap in unit labour costs has been reduced significantly not only by decreasing unit labour costs in Greece, Ireland, Spain and Portugal but also by the increase in labour costs in Germany due to the positive cyclical position. Speaking about Greece, let me note that it should be considered a unique case among the beneficiary countries, as it has been experiencing a solvency problem, as opposed to a liquidity problem. That is why the second financial assistance programme for Greece was more complex than for Portugal or Ireland, with private sector involvement that included a voluntary bond exchange and reduction of Greek debt. The euro area Member States will continue to support Greece as long as Greece continues to implement the agreed conditionality.

Second, at European level, the key is the new Treaty on Stability, Coordination and Governance in EMU, today under ratification. The Treaty, also known as the fiscal compact, provides for further enhanced coordination in fiscal and economic policy. It sets out permanently binding budgetary rules including automatic sanctions, which Member States will enshrine in their national legislation. This will help to put government finances on a sustainable footing – an important step towards creating a stability union and resolving the sovereign debt crisis.

The Treaty strengthens the reinforced Stability and Growth Pact and enhances deeper fiscal coordination. Member States are required to make significant progress towards a balanced budgetary position. Expenditure bench-

marks will now be used alongside the structural budget balance to assess adjustments in budgetary consolidation. Furthermore – for the first time – a controlled reduction of the debt ratio to 60% of GDP is required. Both the reduction of the deficit and the reduction of total debt are subject to a new, graduated sanctions procedure, in which resolutions proposed by the European Commission can be adopted even against a majority of euro countries.



This has been complemented by a new procedure for detecting and avoiding excessive macroeconomic imbalances. Where excessive imbalances exist, repeated failures to follow recommendations by the European Commission will result in sanctions. Although all Member States will be analysed, the procedure is clearly focused on Member States with weak competitiveness and large current account deficits. Again, Europe closes a structural gap. In the past, imbalances could become excessive as there was no designated procedure to address them.

Another major improvement is the introduction of the so-called “European Semester”. This is the first half of every year during which the Member States’ budgetary and structural policies are reviewed by the Commission and partner countries. It will enable consistent

policy guidance early enough, so that Member States can take this into account when they adopt their national budgets for the following year. For the first time, spillover effects to other Member States will be taken into account before national budgets are decided by parliaments. The European Commission has pushed for this approach for many years but it needed the crisis for Member States to give up their resistance.

In addition, a new Macroeconomic Imbalance Procedure is in place, which aims to prevent and correct macroeconomic imbalances within the EU. It relies on a scoreboard of indicators, which focus, *inter alia*, on indebtedness and competitiveness. The Macroeconomic Imbalance Procedure has a corrective arm, known as the Excessive Imbalance Procedure. In cases of serious macroeconomic imbalances, the Member



State concerned will have to submit a corrective action plan with a clear roadmap and deadlines for implementing corrective action. The Procedure will be rigorously enforced, with financial sanctions imposed on countries following repeated non-compliance with the recommended corrective action.

It is also significant to note that Eurostat has been given extensive audit powers over Member States' national

finances. It will be able to investigate whether governments are accurately reporting data on their debt and deficits.

The financial crisis revealed major deficiencies in the model of financial supervision in the EU. In order to address the pressing need to have an institution that would identify macroprudential risks, that is risks in the EU financial system as a whole, the European Systemic Risk Board was established. The crisis also exposed shortcomings in the areas of cooperation, coordination, and consistent application of EU law between national supervisors. This has been corrected by the establishment of three new European Supervisory Authorities, dealing with the banking, securities, and insurance/pension sector. One important task of the new authorities is developing a single EU rulebook applicable to all financial institutions in the internal market.

Ladies and Gentlemen, let me stress: Member States are putting national reforms in place and strengthening economic governance at the European level. This is the key to overcoming the sovereign debt crisis. The establishment of financial crisis mechanisms – the current EFSF and the future ESM – is only of a complementary character. They can buy time for euro area Member States to do their homework – but not more. Only financing would not help much.

But, as a complement, crisis resolution mechanisms and financial backstops are very important. Europe has often been criticised for not doing enough. On this front, I disagree. Europe has created strong firewalls. Europe provided EUR 53 billion to Greece in the first Greek package, it has committed EUR 97 billion to Ireland and Portugal, it has agreed the second support pack-

age to Greece worth EUR 144 billion. The ESM, once ratified, stands ready to provide EUR 500 billion in fresh money which comes in addition to the existing EUR 192 billion in EFSF commitments for Greece, Ireland and Portugal. Furthermore, euro area Member States will provide EUR 182 billion in bilateral loans to the IMF to increase the Fund's general resources. Also the ECB has intervened on the secondary market for EUR 212 billion. Overall, Europe has mobilised approximately EUR 1,200 billion, which is more than USD 1,500 billion. Out of this amount, nearly USD 1,000 billion is still available for disbursement.

The cornerstone of the financial backstop however remains the EFSF and ESM. The EFSF was set up in 2010 as a temporary rescue mechanism until June 2013. It has a lending capacity of EUR 440 billion. The ESM is expected to take over the tasks of the temporary EFSF in October 2012. As with the EFSF, ESM assistance will only be granted under strict policy conditions. The ESM will have a subscribed capital of EUR 700 billion of which EUR 80 billion will be paid-in capital over a period of two years and EUR 620 billion in callable capital payable by the Member States. The lending capacity will be EUR 500 billion.

The ESFS (and ESM, once it becomes operational) can provide financial assistance within macro-economic adjustment programmes but they have also the flexibility to provide financial assistance in other ways. One example is that of precautionary credit lines. The objective of precautionary credit lines is to support sound policies and prevent crisis situations by encouraging countries to secure access to EFSF and ESM assistance before they face difficulties in the markets. This is in line with established IMF practice.

The EFSF/ESM can also lend for the purpose of recapitalising banks in non-programme countries when the root of the problem is the financial sector. Before EFSF/ESM engages in recapitalisation of financial institutions, in the first instance, shareholders of distressed banks are requested to provide additional capital. Secondly national government are expected to intervene. And only failing that would the EFSF/ESM participate. The restructuring or resolution of a distressed financial institution is a *sine qua non* condition for EFSF/ESM assistance for recapitalisation and must always be compatible with EU state aid rules.

The other new instruments, which have not been used so far, concern interventions by the EFSF and the ESM in the primary and secondary debt markets. The main objective for primary market intervention is to allow a Member State to maintain or restore its relationship with the dealer and investment community. EFSF/ESM intervention could reduce the risk of a failed auction. Through secondary market interventions, EFSF/ESM would support the functioning of debt markets and appropriate price formation in government bonds in exceptional circumstances where limited liquidity of markets threatens financial stability.

I would also like to emphasise that all new instruments are linked to appropriate conditionality. This principle of EFSF/ESM lending is independent of the used instrument, i. e. loans, precautionary credit lines, bank recapitalisation or intervention in the primary or secondary debt market.

On a positive note, it is already evident that the euro area strategy is delivering results. All Member States have clear fiscal consolidation strategies in place, which, accompanied by the measures listed above, have started to pro-

duce tangible effects. One example which can be pointed out is that the euro area's aggregate fiscal balance has been clearly improving since 2010, and is significantly better than the fiscal balance of other developed economies, such as the USA, the UK and Japan. In addition, the current account balance of the euro area's peripheral economies has been steadily improving since 2008, and the same can be said of these countries' competitiveness, measured by nominal unit labour costs.

Ladies and Gentlemen, as you can see an enormous amount has been achieved but there is still work to do. There is one important area, where further progress is required. This is the area of financial markets. Let me mention one key concern which needs to be addressed urgently.

We see a clear trend towards renationalisation of banks in Europe. With the crisis and the lack of trust, banks request a lot of liquidity from the ECB and park large amounts at the ECB every night. The interbank market does not work. Financial integration in Europe, which was one of the benefits of EMU, is being reversed. This leads to unusually low interest rates in countries like Germany and Austria whilst, at the same time, to very difficult financing conditions in Southern Europe. This is a significant extra burden for the private sector in these countries as

financing costs for SMEs and corporates are several percentage points higher than in the north. This will have negative consequences for the real economy and widen economic divergences in EMU again.

We should therefore begin the process of moving closer to a "banking union". This will take time. But, a European deposit insurance scheme, a bank resolution authority and a more centralised supervision for cross-border banks are three key elements to make EMU more complete. Moving towards a banking union would underpin a well-functioning financial sector which is a prerequisite to providing the economy with appropriate financing at sustainable costs.

To conclude: Europe has done a lot in response to the crisis. Budget deficits are reduced; current accounts are moving into surplus; competitiveness is restored. Economic governance is now greatly strengthened. With the fiscal compact, a reformed SGP, a new Imbalances Procedure, the European Semester – this is the new way of doing things in Europe in terms of co-ordination of our economic policies. A crisis resolution mechanism is in place. More needs to be done to re-integrate financial markets. This all has one single aim: creating a better functioning euro area with financial stability and growth.

Panel 1:

How to Manage Financial Crises
from a Systemic Viewpoint?

Wolfgang Duchatzek

Vice Governor
Oesterreichische Nationalbank



Introductory Remarks

Ladies and gentlemen,
When a financial crisis strikes, the public sector has to take a leading role in crisis management. If the crisis is systemic usually several countries are involved simultaneously adding on top of difficult policy choices at the national level, policy coordination problems of significant complexity. Finding the right policy mix in such a situation is a considerable challenge. Some of the key issues that are involved as well as some reasonable ways to address them is the topic of this first Panel with the title *How to Manage Financial Crisis from a Systemic Viewpoint?*

In many respects the policy responses to the recent financial crisis reflected the experience of the past. Central banks quickly helped to contain extreme liquidity stress and to stabilize financial liabilities. Accommodative fiscal policies helped to maintain aggregate demand and to counteract an extreme economic contraction. The next stage of policy responses which would in principle require the removal of insolvent financial institutions from the system and recapitalizing viable ones was followed to some degree in the major countries affected by the crisis. But how exactly resolution and balance sheet restructuring should take place and according to which schedule turned out to be controversial. Finally, the formulation and implementation of a growth strategy and a plan for operational restructuring of the financial sector to restore sound finance and improve non-performing loans turns out to be even more controversial and the debate on appropriate policies in this respect is still on-going and open.

From a systemic viewpoint, crisis management seems to be very much a matter of getting the overall policy mix and in particular the sequencing of dif-

ferent measures right. It also involves inter-temporal trade-offs. Striking the right balance between containment and restructuring remains one of the major challenges.

Looking back at the recent – and unfortunately on-going – crisis with a focus on the European Monetary Union to draw lessons, as the title of our conference suggests, is an excellent opportunity to give a balanced reflection of



how these challenges of crisis management have been addressed and what might be improved for the future. To guide us in this debate we are very lucky to welcome two distinguished international experts who have kindly agreed to share their views on this important topic with us today

Andreas Dombret is a Member of the Executive Board of the Deutsche Bundesbank. Before he joined the Executive Board of the Bundesbank, Andreas Dombret held various important positions in Finance and Banking. He was with Deutsche Bank's Head Office in Frankfurt as a manager with the power of procuration. From 1992 to 2002, he worked at JP Morgan in Frankfurt and London, from 1999 as a Managing Director. From 2002 to 2005, he was the Co-Head of Rothschild Germany located in Frankfurt and London, before serving Bank of

America as Vice Chairman for Europe and Head for Germany, Austria and Switzerland between 2005 and 2009. He was awarded an honorary professorship from the European Business School in Oestrich-Winkel in 2009. Since May 2010, he has been a member of the Executive Board of the Deutsche Bundesbank with responsibility for Financial Stability, Statistics and Risk Control. He holds a Ph. D. in business management of the Friedrich Alexander University in Erlangen Nürnberg.

Federico Sturzenegger is currently President of Banco Ciudad de Buenos Aires and Professor at the Universidad Torcuato Di Tella. He holds a Ph. D. in Economics from MIT (1991), was Assistant Professor of Economics at UCLA (1991–1995), Chief Economist

of YPF¹ (1995–1998), Dean of the Business School at Di Tella (1998–2000/2002–2005), Secretary of Economic Policy of the Republic of Argentina (2001), and Visiting Professor of Public Policy at the Kennedy School of Government, Harvard University (2005–2007). He has written or edited seven books, and has published extensively in the area of international finance and macroeconomics. His joint book with Jeromin Zettelmeyer *Debt Defaults, Lessons from a Decade of Crisis* on the Latin American Debt Crisis is particularly well known. He appears regularly in the press, and is a regular consultant of corporations and international organizations. In 2005, the World Economic Forum of Davos selected him as Young Global Leader.

¹ *Yacimientos Petrolíferos Fiscales, Sociedad Anónima* is an integrated Spanish oil and gas company with operations in 29 countries. The bulk of its assets are located in Spain and Argentina, as a result of the 1999 takeover of Argentine energy firm YPF by the Spanish conglomerate Repsol S.A. It is now the 15th largest petroleum refining company according to the Fortune Global 500 list, employing over 40,000 people worldwide.



Andreas Dombret

Member of the Executive Board
Deutsche Bundesbank



How to Manage a Financial Crisis from a Systemic Viewpoint

1 The Gordian Knot

In these times of debt crisis some observers have resorted to speaking of a “Gordian knot”, implying that “cutting the knot” would put a quick and easy end to the problem. I must admit that this viewpoint leaves me surprised and slightly worried.

It reminds me of a story by the great novelist Manès Sperber: A figure in his writings is a boy, who was asked by the teacher: “What do you know about the Gordian knot?” The boy’s answer is remarkable: “Nobody can solve the Gordian knot, including Alexander. But instead of admitting this, Alexander took the sword and cut the knot, what every stupid guy could have done. Henceforth, Alexander was called the Great.” The teacher, who apparently admired historical heroes, was not amused: “Sit down; six”, he said. Those times the marks ranged from “one” to “six”, not from “AAA” to “D”.

Another novelist, Erich Kästner, wrote in his essay *The Gordian Knot*: “If I had used my pocket knife to cut the knot of my shoestring my mother would have got angry.” “You must not cut knots”, she would have answered: “Shoestrings can be used again.” Clearly, mothers have a better idea of how to deal with knots when they arise.

In my opinion, the moral of both these stories is similar to the lesson that can be learned from the current financial and sovereign debt crisis: There is no easy way to solve the crisis without tediously disentangling the knot, whether there is a sword or not. Cutting the knot is something different from solving it. And containing the crisis is something different from solving it.

2 The Loops of the Knot: Systemic and Fundamental Elements of the Current Crisis

Only a few terms have experienced such a surge in usage in recent years as the words *systemic* and *macroprudential*. But what is the difference between a systemic and a non-systemic event?

If an event is non-systemic it can be treated in isolation. In the case of the debt crisis, the debt problems of countries can and should be treated as a series of individual problems and not as a systemic problem affecting the euro area as a whole.



Things are different in the case of a systemic event, mainly due to the effect of contagion loops between the different sovereigns, the loops between the public sector and the financial sector, the contagion loops between different financial intermediaries and ultimately the feedback loops between the financial sector and the real economy.

The degree of financial integration in the euro area is such that if some sovereigns are pushed into a bad equilibrium this affects other countries. The banking system can become fragile. What starts as a liquidity problem can easily turn into a solvency problem. Strong externalities are created, mak-

ing it impossible to isolate the problem of one country from the rest of the euro area.

At the outset, the event might have originated locally, caused by local problems, in which case it might only be possible to solve it by addressing those root problems. In the meantime, however, we have seen how local problems can turn into a systemic problem.

For example, local problems in some countries arise from a low degree of competitiveness, unsustainable fiscal positions or a combination of both. The eventual solution is a gradual and steady improvement of their competitiveness and fiscal positions. There is no substitute for such an adjustment process at the local level. In the present situation, however, we may need additional instruments, for example firewalls or recapitalization measures, to address the systemic component.

Turning to another example, the interest rates of some countries proved too low during the first decade of the euro, leading to house price booms and credit growth in those countries. These two factors have contributed to the recent crisis. Again, local problems turned into a systemic problem. Here, the solution is a balance sheet adjustment of banks and households. And again there is no getting round this tedious approach. The instruments to address the systemic component that are now available may assist this process.

At the end of last year we saw clear signs of a systemic financial crisis. The provision of liquidity for a period of three years, together with measures to strengthen fiscal discipline and to restructure Greek debts in an orderly fashion, has managed to mitigate the stress to some extent; at least for some period of time. Recently, tensions in the market have renewed due to doubts of the solidity of the fiscal positions of

some countries. Moreover, market participants have realised that the loops of the knot between the public sector and the banking system in some countries have become tighter, not looser. This emphasizes the need for fiscal consolidation that is disentangling the knot.

3 Firewalls: A “Sword” for Cutting the Knot?

This characterization of the systemic component determines the rationale for a firewall and its design. Simply by building confidence, a firewall can prevent or mitigate contagion without actually having to be triggered. If triggered, it can help to prevent a country’s liquidity problem from turning into a solvency problem. Moreover, it can buy time and serve as a tool for commitment to implement necessary reforms.

No doubt: A large and effective firewall can reduce the likelihood of being triggered. However, the major issue here is the risk arising from simultaneity of payouts. The greater the simultaneity, the less credible a firewall can be, because it cannot cover the financing needs of all countries simultaneously.

Thus, a firewall is limited by the capabilities of the individual contributors. In a crisis characterized by having a systemic component with a high degree of market integration and loops between the public sector and the banking sector the probability of coincident payouts seems to be high.

Proponents of a firewall to act as a “sword” for cutting the knot seem to ignore this fact. The challenge is considerably more complex. It requires a design that balances the confidence-building effects of an availability of sufficient funds where this is needed with the possibility that simultaneous payouts can overburden contributors.

Moreover, an appropriate design of firewalls has to take moral hazard considerations into account. In this context, moral hazard is a serious problem. As policies needed to generate a long-term solution are subject to complicated political processes, the political incentives to not follow through on those solutions can be strong. This would undermine what I consider to be the essential benefit of a credible firewall: Its potential ability to encourage prudent economic policies.

To summarize, financing by means of firewalls is no substitute for restoring solvency – or to go back to my original metaphor – it is not an effective sword for cutting the knot. This can only be achieved through economic adjustments and structural reforms, in which case a firewall may well be helpful.

4 Recapitalization: Another “Sword” for Cutting the Knot?

The loops that exist between the sovereign risks and the risks in the banking system in the current crisis make it necessary to address banking risks specifically. Capital buffers might offer an appropriate solution. The rationale for recapitalization was outlined in the Bundesbank’s most recent Financial Stability Review. I quote:

“[...], in times of systemic stress, markets cease to make broad based distinctions because [...] it is almost impossible ex ante to forecast the position of an individual bank. [...] Given the high degree of interconnectedness and the risk of contagion, this challenge demands not just an adequate capitalization of national banking systems but also convincing solutions that are coordinated across Europe.”

In principle, adequate capital buffers strengthen the resilience of the

financial sector, because they interrupt the sequential failure of institutions and mitigate contagion risks. They can reduce the procyclicality present in the system as they create room for manoeuvre before risky assets and credit supply have to be reduced in case a systemic event occurs.

In an ideal world these buffers are set up during a boom period; they are to be used when a crisis emerged, which is the idea behind countercyclical capital buffers. However, if the buffers are low relative to the risks that are building up when the event has already occurred there is the risk of excess deleveraging and procyclicality. This is where public aid comes into play. This may assist the recapitalization of the banking system thereby counterbalancing excessive deleveraging pressure.

As you know, this is the strategy followed by the European and national authorities, combined with some moral persuasion to abstain from excess deleveraging. And it looks like this strategy



is going to be successful. At least this is what the capitalization plans of banks indicate. Most of them intend to adjust their liability side to a large extent, not their asset side.

Of course, in some countries there is nevertheless some deleveraging pressure; but this is, or was, due to the refi-

nancing needs of their banks and is not caused by the recapitalization plan itself. On the contrary, if a loss in confidence is a major reason for the refinancing problems, restoring confidence through publicly assisted recapitalization might be a key tool to mitigate excess deleveraging.

Moreover, deleveraging consists of both structural and cyclical components. It cannot easily be separated into “good” deleveraging which enforces the necessary adjustment of business models and “bad” deleveraging which implies a reduction of healthy business.

Again, publicly supported recapitalization is not a sword for cutting the knot, but rather an instrument to assist necessary adjustment.



5 Disentangling the Knot: Addressing Systemic Risks by the ESRB

The discussion so far has shown that in the modern-day financial system the loops of the knot are intertwined in complex, multidimensional ways. This calls for a coherent and systematic approach to addressing the problems. Since the beginning of 2011, with the

European Systemic Risk Board (ESRB), Europe has had a new macroprudential oversight body for analyzing systemic risks with formal “warnings” and “recommendations” to be deployed as formal macroprudential instruments. The ESRB comprises all European and national supervisory authorities as well as central banks, with the latter playing a dominant role.

Given its institutional structure and the nature of its instruments, the comparative advantage of the ESRB lies not with crisis management. It lies less than ever with constructing “swords” for cutting the knot, but in crisis prevention and mitigation, that is in disentangling the knot.

At an early stage, the ESRB can identify fundamental and local factors with the potential to prepare the ground for a systemic event. It can also recommend counteractive regulatory measures. This gives it the chance to address potentially systemic risks at an early point in the cycle. Once successfully implemented it can unburden itself, for example, of its monetary or fiscal policy tasks. This allows policymakers in those areas to concentrate on their own targets, leaving it to those responsible for macroprudential oversight to safeguard financial stability.

For example, if it is the case that low interest rates lead to excessive leverage or to excessive risk-taking or to house price bubbles in some countries in a monetary union there is nothing that monetary policy can do about this. By contrast, once we have macroprudential instruments at our disposal we can use a leverage ratio or a loan to value ratio, just to mention two options. The ESRB has recognized the importance of having sufficient flexibility. In an open letter to EU authorities it states: “Macroprudential authorities at both Member State and Union level

need discretion to require additional disclosures and to tighten temporarily a diverse range of (Pillar I) calibrations.”

Establishing a macroprudential policy framework in a monetary union reminds me of a complicated balancing act. That is, first, to find the right balance between a sophisticated system which is fine-tuned to any marginal change in systemic risk and an approach based on easy-to-implement rules. The second challenge is to find enough flexibility when implementing instruments without endangering the level playing field. So far the discussion is not completed and requires also some practical experience.

6 Conclusion

So what is the moral of my speech? Clearly, I have no sword to remedy the situation. And for those who wish they had such a sword, the idea of undoing knots may sound like “muddling through”. But to my mind, this stony road of muddling through, this long-term disentangling of the knot, is vastly preferable to the alternative of cutting the knot. It means doing things the hard way and entails much future sacrifice and commitment. At the end of the day I have nothing to offer but “toil” and “sweat”.

Nevertheless, thank you very much for your attention.

Federico Sturzenegger

President
Banco Ciudad de Buenos Aires



Lessons for Europe from Argentina's Debt Crisis

The Discussion in Recent Years

This paper deals with the question of how to build a more sustainable financial architecture in the presence of sovereign debt risk.

In recent years we have discussed extensively the ways of building a more stable international financial system, as well as how to construct a larger and more stable market for sovereign debt. Among the many mechanisms that have been discussed, the one that generated most attention, about a decade ago, was Anne Krueger's SDRM (Strategic Debt Restructuring Mechanism), a framework in which countries could apply to or were going to be asked to participate in an orderly restructuring procedure similar to a typical bankruptcy procedure for a corporation.¹ At the same time, a lot of interest was also placed on the suggestion that collective action clauses (at the time common in London law bonds but not in New York law bonds) should become a standard feature in sovereign debt. Collective action clauses force a restructuring agreement for all bondholders when a minimum number of bondholders decide to accept the conditions of a restructuring proposal.

Beyond these two, other mechanisms and ideas have also been put forward in the last decade. Among them was Calvo's minimum price scheme by which the IMF, World Bank, developed countries, or developed countries central banks would guarantee a minimum price for sovereign debt in an attempt to rule out multiple equilibria which would unnecessarily increase the volatility in sovereign debt prices. The IMF

has been discussing a scheme called GSM (Global Stabilization Mechanism), a mechanism to provide liquidity to debtors in distress.² Along the same lines, the idea of having regional hubs, in which regional central banks support or help in guaranteeing the payment



structure of sovereign debt has never been abandoned. Finally and perhaps more relevant from a practical point of view, in recent years, the IMF has put forward different alternatives such as the PCL and FCL, (Precautionary Contingent Line and Flexible Contingent Line), which worked as mechanisms with clear rules of prequalification aimed at obtaining liquidity at times of distress.³

All these mechanisms have been held as financial innovations to provide a better working market in sovereign debt, yet, when the Greek restructuring finally occurred in 2012, the solution appeared to replicate a typical 1980s debt restructuring package. In the 1980s the restructuring packages were carried through the negotiation of governments with the so called Bank

¹ See Rogoff and Zettelmeyer (2002) for a comprehensive review.

² Fernandez Arias and Levy Yeyati (2010).

³ Fernandez Arias and Levy Yeyati (2010).

Advisory Committee (in the recent Greek restructuring replaced by the Troika) which typically led to the combination of a debt re-profiling together with the disbursement of fresh money, provided with the help of an outside partner, the IMF, the World Bank or the Treasury. These packages imposed adjustment programs in order that countries would put in check both their fiscal and external accounts. The implementation of the Greek restructuring was a radical change relative to the typical restructuring of the 1990s when the focus was put mostly on the debt restructuring terms on bondholders without significant conditionality being imposed (by the IMF if at all) on countries. In other words, countries proposed the package unilaterally.

Before continuing, a point, I would like to stress is that in spite of all the

with the help of, increasingly reluctantly forthcoming, programs by the IMF. The last of these provided about USD 4 billion of fresh money by September of 2001 with additional installments to be paid later on. This final package was negotiated around the time of a change of authorities at the IMF by which Stanley Fisher, deputy managing director, was turning over, after many years, to Anne Krueger. By December Anne Krueger had taken over as deputy managing director and shortly after the IMF decided not to continue with the program. At the time, Argentina had a primary surplus and a debt to GDP ratio of below 50%; and therefore it could easily be argued that with only slightly better international conditions Argentina had a macroeconomic situation that could become manageable. The country had made substantial fiscal efforts, including a nominal wage and pension cut in July. My understanding is that had Ms. Krueger gone forward with the package at the end of 2001, she would have become immediately responsible for everything that had been done before. In terms of her personal cost-benefit analysis, she had little to gain and much to lose from such decision. With the benefit of hindsight it looks natural that she would not have supported a continuation of the restructuring program at the time. We see similar situations every day today in Europe as many times a change of government is a prelude for a shift in gears.

A look backwards to what has happened with sovereign debt markets over the last ten years, shows that the SDRM never was able to take off whereas collective action clauses became a regular feature in sovereign debt markets. The other options were applied selectively with regular success.



theoretical discussion, it appears that the personal constraints and interests of policy makers are, at the end of the day, an important determinant, if not the most important one, of the solutions considered. A historical example in this regard is the case of Argentina, which in 2001 was facing a run on its debt. Myself, being a member of the government at the time, I remember the increasingly difficult situation of Argentina during 2001, which was managed

Theoretical Issues

It is interesting to review a few of the theoretical issues that are relevant when thinking about the international sovereign debt market. Among these I believe five are the main points, all of them very well known. I will then focus on the last of these, the one for which I think Argentina provides interesting lessons.

The first important issue is that of Moral Hazard: any financial architecture scheme which provides substantial relief to debtors in distress is subject to moral hazard problems. We understand by moral hazard the building of wrong incentives, which would either make the country sustain or pursue unsustainable fiscal policies, as well as create the incentive for investors not to value appropriately the risk of sovereign debt as they attach a positive probability to an outsider coming to their rescue. Moral Hazard was a very significant issue in the discussion of the international financial system in the 1990s (and later on in the run up to the Lehman's crisis).

A second issue which is important for any financial architectural scheme is the issue of limiting accessibility. How much money should be made available to any particular country at a point in time? The issue of accessibility leads us immediately to a distinction which is very easy to do in theory, but very difficult to do in practice: the distinction between facing a liquidity problem and having a solvency problem. It is well agreed by everybody that a financial international mechanism should deal with issues of liquidity but that it should not deal with issues of solvency. Solvency problems should be dealt through restructuring the debt or changing domestic economic policies. The problem is that it is very difficult to distinguish when a country is suffering a problem

of liquidity and when it is suffering a problem of solvency. Again Argentina provides an interesting example. At the time of 2001, Argentina required a 3% primary surplus to make its debt sustainable through basic rules of primary surpluses given the expected growth rate of the economy at the time. Many analysts said Argentina had a solvency problem as Argentina had never achieved a primary surplus that large. However, after debt the restructuring, the primary surplus reached 6% of GDP! Diagnosing a solvency problem is questionable, as always there is a fiscal adjustment large enough that can be implemented if there is the political will to do so. In that respect, understanding when a country is solvent is a very difficult question to answer and my understanding is that we have made not much progress in being able to sort out both situations and that this issue is still resolved on a case by case fashion each time. As an example, in the case of Europe today, many people would agree that Greece is insolvent (even after their recent debt restructuring) and that Germany is solvent. But I would guess that it is very difficult to answer this question for Italy or Spain, and even Portugal, having different analysts argue both ways.

The third issue is that of signaling. Any restructuring mechanism or global financial mechanism has the problem that countries do not want to participate in it unless it is absolutely necessary. Prior to that engaging in any such event or mechanism provides a very negative signal with immediate costs that countries try to avert. I think this was the main issue which undermined the success of the SDRM when it was proposed ten years ago.

The fourth issue, posed by Michael Dooley and colleagues is whether we do in fact need a better restructuring

mechanism than the one we have. For many analysts, it is a positive feature that debt restructurings are costly, and that in fact, it is this costliness what insures that sovereign debt can exist. According to this view a simple and costless debt restructuring could basically undermine the feasibility of sustaining the sovereign debt market all together.

In fact, it's quite striking that the debt restructurings of the 1990s were relatively successful. By successful I mean that they were able to generate substantial reductions of the debt burden and were implemented in a relatively short period of time, at least in comparison with the debt restructurings of the 1980s. Additionally, they typically created the conditions for economic growth during the aftermath of the debt restructuring. So, even from the perspective of the defaulting countries, it looks as if it needs to be discussed whether alternative mechanisms that work better are available. All this supports the view that the current scheme provides a reasonable support for international financial markets.

The final point which is the one I want to focus in this piece is the relationship between debt restructuring and the financial sector. When studying sovereign debt restructurings, there is evidence suggesting that when the debt restructuring coincides with a financial crisis, the output cost increases dramatically.⁴ Thus, I think a very important question to be made, and one that appears to be very relevant for Europe in 2012, is whether there is a way of isolating the financial sector from the debt restructuring which may occur in sovereign debt. In this respect, I think there is an interesting parallelism between the case of Argentina and that of Europe in 2012, and, particu-

larly given the success of Argentina's emergence from its own crisis, that there are useful lessons to be learnt.

Isolating the Financial Sector

To start with, we should mention the similarities between the case of Argentina and that of Mediterranean Europe. A first, evident similarity is the fact that they both have to deal with the debt crisis under a fixed exchange rate regime. In the case of Argentina it was a hard peg with the US dollar that had been in place since 1991 through the Convertibility Law. In the case of Mediterranean Europe is the participation in the European Monetary Union, which at the individual country level imposes a fixed exchange rate with other member economies. The second similarity is the exposure of the financial sector to sovereign risk. In the case of Argentina banks had about 35% of their assets invested in government bonds. With differences across countries, the situation is similar in the case of Europe.

There are also dissimilarities. In the case of Argentina, as we mentioned before, both liquidity and solvency were questioned. In the case of Europe, solvency is a problem which is restricted just to a small set of countries whereas liquidity on the other hand should or could not be an issue. This is a critical difference because in the case of Argentina, the country could not provide liquidity in US dollars, whereas in Europe the European Central Bank can provide liquidity in euros for individual countries if it decided to do so. Another dissimilarity is that the peso is not the euro. Breaking the peg with the US dollar in the end would have been a common occurrence in Argentina, the fear of which actually triggered sub-

⁴ Sturzenegger (2004).

stantial capital flight from the Argentine peso to the US dollar throughout 2001. In the case of the European economies there is no need to run away from the euro even if a new local currency were to be introduced. Current transactions are already done in the stronger currency.

On the other hand, there is a similar risk regarding what may happen with deposits in the financial sector. For example, whether they would be reconverted to the local currency or not, this risk is what is triggering a steady deposit outflow from Greek and Spanish banks.

Yet, in all events, it seems that a substantial capital flight as the one occurred in Argentina is not likely in the context of Europe.

While all these dissimilarities work in favor of concluding that there is a much more manageable situation in the case of Europe, on the other hand, the size of the financial sector is substantially larger in Europe and therefore the interrelation between sovereign debt restructuring and the health of the financial sector looks more critical.

What did Argentina do after its financial crisis and how did it deal with this relationship? In a nutshell, Argentina took a series of measures which forced the financial sector to take the losses for the sovereign debt crisis and default, but at the same time introduced mechanisms so that the losses could be absorbed over a long period of time.

The same critical question has to be made today in Europe: Who is going to pay the costs and losses imposed by the debt restructurings that may occur? Of course, part of the costs will be paid by the taxpayers, part will be paid by the multilaterals (in this case the European Union or the IMF), part will be paid by bondholders and there is a fourth

player, even though it could be considered a subset of the bondholder segment, which is how much will be paid by the financial sector. To the extent that one wants to avoid the financial sector from paying or assuming any of the losses of the debt restructuring, that would either overburden the budget (as the Irish case shows) or affect the depositor if bank deposits also suf-



fer a haircut (Argentina tried this option several times as well).

So, to the extent that the answer is that the financial sector should pay at least a part of the costs, the question is how to make the financial sector pay its share without having a financial crash. I believe that the key to solving this dilemma is allowing the financial sector sufficient time for recapitalization. In this way, the financial sector pays the burden from its own income, but only as this income is generated. There is some justice in this solution as it was the financial institutions themselves which decided to own this government debt.

Going back to the case of Argentina, a series of measures were taken to deal with the exposure of financial in-

stitutions to sovereign debt. To start with, their exposure to sovereign risk was limited going forward. This was done by not allowing banks to have more than 30% of their assets applied to sovereign debt, this including sovereign debt from all levels of government. At the same time there was a second cap of 75% of net worth of exposure, and the one which applied was the most stringent of the two. Of the latter, national government debt was capped at 50% of net worth, any individual state debt at 10% and municipal debt at 3% of net worth. If a financial institution was going to lend to a state or a city, it would have to ask this state or this city to pledge federal tax collections transfers (in Argentina, part of the income of states and provinces is obtained in a tax sharing agreement with the National Government), as a guarantee for the loan. In addition, any



authorization of public sector lending by any bank had to be authorized by the central bank and the Ministry of Finance. I find that this is an interesting procedure because it would be easily replicable in the case of Europe if there was a European Commission which from here onwards supervised or authorized any lending by financial institution to a sovereign. The benefit of this measure is that the depositors

would be reassured that the risk of the financial sectors exposure to sovereign debt would be minimized and would be returned to reasonable levels over time, without imposing a big adjustment in the short run. In the case of Argentina, banks that were above this target were given a waiver at the time when the measure was implemented, but which was implemented together with the prohibition of further lending until they would get back within the authorized limits.

Additionally, Argentina temporarily reduced capital requirements from 11% to 8%, and liquidity requirements were also decreased by allowing that cash and money in transit would be included towards fulfilling the mandatory liquidity requirements. This way, the credit contraction that the country experienced at the time of the crisis was somehow eased through these mechanisms.

Finally the accounting procedures for valuing public bonds were changed. The central bank established a theoretical price which banks could use in their accounting of sovereign debt even under the knowledge that the market value of the bonds was much lower. The reason for allowing this was to allow the banks to show positive net worth allowing time until they could get accounting and market prices back in line. The authorities believed that had the whole financial sector would have ended with negative net worth; this would have triggered a deeper financial crisis and a deeper run on deposits. In fact, over time these numbers converged.

Of course all this accounting forbearance and the other measures were combined with a feature, which I think was critical: banks were not allowed to distribute dividends until their accounting was fully back to normal. In all, these measures eased the

availability of funds to the bank and allowed them to show more reasonable net worth, but at the same time imposed on them that they should retain dividends until the situation would normalize itself.

How to Do a Debt Restructuring

Another important lesson to be made, particularly when discussing the accounting procedures for valuing bonds, relates to the way the debt restructurings are implemented. If we look at table 1, we will see a series of results taken from a series of works done with Jeromin Zettelmeyer⁵ on the debt restructuring.

The table shows two columns. The first one has the market haircut of the main episodes of debt default, starting with the Russian default in 1998 and going all the way to the Uruguayan restructuring of 2003. The market haircut is computed by taking the stream of payments of the original debt and comparing them to the stream of payments of the restructured debt, both valued at the post restructuring discount rate. The difference between the two net present values provides a measure of how much bondholders lost as a result of the debt restructuring in its immediate aftermath. We can see that the number varies significantly from Argentina’s external debt restructuring of 73% to 13% in the case of the Uruguayan external debt restructuring. I would say that a number of 30% is a common occurrence in terms of haircuts.

The second column, entitled debt relief, shows a different computation. Here, the computation does not use as discount rate the spreads prevailing in the immediate aftermath of the debt restructuring, but a theoretical dis-

Table 1

Haircuts		
	Market Haircut	Debt Relief
	%	
Russia GKO, residents	46.7	31.8
Russia GKO, nonresidents	60.0	47.9
Russia Minfin	63.2	40.0
Russia Prins/lans	52.6	33.2
Ukraine OVDP, nonresidents	56.4	43.3
Ukraine Chase Loan	30.7	15.8
Ukraine ING Loan	38.0	4.8
Ukraine External	28.9	10.2
Pakistan Eurobond	31.0	11.2
Ecuador External	28.6	24.8
Argentina Phase I	40.5	30.8
Argentina External	73.0	70.9
Uruguay External	13.4	−5.3
Uruguay Domestic	22.3	0.0

Source: IMF.

count rate which relates to the fundamentals of the country. Using a very simple model which relates the cost of debt to some basic fundamentals, we value debt at that so called “steady state” discount rate. Again, the Uruguayan external restructuring provides an interesting case because we see a negative number in terms of debt relief. What does this negative (−5.3%) value mean? What it means is that the new instrument that was issued by Uruguay carried an interest rate which was higher than the steady state interest rate, though it was lower than the crisis rate prevailing immediately after the exchange. Thus, while in a market haircut we observe a loss of a 13%, when we value the instrument at the steady state rate, interestingly, we have a gain of 5%. In other words, a maturity extension that has been achieved at a relatively high interest rate is the reason for this negative debt relief. One could conclude that for a bank or investor

⁵ Sturzenegger and Zettelmeyer (2007a) and Sturzenegger and Zettelmeyer (2007b).

with sufficient patience to wait for this steady state to materialize, she would have ended with an instrument which was better, because it carried a convenient interest for a longer period of time than the instrument one started with. In the case of Argentina, it is interesting to notice that the market haircut and the debt relief numbers are very similar, 73% and 71%. The reason for this is that a big chunk of the restructuring was done through a haircut in the nominal value of its debt. It cannot be any other way, if you cut the nominal value of this debt, there is no difference between the two numbers. The difference emerges when you actually implement the debt restructuring with a maturity extension with lower interest rates.

The lesson of this table is that when implementing a debt restructuring, it is much more difficult to provide accounting forbearance for the financial sector if you do it through a debt restructuring which imposes a very strong nominal haircut. Alternatively, providing a debt restructuring through a maturity extension at a relatively low interest rate would easily allow the banks, or the financial supervisory committees, to allow the banks to value at least transitorily the debt above its market value, or to discount the value of the debt at a more reasonable interest rate and therefore not force substantial losses on the financial sector in the short run. By the way, this is the way the European Central Bank itself measures and values, for example, Greek debt in its balance sheet, but not the way the Greek restructuring was implemented.

Conclusions

The conclusions are that we should not overburden the financial sector with capital requirements at time of stress in order to provide reassuring signals of the solvency of the system. If a sovereign debt restructuring is necessary, it appears that there are benefits to do it not through a nominal haircut but through the extension of maturity below market rates (countries would oppose such measures because it does not allow them to show immediate reduction in its debt to GDP ratios). This mechanism for restructuring should be complemented with accounting forbearance to improve the value in the balance sheet of the banks. Finally, lending by financial sectors to sovereigns should be authorized only by an European supervisory committee; a measure that I think is perfectly feasible in the current context in Europe. A key feature is that this helping hand to the financial sector must be combined with a dividend policy that should be restricted until solvency of the financial sector is guaranteed and accounting forbearance eliminated.

In all, these are a combination of measures that provide a better time frame for the financial sector to absorb the losses of the debt crisis in Europe. In the end, it is just a question of time, and the objective is to provide the financial sector with sufficient time so that it can actually absorb the losses, of which they have responsibility for having taken the burden and by having purchased such large holdings of sovereign debt.

In the end, I think these lessons from Argentina are useful to reduce the cost in Europe of a debt restructuring event, by focusing on the issue of the relation between the financial sector and its exposure to sovereign debt.

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Klaus Liebscher Award



Klaus Liebscher Award for Scientific Work on European Monetary Union and Integraton Issues by Young Economists

Ladies and Gentlemen,
Today it is the 8th time that we give the Klaus Liebscher Award to a young researcher in economics. As in all the previous years it has been an extraordinarily difficult task for the jury to select among a large number of excellent submissions the winning paper of this year.

On the occasion of the 65th birthday of Klaus Liebscher, former Governor of (OeNB) the Oesterreichische Nationalbank, the bank in 2005 established the *Klaus Liebscher Award*. We did so in recognition of his unrelenting commitment to the cause of European integration and Austria's participation in European Economic and Monetary Union. This award is the highest scientific distinction, the OeNB offers. It is granted every year for up to two excellent papers on European Economic and Monetary Union and European integration issues. Young economists, up to 35 years from EU member and EU candidate countries are eligible. The award is worth EUR 10,000. The papers are refereed by a panel of highly qualified reviewers.

This year, the Klaus Liebscher Award is granted for the eighth time. The OeNB, in response to its integration into the ESCB, very much increased its research activities and research capabilities. Meanwhile, academic publications and the contributions to the system have been substantial. The efforts to increase the economics and research output certainly also reflect the fact that we now operate in a very different environment, where the role of research for modern central banking has become much more important. The OeNB's support for economic research is visible in numerous activities, like for example the Klaus Liebscher Award, which we

give today to an outstanding young researcher. The support of research and the exchange with other researchers in economics is an important investment of OeNB in its economic expertise.



The winning paper of this year is by a young economist: *Harald Oberhofer* from the University of Salzburg. His paper has the title: "Firm Growth, European Industry Dynamics and Domestic Business Cycles".

Harald Oberhofer is an Assistant Professor of Economics at the Department of Economics and Social Sciences at the University of Salzburg. He is a research affiliate at the Austrian Center for Labor Economics and the Analysis of the Welfare State, funded by Austrian Science Funds (FWF). He is a member of the Salzburg Center of European Union Studies. He consulted the World Bank in 2011 and is currently also a short term consultant to the OECD. Harald Oberhofer holds a Ph. D. in economics from the University of Innsbruck. His main research interests are economics of multinational enterprises, international economics, empirical industrial organization, applied econometrics and empirical political economy.

Panel 2:

Debt Restructuring and Contagion:
Balancing Risks and Benefits

Martin Summer

Head of Division
Oesterreichische Nationalbank



Introductory Remarks

At some stage in a debt crisis, the discussion will focus on the question whether and how private creditors should be involved in a process of debt restructuring. This debate has dominated the discussion on how to deal with Greek sovereign debt for months.

Much of these debates always centre on the issue whether the restructuring of the debt of one country – or in the case of private debt of some systemically important financial institution – will spark a wider wave of contagion.

The first link in the chain of contagion is always the banking system. However, assessing the risk that contagion can occur is not an easy task. It also depends on the exact form a restructuring will take and involves many complicated economic and legal details.

Furthermore, the issues are not settled by trading off the benefits of restructuring against potential risks of contagion. There is always a difficult intertemporal trade-off involved as well. Should the costs of a crisis be incurred now rather than later? But even here the shifting of burdens across time is more intricate than it seems, because the costs and benefits traded off against each other are not independent of the way the trade-off is made. Some costs that might look reasonable today may become unbearable by postponing decisions to write down assets and restructuring liabilities for too long.

Fortunately, we have today two renowned experts on banking and finance with us. Both of them kindly agreed to come to Vienna to share with us their views on this important topic in this second panel of today

Thorsten Beck is full professor of economics at Tilburg University and also chairman of the board of the European Banking Center. Thorsten Beck has joined Tilburg University in August 2008. Previously, he was a senior econ-

omist in the research department of the World Bank. His research, academic publications and operational work have focused on two major questions: What is the relationship between finance and economic development? What policies are needed to build a sound and effective financial system? Recently, he has concentrated on access to financial services, including small and medium sized enterprise (SME) finance, as well



as in incentive-compatible design of financial safety nets. His country experience, both in operational and research work, includes Bangladesh, Bolivia, Brazil, China, Mexico, Russia and several countries in Sub-Saharan Africa. He holds a Ph. D. from the University of Virginia and an MA from the University of Tübingen in Germany.

Loriana Pellizon is an associate professor of economics at the University of Venice. Her research focus is in financial economics covering risk management and capital requirements, credit derivatives, credit risk, systemic risk, financial crisis and contagion, asset allocation and portfolio selection, household portfolios, mutual fund performance, hedge funds, and corporate governance. Loriana Pellizon is a graduate from the University of Venice and holds a Ph. D. in finance from London Business School.

Thorsten Beck

Professor

Tilburg University and CEPR



Banking in Europe: Disentangling a Twin Crisis

The on-going sovereign debt crisis in Europe continues to put strains on banks' balance sheets but also the Single European Market in banking. Rather than disentangling the sovereign debt and bank crises, recent policy decisions have tied the two even closer together. The use of the additional liquidity provided by the ECB through longer-term refinancing operations (LTRO) by some banks to stock up on government bonds has tied the fate of sovereigns and banks even closer together. And while first steps have been taken to address (i) sovereign insolvency of some periphery countries and (ii) the risk of sovereign illiquidity turning into a self-fulfilling solvency crisis in some other countries, there are still no proper mechanisms in place to address either. This paper discusses the critical role of the European banking system and its regulation in this crisis. I argue that without disentangling bank and sovereign debt fragility, the euro area will not get out of the current crisis. Similarly, the euro area can only become a sustainable currency union if the regulatory dichotomy between macro and financial stability is overcome and an effective European financial safety net is created.

The current euro area crisis is a child of the 2007/8 Global Financial Crisis and the failure of European policy makers to respond to the crisis by building the appropriate frameworks and institutions. It has made obvious the trilemma of the European Banking Market, i.e. the impossibility to maintain financial stability with cross-border banking and national regulation. It has also shown that the home bias in government security holdings ties banks and sovereign closer together and can result in negative feedback loops. In summary, not having addressed the underlying weaknesses of banks and the institutional frameworks

to deal with bank and sovereign fragility has exacerbated the crisis and made a rapid exit all but impossible. In turn, it points to reforms in bank regulation and resolution frameworks as a critical entry point to solve the current crisis.

This paper first discusses the trends towards cross-border banking in the early 21st century and how they interacted with other trends in the financial system to form the financial system as we observed it in 2007 before the outbreak of the Global Financial Crisis and what benefits and risks this has brought for Europe and the euro area. I then turn to the implications of cross-border banking for the stability framework and



argue that monetary and financial stability can no longer be targeted separately, but have to be approached in a joint framework. Finally, I address the short-term needs during the current crisis, which involve cutting the unhealthy link between sovereign and banks, especially in periphery countries, to help address the fragility on both sides.

Before moving on, let me note that a large part of the analysis in this paper is based on a CEPR policy report that I co-authored with *Franklin Allen, Elena Carletti, Philip Lane, Dirk Schoenmaker* and *Wolf Wagner*. While we finalized

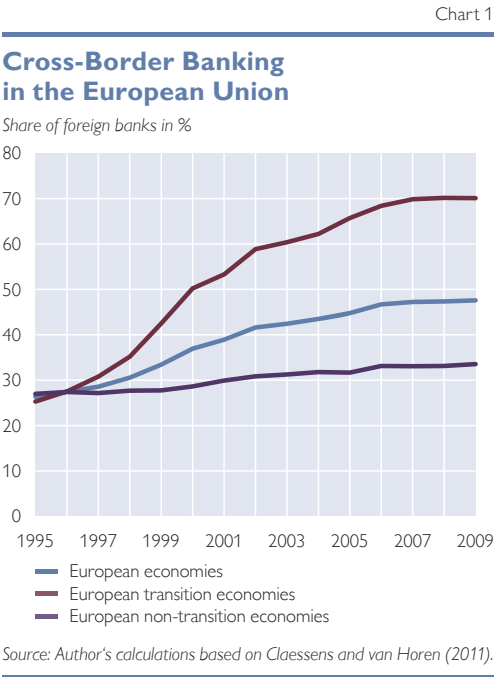
this report in April 2011, the orderly default by Greece and the continuous doubts on debt sustainability of Ireland and Portugal and, more recently, Spain, and concerns on some other peripheral states have reinforced the messages in this report. The on-going crisis has also reinforced regulatory instincts to focus on national interests and stakeholders when it comes to cross-border banking, which makes exit from the crisis even more difficult.

How Did We Get Here?

The monetary union was supposed to be the crowning element for a single economic area in Europe, eliminating exchange rate uncertainty and thus further boosting economic exchange across borders and free flows of capital and labor. At the same time, a regulatory framework for cross-border banking within Europe was established, in the form of several European Banking Directives, with the objective of creating a single market in banking. The introduction of the euro in 1999 eliminated currency risk and provided a further push for financial integration (Kalemli-Ozcan, Papaioannou, and Peydró, 2010). Chart 1 illustrates this trend towards increasing importance of cross-border banks across European financial systems. This trend towards cross-border banking can also be seen in an increasing share of cross-border merger and acquisitions in total merger and acquisitions, as documented by Buch and DeLong (2010). Finally, this trend towards cross-border banking can also be illustrated for individual banks in Europe. The percentage of foreign assets in total assets is 82% for Deutsche Bank, 64% for Santander, 62% for UniCredit, 41% for BNP Paribas and 29% for Societe Generale (Allen et al., 2011). And the trends towards globalization went hand in hand

with a trend towards consolidation, with the result that the largest banking groups controlled more than 16% of global banking assets in 2008, more than double their market share in 1998 (Claessens et al., 2010). Globalization and consolidation were accompanied by several other important trends in the financial system, including a trend towards less safe assets on banks' balance sheets, partly driven by the low interest rate environment and consequent search for yield, and a move away from high-cost but stable retail funding towards lower-cost but more volatile wholesale funding. All of these trends were the backdrop on which the subprime mortgage crisis in the USA hit the global financial system in 2007.

When the 2007 crisis erupted in the U.S., cross-border banks were an important transmission channel. In a financially integrated world, where large shares of assets are traded on international markets and with high amounts of inter-bank claims across borders, the contagion effects were pronounced and immediate, going



through direct cross-border lending, local lending by subsidiaries of large multinational banks and lower access of local banks to international financing sources.

The Global Financial Crisis of 2007/8 saw a striking asymmetry between the reactions by monetary and by regulatory authorities. The shock that the Lehman Brothers failure in September 2008 caused on global financial markets is illustrative for this. While central banks coordinated well to address the liquidity crisis in the international financial markets, regulators did not coordinate well when it came to dealing with failing cross-border financial institutions, as became obvious in the cases of the Benelux bank Fortis and the Icelandic banks. In the case of Fortis, in spite of MoUs and close cooperation of supervisors, resolution of the bank had to be nationalized, i.e. the bank had to be split up along national borders, and ultimately the three pieces had to be nationalized. In the case of the Icelandic banks, default led to an uneven treatment of national and international creditors and a political crisis within Iceland and between Iceland and several other European countries. Over time, coordination improved, as most obvious from the Vienna initiative, where coordination between international financial institutions, regulators and banks led to several cross-border banks making specific rollover and recapitalization commitments vis-à-vis their subsidiaries in Central and Eastern Europe (De Haas et al., 2012). However, as I discuss below, these attempts at coordination are still mostly ad-hoc rather than based on a robust institutional framework.

The Benefits and Risks of Cross-Border Banking

The benefits and risks of cross-border banking have been extensively analyzed and discussed by researchers and policy makers alike. Cross-border banking can bring competition and higher efficiency into host countries, thus helping to deepen and broaden financial sys-



tems as seen most prominently in Central and Eastern Europe during the late 1990s and early 2000s. The main stability benefits stem from diversification gains; in spite of the Spanish housing crisis, Spain's large banks remain relatively solid, given the profitability of their Latin American subsidiaries. Similarly, foreign banks can help reduce funding risks for domestic firms if domestic banks run into problems. However, there are also significant costs of cross-border banking, though they do not necessarily materialize at the same time as the benefits. Foreign capital is likely to be more mobile than domestic capital and in a crisis situation, foreign banks may simply decide to "cut and run". As seen in Central and Eastern Europe, there is a regulatory and political bias to force large cross-border banks to withdraw from host economies and focus on home markets. There is also the risk of contagion: in the same way as cross-border banking insulates

the domestic economy from domestic shocks, it also exposes it to foreign shocks (Degryse, Elahi and Penas, 2010). As became obvious in the recent crisis, the formation of cross-border banks has also increased the complexity, the interconnectedness and the size of institutions and their failure may thus impose significantly higher costs on economies than the failure of a purely domestic bank.

The costs of cross-border banking might outweigh the diversification benefits if outward or inward bank investment is too concentrated. Several Central and Eastern European countries are highly dependent on a few West European banks, and the Nordic and Baltic region are relatively interwoven without much diversifi-



cation. At the system-level, the EU is poorly diversified and is overexposed to the United States, which explains why it was harder hit by the Global Financial Crisis than other regions of the world (Schoenmaker and Wagner, 2011). While regulatory interventions into the structure of cross-border banking would be difficult if not counter-productive, a careful

monitoring of these imbalances is called for.

Beyond the geographic diversification of bank flows, there is an obvious need to focus on specific financial institutions. The crisis of 2008 has clearly shown the deficiencies of both national, but especially of cross-border bank resolution frameworks. Most European countries did not have the necessary tools to deal with failing banks beyond forcing them into regular liquidation processes – with all the negative contagion and spill-over risks this has for the rest of the financial system and the negative repercussions for the economy at large – or bailing them out with taxpayers having to bear the consequences of private risk decisions and thus creating moral hazard risk. While these external costs of bank failure call for specific bank resolution frameworks on the national level to minimize the external costs of bank failure and moral hazard risks at the same time, there are additional frictions and externalities that call for a special focus of regulators on cross-border banks. First, cross-border banking increases the similarities of banks in different countries and raises their interconnectedness, which, in turn, can increase the risk of systemic failures even though individual bank failures become less likely due to diversification benefits (e.g., Wagner, 2010). Second, national supervision of cross-border banks give rise to distortions as shown by Beck, Todorov and Wagner (2012). The home-country regulator will be more reluctant to intervene in a cross-border bank the higher the share of foreign deposits and assets and more likely to intervene the higher the share of foreign equity. The reason for this is that a higher asset and deposit share outside the area of supervisory responsibility externalises part of the failure costs, while a higher share

of foreign equity reduces the incentives to allow the bank to continue, as the benefits are reaped outside the area of supervisory responsibility. This bias became obvious during the 2007/08 crisis, when banks with a higher share of foreign ownership were intervened at an earlier point of fragility, while banks with a higher share of foreign assets and deposits were intervened at a later point (Beck, Todorov and Wagner, 2012).

In the wake of the crisis, attempts have been made to address these gaps in resolution frameworks, both on the national but also on the European level. Following the de Larosière (2009) report, the European Banking Authority (EBA) was established to more intensively coordinate micro-prudential issues, while the European Systemic Risk Board (ESRB) is in charge of addressing macro-prudential issues. Further reaching reform suggestions, such as creating a European-level supervisor with intervention powers or a European deposit insurance fund with resolution powers modeled after the U.S. FDIC (Federal Deposit Insurance Corporation or the Canadian CDIC (Canada Deposit Insurance Corporation), however, were rejected, mostly based on arguments of the principle of subsidiarity, national sovereignty over taxpayers' money that might be needed for resolution of large cross-border banks and the need to amend European treaties.

Given the biased incentives of national regulators discussed above, however, there is a strong case for a Pan-European regulator with the necessary supervisory powers and resources. While different institutional solutions are possible, a European-level framework for deposit insurance and bank resolution is critical in order to enable swift and effective intervention into failing cross-border banks, reduce uncertainty and strengthen market disci-

pline. Depending on the choice of resolution authority (supervisor or central bank), the new European Banking Authority (EBA) or the European Central Bank (ECB) can be given this central power in the college of resolution authorities. In addition, resolution and recovery plans, also known as living wills, for cross-border banks should be developed to allow for an orderly winding down of (parts of) a large systemic financial institution. As large financial institutions have multiple legal entities, interconnected through intercompany loans, it is most cost effective to resolve a failing bank at the group level. This can imply a split-up of the group, sale of parts to other financial institutions and liquidation of other parts. In this context, *ex ante* burden-sharing arrangements should be agreed upon to overcome coordination failure between governments in the moment of failure and ineffective *ad hoc* solutions. By agreeing *ex ante* on a burden-sharing key, authorities are faced only with the decision to intervene or not. In that way, authorities can reach the first-best solution in a swift way. It also helps overcome the time inconsistency problem of bank resolution, where the optimal solutions *ex-ante* and *ex-post* vary, which creates moral hazard risks. While burden-sharing should be applied at the global level, it can only be enforced with a proper legal basis. That can be provided at the EU level, or at the regional level. A first example, albeit legally non-binding, is the Nordic Baltic scheme.

Critically, such a cross-border supervisory and resolution authority needs the necessary resources to resolve large cross-border banks in an efficient manner. That is why a combination of the resolution authority with a deposit insurance scheme for cross-border banks might be necessary. In-

industry-based funding for such a scheme is also called for to reduce concerns of moral hazard, where the downside risk of banks' risk-taking is borne by taxpayers. Since deposit insurance, even if financed by banks themselves, always faces limitations in case of systemic bank failure, however, a back-stop by national governments, possibly through a European institution, such as the EFSF, is necessary.

Linking Financial and Macro-Stability

The euro area crisis is as much a joint sovereign debt and banking crisis as it is a crisis of governance. Large imbalances have built up since the introduction of the euro, driven partly by divergent real exchange rates, non-synchronized business cycles, and capital flows attracted by housing bubbles. As pointed out by many commentators, however, the aggregate fiscal position of the euro zone is stronger than that of the UK, the USA or Japan. Take for example the fiscal deficit, which is predicted to reach 3.4% in 2012 in the euro area, compared to 7.6% in the USA, 7.7% in the UK and 8.0% in Japan. Similarly, the euro area as aggregate runs a current account surplus, unlike the USA and the UK. However, behind this relatively favorable aggregate picture lies a large variation within the euro area and the necessary institutions to address these internal macroeconomic imbalances are missing. While this holds true for many policy areas, most prominently fiscal policy, this has become especially clear in the area of cross-border banking.

The crisis has raised fundamental questions on the interaction of monetary and financial stability. While the inflation-targeting paradigm treated monetary and financial stability as separate goals, with monetary policy aim-

ing at monetary stability and micro-prudential policy aiming at financial stability, the crisis has questioned this approach fundamentally. Inflation targeting was also behind the original Growth and Stability Pact in the Maastricht Treaty and is also the background for the recent Fiscal Compact. This ignores, however, the close interaction between banking and official sector, including through banks holding governments bonds, and the effects of asset and credit bubbles. Both Spain and Ireland fulfilled the Maastricht criteria going into the crisis, but experienced real estate boom and bust cycles, with losses ending up on governments' books, both directly through bank failures as indirectly through recessions driving up deficit and debt to GDP ratios. Similarly, banks' lending retrenchment following the 2007/8 crisis has a negative impact on the private sector and ultimately GDP, which in turn reduces tax revenues, drives up government debt, which ultimately puts banks' balance sheets under pressure, which are full of government bonds. This situation is exacerbated by the home bias in sovereign debt holding, documented by Acharya, Drechsler and Schnabl (2012). In 2010, more than 60% of sovereign bond holdings by Irish, Italian, Portuguese and Spanish banks were domestic government bonds, with this ratio reaching almost 90% in Greece.

The close link between financial and monetary stability requires a new framework for macroeconomic stability, including the use of macro-prudential regulation as additional policy tool beyond micro-prudential regulation. While monetary policy should take into account asset and not only consumer price inflation, one tool is simply not enough to achieve both goals, especially not in a currency union, where asset price cy-

cles are not completely synchronized across countries. Macro-prudential regulation cannot only serve to counter the risk of asset price bubbles, but also mitigate risks stemming from asset concentration and herding behavior. Such regulation would have to be applied on the national, but monitored on the European level. While the experience with such macro-prudential regulation has not been completely satisfactory, as for example in Spain, this does not take away the argument for it, but rather calls for further strengthening.

Another important issue is the close link between sovereign debt and banking crises in the euro area. With banks holding a large share of government bonds (and these bonds constituting a large share of banks' assets), a sovereign debt restructuring as just happened in Greece leaves banks undercapitalized if not insolvent. In times of crisis, incentives to hold government bonds (still considered risk-free thus with no capital charges) increase as the risk profile of real sector claims increases (a trend exacerbated by Basel II, as pointed out by many observers, e.g. Repullo and Suarez, 2012). The government debt overhang in many industrialized countries also creates a political bias towards financial repression to reduce the costs of government debt, with further pressure for financial institutions to hold domestic government debt (Kirkegaard and Reinhart, 2012). This close interaction between banks and sovereigns also influences policy stances, such as that of the ECB until late last year when it opposed even any talk about Greek sovereign debt restructuring as this would prevent it from accepting Greek sovereign debt as collateral for banks, even at the time when it was obvious for all observers that debt restructuring would be all but inevitable.

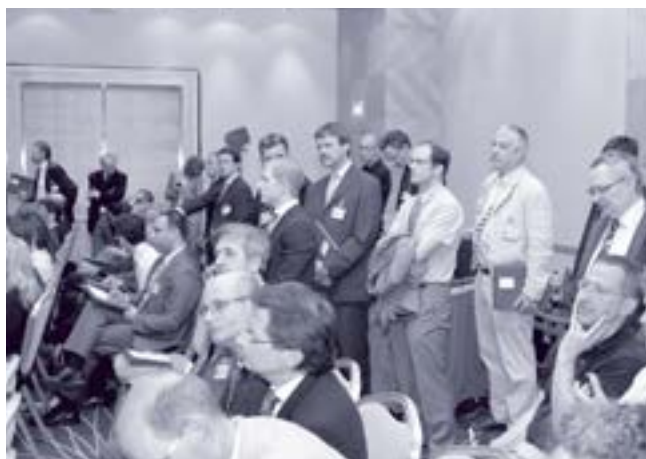
Several adjustments are therefore needed in the area of sovereign debt, as outlined in more detail in Allen et al. (2011). First of all, government debt should not, per se, be considered risk-free, but incur capital charges according to its risk profile. Second and as consequence of the first, asset concentration ratios should take into account the home bias in government bond holdings and impose diversification requirements. Third, a formal insolvency procedure for sovereign debt is needed within the European Union,



which would limit not only the need for bailouts but also reduce uncertainty and moral hazard risks. One way that such a mechanism could work is for the country to declare it cannot fully meet its debt obligations, to be verified by a team from the IMF, ECB and the European Commission, which would then assist in designing the optimal repayment plan. In addition to such an insolvency procedure and orthogonal to the current debate on Eurobonds, a closer coordination of fiscal policy is necessary, not just to avoid individual countries endangering the currency union with unsustainable fiscal policies, but to avoid procyclicality of fiscal policy as currently to be observed.

Long-Term Reforms, But Short-Term Needs

While the institutional reforms outlined above are necessary for the long-term sustainability of the euro area and a Single European Market in Banking, the euro area is facing immediate needs in fighting the ongoing crisis. There is still a significant capital shortfall in many European banks, not yet fully recognized. The leverage of European banks is almost twice that of U.S. banks; as reported by Feyen, Kibuuka and Ötcher-Robe (2012), the asset-equity ratio is 18 to 20 in European banks compared to 10 in the USA. While more recent official stress tests have finally started including sovereign defaults into their scenarios, official calculations, such as the EUR 106 billion announced in October 2012, are intended simply in bringing the necessary capital



to the minimum ratio. Acharya, Schoenmaker and Steffens (2011), on the other hand, calculate a recapitalization need of EUR 200 to 500 billion. The increasing weight of sovereign debt on banks' balance sheets weighs down banks, especially in the periphery. The example of Greece that had to bail out its banks at the same time as it required a bailout for sovereign debt restructur-

ing is illustrative in this context. The close link between banks and sovereign in the periphery countries leads to negative feed-back loops increasing fragility for both, as already discussed above and requires urgent policy action. This close tie also exacerbates the negative impact of fiscal austerity measures on the private sector by increasing the multiplier effect.

While the LTRO started in late 2011 might have succeeded in satisfying immediate liquidity needs of many banks in the euro area, it does not constitute a sustainable solution to the undercapitalization of many banks and might even create new risks. If this additional liquidity is used for private sector lending, this could reduce the impact of fiscal austerity in the periphery countries, while it could also lead to increased risk-taking by banks, given the low interest rates and high leverage of banks (Ongena and Peydro, 2011 and papers cited therein). If on the other hand, banks use the additional cheap liquidity for a carry or "Sarkozy trade"¹ into higher-yield government bonds, this would further strengthen the links between sovereign and bank fragility. The idea that such a carry trade might actually increase profits and ultimately capital buffers of weak bank is a rather high-risk undertaking. In addition, the decentralization of the collateralization process from the ECB down to national central banks, while politically maybe a smart measure, might create a further home bias on banks' balance sheet throughout the euro area. The LTRO is thus at best a second-best, but definitely sub-optimal response by the ECB to both bank and sovereign debt crises. However, rather than tying banks and sovereigns closer together, what is needed is to disentangle the two.

¹ Named so after the then French president who suggested exactly this bank behavior.

One possibility to separate sovereign debt and banking crises was suggested by Beck, Uhlig and Wagner (2011) and Brunnermeier et al. (2011). Beck et al. suggest creating a European debt mutual fund, which holds a mixture of the debt of euro area members (for example, in proportion to their GDP). This fund then issues tradable securities whose payoffs are the joint payoffs of the bonds in its portfolio. If one member country defaults or re-schedules its debt, this will likewise affect the payoff of these synthetic euro bonds, but in proportion of the overall share in its portfolio. As the share of most periphery countries, including Ireland and Portugal, would be small, a default of one country would not pose a significant risk to the Eurobond. Brunnermeier et al. (2011) suggest a similar structure, though with two tranches of senior and junior debt, with only senior debt being used for banks' refinancing operations with the ECB. The ECB would then use only the new synthetic Eurobonds or European Safe Bonds (ESBies) as collateral in their open market and repurchase operations. This would create a large pool of a new reasonably safe and very liquid asset, that can serve as investment vehicle for global investors and collateral for European banks in their operations with the ECB. It is important to stress that these are not Eurobonds as currently discussed, as they do not imply European mutualization of sovereign debt and are thus also not subject to the criticisms of moral hazard risk and taxation without representation.

Obviously, such a synthetic Eurobond or ESBie would only help separate the two crises, but would not solve either of them. To get these Eurobonds started, European banks would sell their current sovereign debt to the European debt mutual fund and receive

synthetic Eurobonds in return, which would make the undercapitalization of many banks transparent as they must realize the losses of peripheral government bonds still held in their books. In the case of banking distress, a proper resolution framework is therefore needed, as discussed above. In the case of sovereign debt crisis, a formal insolvency procedure should be put in place, while at the same time a better firewall is needed to prevent a liquidity crisis in sovereign bonds to turn into a self-fulfilling solvency crisis. Critically, such a construction would benefit the ECB as it no longer faces pressure to purchase bonds from high risk countries and would thus allow a clearer separation of fiscal and monetary policy.

Another immediate concern (which might become more transparent with the above suggestion) is the large undercapitalization of banks, a concern especially in countries with weak fiscal positions, such as Spain. Given the limited resources available for the recapitalization of banks in these countries and in order to turn these banks from being a drag on governments' budgets into growth engines, recapitalization with European resources (such as the EFSF) should be considered. At the same time, the necessary restructuring of banking systems – as currently under way in the Spanish *caja* market segment – has to be reinforced. Clear recognition of losses and avoidance of any ever-greening of non-performing loans can help avoid a prolonged banking and economic crisis as in Japan in the 1990s. It is important that the current recapitalization of banks in Europe is not be done in the form of balance sheet retrenchment or reallocation, but rather in the form of true additional capital to support the private sector in their way out of the crisis. A growth strategy for the euro area has to focus

on a sound and effective financial system to support private sector growth and counter the effects of the necessary fiscal retrenchment.

Looking beyond Policy to Politics

Beyond the lack of proper policy tools and mechanisms, the euro area faces a deeper crisis, that of a democratic deficit for the necessary reforms to make this monetary union sustainable in the long-run. Political resistance in both core and periphery countries against austerity and bailouts illustrate this democratic deficit, which can also be described as “taxation without representation”. In the long-term, the euro area can only survive with the necessary high-level political reforms that return the democratic underpinning to the European project. It is in the context of such a political transformation and integration of the euro area that many of the reforms outlined in this paper will be significantly easier to implement, as for example suggested by Goodhart and Schoenmaker (2011). Some observers have compared the problems of the euro area with the long and painful process that the USA has gone through on its way to an economic union (Aizenman, 2012). Unlike the USA of the 19th and most of the 20th century, however, the euro area has much closer interconnectedness especially in the financial sector. In addition, European political culture of the 21st century is much less willing to allow market forces to determine events.

Outside observers often note a “we are different” approach of European policy makers to the crisis, similarly to the oft-heard “this time is different”. There is a lot to be learnt by European authorities from emerging market crises of the past 20 years, including in terms of resolution of systemic banking crises. Yes, European financial systems

might be – in the aggregate – in a stronger position than many emerging markets during their respective crises periods. On the other hand, Europe’s policy makers are much more constrained in their crisis response, due to the governance challenges and political constraints described above. Unlike in other industrialized countries, there are also constraints on the coordination between monetary and fiscal authorities. The high degree of complacency by euro area policy makers is therefore one of the largest risk factors. Over the past two years, the crisis has been addressed with many ad-hoc solutions, arrived at in the wee hours of emergency summits. None of these “solutions” has addressed the underlying governance challenge or has created even the basis for a sustainable currency union. The risk continues that at some point at some crisis summit, time will be running out and the lack of decision taking will lead to a negative chain reaction and the break-up of the euro area. In the current circumstances (May/June 2012), the largest risk is not that of a Greek exit from the euro area, but rather in how it will be handled by European policy makers.

Conclusions

This paper has been based on the underlying hypothesis that a sound and efficient financial system is critical for the functioning of modern market economies. While the Global Financial Crisis has shown the excesses of financial deepening and the possibility that a financial sector can grow too big for social benefits, it would be dangerous to throw out the baby with the dirty bathwater. Europe needs a strong, stable and efficient financial system that can provide enterprises, households and governments with the necessary financial services. More than ever, this is

necessary to grow out of the current crisis. The Single European Banking Market can bring the necessary competition and scale for the European economy, but it has to be harnessed by an incentive-compatible regulatory framework whose geographic perimeter matches those of the financial institutions it covers. Creating the institutional framework to resolve large cross-border banks with minimal negative externalities for the rest of the European financial system and the real economy should top the reform agenda. An incentive-compatible resolution framework can also influence banks' risk decisions ex-ante and thus reduce fragility.

Don't let a good crisis go wasted! This has been a popular *cri de guerre* following the 2007/08 crisis. Europe, and especially the euro area, did too little after the 2007/08 crisis to address the institutional gaps in the framework that is needed for (i) a stable European banking market and (ii) the interlinkages between monetary and financial stability. It has left policy makers with too few policy tools and coordination mechanisms during the current crisis. Crisis resolution has been mostly reduced to short-term fixes and second-best institutional structures.

The current crisis calls for urgent short-term measures and long-term institution building. Building the necessary institutions to underpin the European Banking Market is obviously only

part of a closer economic union and convergence process across many markets and policy dimensions, including labor markets and other factor markets. The critical role of banks as transmission channel of contagion and the close links between banks and sovereign through banks' government bond holding, however, calls for banking reform as priority area. Only by addressing both bank and sovereign bank fragility with European solutions can the two be disentangled and solved.



One can also frame this recommendation in terms of the current political debate on complementing the fiscal with a growth compact. A growth compact focused on increasing the denominator of deficit and debt-GDP ratios is certainly necessary; focusing on the banking system is not only important but also necessary for such a growth compact to have the necessary impact.

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Sovereign Crisis, Contagion and Systemic Risk

In a recent working paper of the Norges Bank¹, I have investigated with Massimiliano Caporin, University of Padua, Francesco Ravazzolo, Norges Bank and Roberto Rigobon, MIT Sloan a series of questions about the contagion that the recent sovereign crisis in Europe could create. In particular we are interested in the following questions: How much contagion to countries in the European Monetary Union could be expected as a result of a possible credit event in Greece, Italy or Spain? How much France and Germany are going to be affected? How about countries outside the European Union? Through which channel is the shock going to be transmitted etc.? Clearly, these are important questions for economists, policy makers, and practitioners. However, the empirical challenges to address these questions are extraordinary.

The first challenge comes from the definition of contagion. What is exactly contagion? Is it the “normal” or “usual” propagation of shocks, or is it the transmission that takes place under unusual circumstances? Some literature tends to define contagion as the co-movement that takes place under extreme conditions – or tail events – while another sizeable proportion of the literature compares how different the propagation of shocks is after normal and rare events. The first definition concentrates on the measurement of the transmission after a bad shock takes place, while the second one measures how different the propagation is after a negative shock appears. It is impossible to solve this “semantic” problem in this paper, but our objective is to present convincing evidence of the amount of contagion that takes place according to the second definition. In other words, we are interested in understanding how

much contagion exists within the sovereign debts in Europe, where contagion is defined as how different the propagation is after a large negative realization has taken place.

The second challenge is an empirical one. Contagion is an unobservable shock and therefore most empirical techniques have problems dealing with omitted variables and simultaneous equations. The problem is even more complicated because the data suffers from heteroskedasticity, which means that the econometric biases due to these problems shift in the sample, then the conditional volatility moves. In other words, if the correlation between two



variables is different in normal and crisis times, how can we be sure that this is the outcome of a shift in the propagation and not the result of the fact that correlations are not neutral to shifts in volatility? Crisis times are usually associated with higher volatility and simple correlations are unable to deal with this problem. Moreover, if a linear regression has been estimated across different regimes, again, how can the researcher be sure that the coefficients are different because the underlying parameters are shifting, as opposed to the fact that the omitted variable and simultaneous

¹ http://ideas.repec.org/p/bno/worpaper/2012_05.html. Retrieved on August 27, 2012.

equation biases are not neutral to changes in the volatility?

Finally, the third challenge is that the channel of contagion is rarely understood before the crisis occurs. In other words, very few would have ever predicted that the channel of transmission of the Russian crisis in 1998 was going to be Long-Term Capital Management (LTCM). Furthermore, even though several economists anticipated the US 2008 crisis, none described the transmission from the subprime, to insurances, to AIG, and then to the rest of the world. The profession is extremely good at describing the channels through which shocks are transmitted internationally right after the contagion has taken place. This puts a significant constraint on structural estimation. Structural estimations of contagion have the problem that the channel has to be specified *ex-ante*, reduced from estimations, on the other hand, have the advantage that they are channel free and therefore might capture the existence of contagion that was not fully taken into account before the shock occurs.

We have first evaluated the extent of contagion in the credit default swaps in the euro region using a reduced form approach based on quantile regressions. As mentioned, contagion is measured as a shift in the propagation when large shocks occur i.e. comparing the highest quantiles and the middle ones. In this methodology when the coefficients are the same, it means that the underlying transmission mechanisms are the same, and that the econometric problems such as omitted variables and endogeneity are not significantly enough to provide a rejection. This is indeed the result they find. In other words, for every pair of countries in our data, the contagion at the extreme quantiles is not statistically different from the

contagion that exists in the mid-quantiles. We examine sovereign credit default swaps (CDS) in the period from November 2008 to September 2011 of seven European countries on the euro area: France, Germany, Greece, Ireland, Italy, Portugal, Spain, and one European Member State that is not in the euro area: the United Kingdom.

The key results of this work are reported in charts 1 and 2 that show the values of the estimated coefficient of the connections of CDS respectively of France, Germany and Italy to changes of the CDS in the other countries across different quantile levels. Each chart shows the coefficient values for several quantile and for each other country.

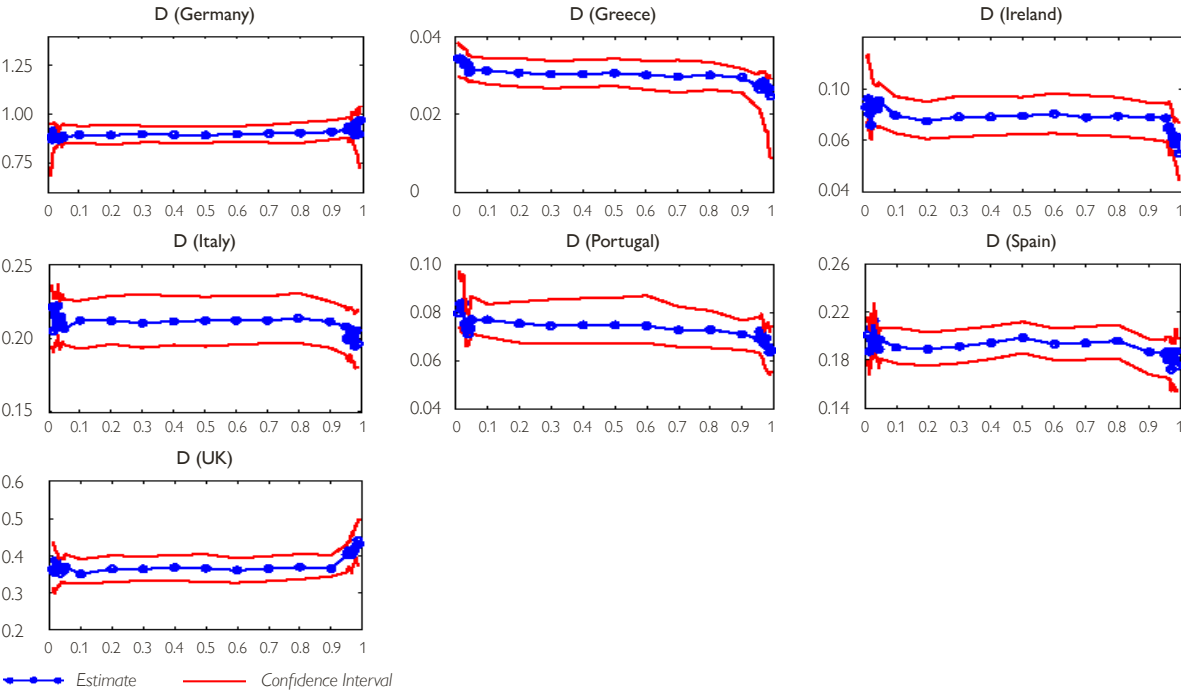
As the charts show, the coefficients are almost flat across the quantiles, suggesting that the dependence between the movements of any two CDS is not changing as a function of the size and sign of the movements.

All our results offer a consistent message: propagation of shocks in Europe's CDS has been remarkably constant between 2008 and 2011 even though in a significant part of that sample periphery countries have been affected by their sovereign debt and fiscal situations. In other words, all the increases in correlation we have witnessed the last two years is coming from larger shocks, and not from similar shocks propagated with higher intensity across Europe.

There has emerged in Europe a strong nexus between the credit risks of financial sectors and their sovereigns. If we investigate whether this nexus is also related to the banking sector cross-exposures and sovereign risk we could see that this is not the case. If we investigate for example France and rank the connections that French CDS have with those of the other countries we will obtain the ranking reported in

Chart 1

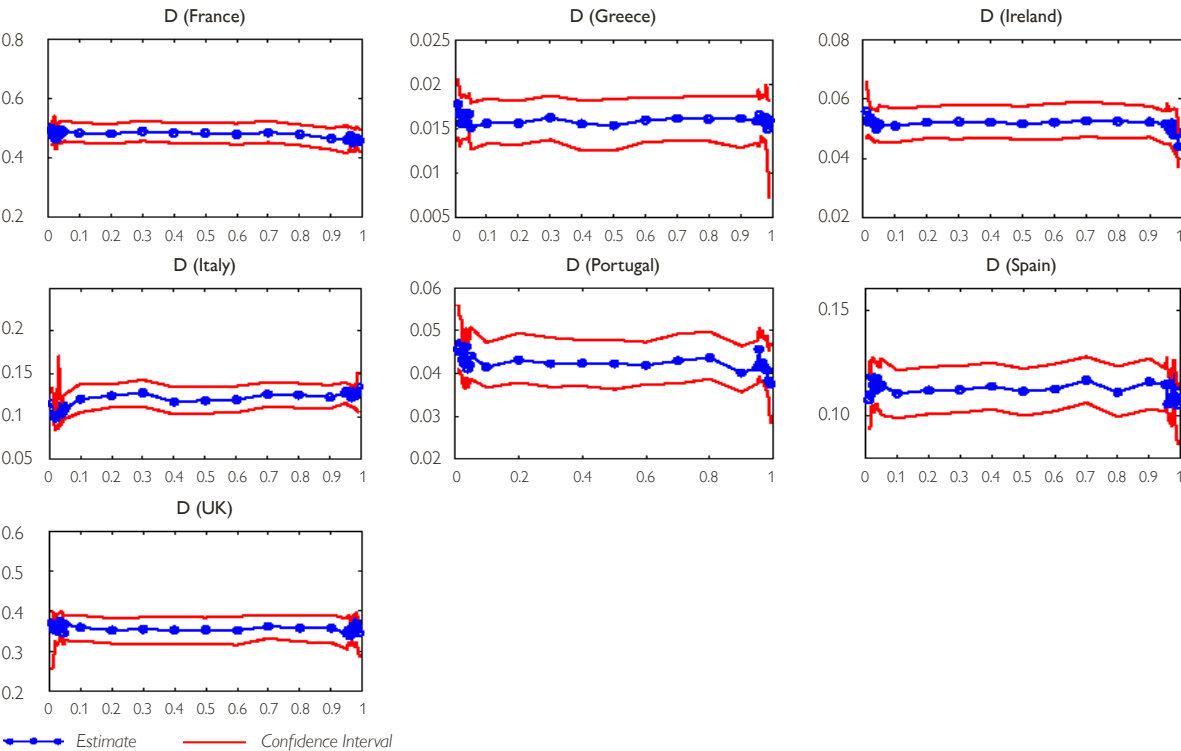
Quantile Regression Coefficients for French CDS



Source: Authors' calculations.

Chart 2

Quantile Regression Coefficients for German CDS



Source: Authors' calculations.

Table 1

Ranking of the French Banking Sector Cross-Exposures on Sovereign Risk of the Other European Member States and French CDS Connections on Sovereign Risk of the Other European Member States

	Germany	Greece	Ireland	Italy	Portugal	Spain	UK
Banking exposure	3	5	6	1	7	4	2
CDS	1	7	5	3	6	4	2

Source: Authors' calculations.

table 1 in the row CDS. If we repeat the same ranking by looking to the exposure the French banks have with respect to the other countries we obtain the ranking reported in the row marked “banking exposure”.

As table 1 shows, linkages among the different countries are not strictly related to the European banking sector cross-exposures. There are clearly some other connections on top of these exposures that contribute to the spillover of risk among countries and among institutions. In line with this idea I per-

and Insurance Sectors was published in the issue of June 2012 of the Journal of Financial Economics.

We propose several econometric measures of connectedness based on principal-components analysis and Granger-causality networks, and apply them to the monthly returns of hedge funds, banks, broker/dealers, and insurance companies.

By definition, systemic risk involves the financial system, a collection of interconnected institutions that have mutually beneficial business relationships through which illiquidity, insolvency, and losses can quickly propagate during periods of financial distress. In this paper, we propose two econometric methods to capture this connectedness – principal components analysis and Granger-causality networks – and apply them to the monthly returns of four types of financial institutions: hedge funds, and publicly traded banks, broker/dealers, and insurance companies. We use principal components analysis to estimate the number and importance of common factors driving the returns of these financial institutions, and we use pairwise Granger-causality tests to identify the network of statistically significant Granger-causal relations among these institutions.

Our focus on hedge funds, banks, broker/dealers, and insurance companies is not coincidental, but is motivated by the extensive business ties be-



formed another research with the aim of mapping connections that contribute to systemic risk. I performed this research with my colleague in Venice Monica Billio, with Mila Getmansky from UMass Amherst and Andrew Lo from MIT Sloan. The paper titled: Econometric Measures of Connectedness and Systemic Risk in the Finance

tween them, many of which have emerged only in the last decade. For example, insurance companies have had little to do with hedge funds until recently. However, as they moved more aggressively into non-core activities such as insuring financial products, credit-default swaps, derivatives trading, and investment management, insurers created new business units that competed directly with banks, hedge funds, and broker/dealers. These activities have potential implications for systemic risk when conducted on a large scale (Geneva Association, 2010). Similarly, the banking industry has been transformed over the last ten years, not only with the repeal of the Glass-Steagall Act in 1999, but also through financial innovations like securitization that have blurred the distinction between loans, bank deposits, securities, and trading strategies. The types of business relationships between these sectors have also changed, with banks and insurers providing credit to hedge funds but also competing against them through their

own proprietary trading desks, and hedge funds using insurers to provide principal protection on their funds while simultaneously competing with them by offering capital-market-intermediated insurance such as catastrophe-linked bonds.

We find that all four sectors have become highly interrelated over the past decade, similarly increasing the level of systemic risk in the finance and insurance industries through a complex and time-varying network of relationships. In our work we demonstrate that these measures can also identify and quantify financial crisis periods, and seem to contain predictive power in out-of-sample tests. Our results show an asymmetry in the degree of connectedness among the four sectors, with banks playing a much more important role in transmitting shocks than other financial institutions. The economic and financial world is more complex than the one we are usually considering with monetary, macroeconomic and central bank models!

Session 2:
Containing Systemic Risk and
Debt Restructuring

Ernest Gnan

Head of the Economic Analysis Division
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Introductory Remarks

Sovereign debt restructurings are, in a longer historical perspective, nothing extraordinary. Even countries currently viewed as examples of stability, such as Germany (as will be pointed out by Professor Ritschl in this volume), in the more distant past resorted to debt restructurings. While the process in the run up to these restructurings is usually messy and full of uncertainty, and thus is associated with financial system instability, once the restructuring decision has been made and the terms have been set (which in turn involves complex choices among many possible options and complex negotiations among many stakeholders), financial stability can often be restored. This is the result of improved fiscal sustainability, given the much lower remaining debt burden and the substantial structural and fiscal reform measures which usually form part of the conditionality associated with the debt restructuring package. In this sense, sovereign debt restructurings can stabilise financial systems in situations where the credibility of a sovereign debtor is already severely impaired and markets expect insolvency to happen.

Why are sovereign debt restructurings then such a taboo before they happen? The simple reason is that the expectation of debt restructuring itself increases a sovereign's risk premium, and thus, through higher financing costs, may increase the probability of a necessary debt restructuring. It is thus not in the interest of sovereign debtors to make restructurings a "standard feature" of creditor-debtor relationships. If they were fully priced in from the beginning, their benefit to governments would be lost. Obviously, fully rational bond markets and investors should not be subject to such cheating and should anticipate such time inconsistency problem of sovereign borrowers, but to

the extent that markets are less than rational, e.g. due to "short memory" and "myopia", "herd behaviour" and "benchmarking" etc., it might still pay for sovereign borrowers to deny the possibility of bankruptcy as long as possible. Therefore, the idea of establishing sovereign restructuring procedures ex ante goes against the very nature of the sovereign creditor-debtor "game", as it happens in the real world.

In EMU, matters are often perceived to be complicated by several factors. First, setting a precedence of debt restructuring with one country can have contagion effects on other euro area countries. This was one of the more often used arguments against "private sector involvement". If restructuring expectations are non-rational and are influenced by recent experiences in nearby countries, then this might indeed be the case. However, it is



not fully clear why such effect should be specific to countries forming part of a monetary union. Such expectational contagion effects can happen between any countries regarded by markets as similar in nature and/or linked through various real and financial channels. Only to the extent that EMU is associated with – actual or perceived – closer real and financial linkages, will contagion become an issues specific to EMU.

Second, it is sometimes argued that an individual euro area country does not have the ultimate resort of monetary financing and/or nominal exchange rate devaluation to reduce its debt burden and restore international price competitiveness and economic growth. Thus, the argument goes, debt restructuring in EMU might be more difficult to avoid. However, to the extent that a sufficiently large group of EMU coun-



tries is in distress or fears possible contagion or other negative repercussions from a debt crisis, the ECB is likely to behave in ways similar to a central bank of an individual country. The ECB's Securities Market Program and Outright Monetary Transactions, while motivated by monetary policy considerations (restoring monetary policy transmission), in effect absorb government debt of distressed countries and thus facilitate government financing.

Furthermore, the various intra-euro area financial support programmes (European Financial Stability Facility, European Stability Mechanism etc.) provide help which would not normally be available for individual countries outside EMU. This would even make the need to resort to sovereign debt restructuring less urgent in EMU than outside.

The question is how far this mutual support within EMU – be it through governmental aid, be it through central bank intervention – should optimally go. To illustrate the different positions currently debated on this matter, let me sketch two extreme, stylised and simplified views: On the one hand, those emphasising contagion and systemic risk from sovereign debt crises and ultimately bankruptcies would argue for more such support, whatever its concrete form and source. If only support mechanisms are sufficiently large, speculation against the problem countries will be deterred and the crisis will soon be over, the argument goes. On the other hand, those who emphasise that the very existence of support mechanisms alters recipient countries' incentives to embark on necessary structural reforms and fiscal consolidations would argue against aid, and would rather have problem countries face bankruptcy or even exit from EMU. In their view, the serious threat of bankruptcy and euro area expulsion would activate the necessary reform efforts to solve the crisis and render further assistance unnecessary. While these two extreme views obviously are grossly simplified caricatures of the much more complex problems and lines of argument at hand, it is nevertheless interesting to recognize that both views rest on a strong role of expectations and incentives. In a way, they are different scenarios of the same “game”, emphasising expectations and incentives of, in the first case, financial markets, and, in the second case, governments or societies in debtor countries.

With respect to the theme of this session, the former group of analysts would argue that, in order to contain systemic risk, immediate and decisive stepping up mutual support mechanisms is unavoidable. Various forms of

Eurobonds, such as the scheme which Jakob von Weizsäcker explains in this volume, are part of such extended support mechanisms.

The latter group of analysts would argue that by providing such support mechanisms, any remaining mechanisms for fiscal discipline will be wiped out, leading, over the medium to long run, to more instability in public finances and ultimately to the value of the currency. Furthermore, it is argued by this group that the expansionary policies potentially lead to new macro-economic imbalances, such as asset price bubbles in the safe-haven creditor countries. All this might, in their view, in the long run pose risks to systemic financial stability.

So, in addition to differences in focus between market versus government failure, there are also differences in time horizons which may explain, among other things, the differences in various experts' views and recommendations.

I am sure, though that the crude toolkit I just offered can do no justice to the presentations by our two speakers of this session, Albrecht Ritschl, Professor at the London School of Economics, and Jakob von Weizsäcker, Head of Department at the Thuringian Economics Ministry. As always, reality and human thinking to explain it are much more complex than simple stylised models or "boxes" of schools of thought.

Albrecht Ritschl

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Does Germany Owe Greece a Debt?

A Historical Perspective on the European Debt Crisis

1 Introduction

Ladies and Gentlemen,
Many thanks for the kind invitation to speak to you, at a time when the European debt crisis is taking another, dramatic turn. The images from Greece we have seen on TV and on the internet in the past days bring back the memory of a similar event in the past. A foreign debt crisis had been lingering. Blind to the warning signs, the creditors refused to accept talk of debt forgiveness or currency devaluation, and insisted on appointing a government of technocrats that pursued a policy of steep deflation. To postpone the hour of reckoning, good money was thrown after bad. Finally, the technocrat government lost its support in parliament over the austerity budget, and national elections were called. When the votes were counted, the shock was profound: almost 40% had gone to extremists from the right and the left. That country was Germany, September of 1930. Nine months later, the German debt default began, eventually resulting in losses equivalent to 15% of US GDP at the time. Another fifteen months later, German fascism acceded to power.

This contribution is about historical perspectives on the European debt crisis. It will focus on the issue of path dependence, or plainly speaking, deep fundamentals that change only slowly over time, or not at all. Do we find deep fundamental factors that were perhaps overlooked in the setup of the euro area, and that could help to explain the fault lines that have suddenly appeared? I concentrate on two such fundamentals. One pertains indeed to Germany. The other is more generally

about Europe's Mediterranean rim and its monetary history, going back by a hundred years or more.

Germans prefer to let their history start with the zero hour of 1945. From being one of the more volatile economies of Europe, West Germany went to being an anchor of fiscal and monetary stability. Importantly, German post-war growth was export-led. Seemingly without much effort, Germany now started to transfer resources to the rest of Europe in almost every year, something that the post-World War I order had spectacularly failed to accomplish. I shall briefly revisit this story. But I will also look at the deeper roots in World War II, all with links to Europe's present debt problem.

The second line of continuity extends far back into the 19th century. Europe's present currency union is not



the first attempt to adopt a unified monetary standard. The mixed record of these previous monetary standards holds lessons in store as well. Between the two lines of continuity, little is left that seems surprising about Europe's current debt crisis – except maybe that no one took a closer look in time.

The next section deals with the financial legacy of World War II, the reinsertion of West Germany into the European economy, and the economics of the Marshall Plan. Section 3 goes further back and highlights the lessons from monetary integration in 29th century Europe. The final section concludes.

2 “Germany is Our Problem” The Legacy of World War II and Europe’s Postwar Economic Order

Europe’s economic reconstruction from World War II faced three major tasks: to repair what could be repaired, to es-



establish a favourable economic environment that also included Germany, and to deal with the war’s financial legacy without choking off recovery. The solution that was found rested on three pillars. The first was economic cooperation in a payments and customs union sheltered from the outside world. The second was sweeping debt forgiveness, combined with an effective aid programme and a ban on future lending to Germany. The third principle was the reorientation of West Germany towards export-led growth.

The successful implementation of these policies (more on this in a moment) turned West Germany into a net

exporter, mainly of the capital goods that were urgently needed for Europe’s post-war reconstruction. Since 1951, West Germany’s current account has perennially been in surplus at 1% to 3% of GDP, at times and again today going up to 5%. My working hypothesis is that Germany’s export orientation is in large part the result of deep institutional parameters set in the post-war period. Much of the crisis we are currently witnessing is indeed the consequence of this post-war order falling apart.

To understand what motivated the architects of the post-war European order and how it guided their actions, it is worthwhile keeping in mind the financial fallout from World War II. Germany’s economic obligations included reparations of undetermined size, as well as large wartime debts and substantial amounts of foreign debts defaulted on in 1933.

German wartime debt was an institutional reflection of bilateralism in trade and foreign exchange. Beginning in 1940, Germany’s central bank had started to operate a multilateral clearing system. Soon these clearing accounts were used as an accounting device for the resources that wartime Germany was vacuuming from all over occupied Europe. Official statistics valuing these resource transfers at heavily manipulated exchange rates showed these debts to amount to 30 billion RM (Reichsmark) at the end of 1944. An internal document from 1944, found in the 1980s, valued the same debts at 85 to 90 billion RM. To have a standard of comparison, calculate this into German GDP on the eve of World War II. GDP in 1938 was close to 100 billion RM. Germany’s clearing debt from World War II would thus be in the range of 85% to 90% of German GDP. This is similar to Ger-

many's debt burden today – except that it was foreign debt entirely. To get an idea of how much this debt would be worth today, multiply this debt/income ratio with German GDP of 2011. The resulting figure is a whopping EUR 2.2 to EUR 2.3 trillion.

This debt burden presented the Western allies with a delicate problem after 1945. To re-launch trade, some debt settlement had to be found. However, West Germany after World War II did not seem to be in a position to export her way out of this debt without initial credit inflows to restart her economy. The experience with World War I reparations underlined the seriousness of this problem: in the 1920s, German reparations had been recycled through international, mostly US credit. These debts were at the core of Germany's debt default of 1933. A similar pattern began to appear in the early post-war years: Germany was making deliveries in kind to Western Europe on reparation account, but at the same time received substantial transfers through US aid programmes. Not keen to repeat the interwar experience, US post-war planners insisted that restarting European trade and settlement of Germany's existing debt would need to be separated.

The solution to this debt problem was the inner core of the Marshall Plan. Every country receiving Marshall Aid had to meet political and financial conditions. This included making Marshall Aid a first claim on Germany. In this way, Germany was protected from sanctions unless Marshall Aid had been repaid. To restart European trade while the old clearing system was blocked, a new European payments and clearing system was created, carrying a guarantee based on funds provided by the Marshall Plan. This system, the European Payments Union of 1950, enabled

its member countries' system to trade with each other and with Germany, without risking debt default. The system functioned seamlessly, except for a crisis in 1951, when one member country first exhausted its credit line and then teetered on the brink of default. This country was West Germany. A team of experts sent in by the Marshall Plan administration soon convinced the Germans that this was a bad idea that deflationary measures had to be taken immediately and that the independence of its new central bank was sacrosanct. Some angry phone calls from the US military government in Germany certainly helped. Interest rates were increased, the budget was stabilized, an outcry in the public was ignored, unemployment increased, and within months, the current account went into surplus. The EPU crisis of 1951 is the true birth date of Germany's combination of export orientation and orthodoxy in fiscal and monetary policy.

The last element of Germany's post-war stabilization was the London debt agreement of 1953. Under this accord, Germany resumed servicing most of her pre-1933 debt, albeit at much reduced rates and on favourable terms. However, settlement of Germany's wartime debt, and of reparations on top of deliveries made up until then and certain individual compensation packages, was postponed until future unification.

In this way, Germany entered the post-war period with a clean slate in terms of money and debt. Her new currency was safeguarded by a ferociously independent central bank, which itself was under the protection of the Allies. Her foreign debt had been reduced to minimal amounts and the rest of it blocked. And her domestic public debt had been all but wiped out in the currency reform of 1948, which replaced

the debt with immobilized balance sheet assets in the banking system. This system forced rather strict austerity on the Germans: little if any credit was coming forth from abroad, and the government stayed away from the domestic bond market until the 1970s. The upside, however, was a minimal interest burden on the public budget.

This system combined with substantial taxation and public sector transfers abroad to depress private consumption and channel private savings into capital exports. Why did it remain so stable, why has this never changed?

There are several elements to an answer. Fiscal policy could afford to be conservative and remained moderately conservative given the exceptionally low interest burdens it faced. High immigration kept wages moderate during extended periods of time, a mechanism that gained renewed importance in the 1980s and again after the fall of the Iron Curtain. Popular support for strictly anti-inflationary monetary policy contributed to currency undervaluation, as probably did comparatively low productivity in non-tradables.

As a consequence of Germany's export orientation, her international asset position grew. In simple accounting terms, this asset growth is the flipside of Europe's debt crisis. If during 60 consecutive years, I sell you more than you sell me, my assets will either have to devalue at some point, or our trade flows will have to be reversed.

Up until the 1990s, this mechanism was apparently effective. Germany's foreign asset growth was lower than the cumulative current account surpluses would suggest, even under the extreme assumption of no interest. In other words, Germany kept losing money on her net foreign investments. This tendency was reversed as soon as European exchange rates were frozen

in anticipation of the currency union. From now on, Germany's foreign assets and her current account moved as if in lockstep.

The growth of Germany's net foreign asset position has intensified since 2008 to reach a level of EUR 800 billion, or roughly one third of Germany GDP. This seems paradox at the time of a major international debt crisis. The theory of imperfect capital markets and sovereign debts provides the insight that absent fully enforceable claims, the volume of credit given to a country will grow until a credit ceiling is reached – usually, a glass ceiling, that is. Afterwards, lending by capital markets will come to a sudden stop, forcing a current account reversal in the debtor country. The fact that German lending to Southern Europe has continued to grow after 2008 seems to defy this logic. How can there be a credit stop if there is continued lending and actually at increasing rates?

The nature of German lending to Europe since the 2008 crisis actually proves the point: almost all of the addition to Germany's foreign wealth since that year has gone through non-market channels, mostly the now notorious TARGET2 system of the ECB. This clearing account system, originally designed to clear short-term debt, has been employed to provide German credit to Southern Europe the members of the ECB at high rates. Essentially, TARGET2 in its current form constitutes German central bank credit to the Southern European member institutions of the ECB. Pointedly but quite literally speaking, it is a license to print money.

TARGET2 is until now perhaps the major mechanism that prevents markets from adapting to Southern Europe's credit problem. Absent political intervention, markets would force

both borrowers' and lenders' current accounts back into equilibrium. For Germany, this would imply that either its export industries declined relative to other sectors of the German economy (fewer luxury cars, more pizza home deliveries), or Germans resorted to higher imports of goods that do not directly compete with their export goods (more Germans vacationing in Greece). Additional adjustment would come through migration (more Germans relocating to the Mediterranean for retirement or more Southern Europeans migrating to Germany for work).

That some such an adjustment will occur in the long run seems inevitable. The European post-war order was in large part based on Germany transferring resources to Western Europe. Although this generated property rights – Germany's foreign assets –, payment was actually never effected. In other words, Europe has been in an unofficial transfer union since its very post-war beginnings. But now, the stock of these asserts, combined with other Southern European debts, has reached a critical level in which Southern European willingness and ability to repay is in doubt.

Europe is thus mired in a stock/flow problem. The European post-war arrangement depended for its viability on the flow of resources out of Germany, resulting in the growth of the stock of debt in the recipient countries. But with the latter hitting a glass ceiling, the former is affected, too. It would be difficult to prevent the stocks of debt from growing further, without bringing to a halt the flows of goods that caused debt to grow in the first place. The adjustment will be painful, it will be politically difficult, but it is essentially inescapable. The European post-war arrangement, in large part based on the smooth and seamless transfer of private capital from Ger-

many to the periphery, is coming to an end in front of our eyes.

One may speculate about the sustainability of the frantic attempts we witness to avoid these conclusions, and to somehow get the transfer machinery started again. These range from out-



right denial of the problem to the idea of an official transfer union, the political surrogate of the market process that has now come to a halt. I view this with scepticism. Germany may have been under a property rights illusion, the now failed notion that it could always repatriate her foreign assets whenever it wished to. But it seems to me equally illusory to assume that Germany would commit to large political transfers in a steady state, without demanding very substantial changes in the political architecture of Europe.

There is an exception to this. Again, it is TARGET2. Economically, this system is the regionally selective creation of money. It has come under heated criticism for the default risk it carries in the case of a Euro breakup. But it is only part of a wider phenomenon, the default risk on Germany's European assets that inevitably appeared once fluctuating exchange rates as a means of restoring balance were abolished. But while the Eurosystem lasts, TARGET2 is doubtless a politically expedient tool.

Being created by an independent system of central banks, it is a means of creating credit outside of parliamentary control. For a while, TARGET2 like all other means of creating money will continue to have real effects. While it does, it operates like a monetarist expansionary programme, giving Europe a ride on some dynamic Phillips curve. In an ironic twist on textbook economics, it appears to sustain and create jobs in Germany, not in the recipient countries. But eventually, monetary neutrality will restore itself. In the long run, the only thing TARGET2 or any other such scheme will do is to generate inflation. Once all the means of manipulating markets are exhausted, balance between stocks and flows of debt will inevitably restore itself, with far-reaching effects on the economies of both



Southern Europe and Germany. While initially, we may expect this adjustment to follow the Keynesian income/expenditure logic, in the medium term relative price adjustments will kick in and become dominant in the long run.

3 Not Touched by Midas: Southern Europe's Failed Monetary Integration in Longer Term Perspective

In the interest of time, I keep this short. Euro accession is not the first attempt

in modern history to link Southern Europe to a wider monetary standard. Two initiatives stand out, the Latin Monetary Union of the mid-19th century and the classical gold standard. These systems blended into each other, essentially because of Germany's decision to join the British gold standard, not France's more traditional bimetallic gold/silver standard, after 1871. Germany's economic ascendancy combined with the effects of demonetizing silver to make France's position untenable, and forced her to follow suit. The details need not concern us here. What matters for our deliberations is the system that followed, and a post-mortem analysis of its failures.

The astonishing stability of the Gold Standard before World War I is well known. Our modern understanding of its workings is that it was a fiscal commitment technology: Whoever wanted to be on gold and enjoy the benefits of that had to rein in public sector deficits. This strategy was universally successful, with a few exceptions. The most notorious of these are all household brand names in the history of debt crises. In South America, these were Argentina, Brasil, and Chile, breaking away from the gold standard at various points before 1900, all mired in unsustainable fiscal policy. In Europe, these were Portugal, Spain, Italy, and Greece, again all mired in unsustainable fiscal policy.

Again, the historical details need not concern us here. But a few observations come to mind. The most striking one is probably the path dependence visible in the South American country list of offenders. All of these countries again became notorious for their debt problems after World War II and up until quite recently – with a new debt problem brewing as we speak. The European evidence needs only little

further comment. Italy broke off the gold standard relatively early. Italy's position was probably doomed right from the completion of her national unification, as markets placed a heavy risk premium on the bond yields of all participating territories. Still, Italy eventually managed to stabilize its financial system outside of the gold standard and shadowed it rather successfully on the eve of World War I, without formally returning. Spain's problem finds its ready explanation in the political instability visiting the country in the last third of the 19th century. The Greek case stands out. Between its independence in the 1820s and the end of the 19th century, Greece had gone through no less than three debt defaults, the most important one being that of 1893. As a consequence, Greece was placed under international financial control, with officials from the creditor countries occupying leading positions in the central bank and the finance ministry. This regime extended far into the interwar period, and only came to an end in 1932 – when Greece defaulted again.

No direct chain of causality leads from this evidence to the crisis these countries are experiencing today. But it seems difficult to avoid the conclusion that in these cases, deeply rooted country specific characteristics are in operation, which make membership in a currency union difficult if not outright impossible. Changing these fundamentals is the true challenge facing anyone who wants to go ahead with Europe's economic and monetary unification, then and now.

4 Does Germany Owe Greece a Debt? Conclusions and Implications

A historical perspective on the European sovereign debt crisis reveals lines of continuity extending back to World

War II and even into the 19th century. Two such lines were identified here. One leads to Germany and the historical origins of her export orientation, which are rooted in the deliberate, successful attempt by the occupying powers after World War II to turn Germany from a net importer and debt defaulter to a net provider of resources for European reconstruction. During World War II, the German war economy had siphoned off resources from all over occupied Europe, leaving behind plundered and partly depopulated countries. One of these countries was Greece. The internal German statistics mentioned earlier put the direct financial liabilities to Greece at 500 million RM, not counting the wider issue of reparations.

All of these debts were blocked in the London agreement of 1953. At the same time, West Germany accepted responsibility for compensating a small number of countries through indemnity packages. One such package, amounting to roughly 160 million DM, was negotiated with and given to Greece in 1960. In an exchange of notes, the Greek side reserved its position that this compensation was only provisional, and that a final settlement would be due after future reunification of Germany. No such settlement has taken place; the Two-Plus-Four treaty defining the terms of Germany's unification of 1990 makes no mention of World War II debts. With this, the case seems formally closed; a recent attempt to sue Germany for war damage in Strasbourg has been rejected. But these are legal matters of only limited concern to the economist who is not a legal expert.

So how about the economics of the issue? Has Germany paid reparations? Does it still owe Greece (and many others) a debt? From the vantage point of

economic history, the current sovereign debt crisis hints to an answer to this question. The post-war European order was based on an implicit contract, a tacit understanding according to which Germany's former victims would accept a reinvented, democratic Germany in their midst without sanctions and further punishment, but would receive resource transfers from Germany. As long as Germany's foreign wealth accumulating in the process did not constitute an obstacle to further transfers, this system worked smoothly. Europe's financial crisis testifies to a breakdown of this system. What used to be capital exports is increasingly seen as transfers without compensation. The assumption of further and further credit guarantees by Germany makes this transformation more and more explicit, as does the TARGET2 system. It is an irony of his-

tory that in the process, a short-term central bank clearing system should have played a role, given that short-term central bank clearing balances played a prominent role in Europe's resource transfers to Germany in the early 1940s. History does not repeat itself, but apparently it has its habits.

The same reasoning also provides a tentative answer to the question of German debt to Greece. Germany's rather liberal assumption of credit guarantees for Greece as well as the acceptance of its part of Greece's haircut have turned the tables in favour of Greece. On the assumption that rather limited repayments will be forthcoming from Greece in the near future, it may well be concluded that now, finally, Germany has paid whatever debt it had to Greece, and the chapter of financial compensation for World War II is concluded at last.



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Blue Bonds Reconstructed

The desirability of the introduction of eurobonds continues to be the subject of a spirited debate in economic policy circles against the backdrop of the ongoing euro crisis. This debate is complicated by the fact that various eurobond proposals with different characteristics have been made. As a result, when the subject is being discussed in the public arena, proponents and critics are routinely not even talking about the same thing. Because the details of these different proposals matter, I was delighted to present the details of one such scheme, namely *The Blue Bond Proposal* co-authored with Jacques Delpla, on the occasion of the 2012 annual conference of the Oesterreichische Nationalbank. Drawing on our original publication¹, the present exposition takes particular care to reconstruct our Blue Bond Proposal, using the basic eurobond concept as a starting point.

1 The Basic Eurobond Concept

The natural starting point for a discussion of eurobonds is its simplest and cleanest variant, namely the pooling of the entire government debt of the euro area to be jointly and severally guaranteed by participating countries. The advantages are obvious: it would create a homogenous and highly liquid asset on par with US government debt, thereby reducing funding cost and further promoting the use of the euro as an international reserve currency. Also, the risk of destabilizing flight to safety phenomena which are currently fuelling the crisis loop between sovereign debt and financial institutions would disappear. Finally, it would reduce the currently experienced pressures on the ECB to stretch its institutional mandate and legitimacy to engage in the kind of heavy lifting for which the ESM/EFSSF

lack size. But the disadvantage is equally obvious: the joint guarantee for government debt underlying the basic eurobond stands to create massive problems of moral hazard. In particular, borrowing costs would become identical for all participating countries irrespective of their particular fiscal stance and credibility.



One way to address such moral hazard problems is rules based, installing institutional safeguards against excessive borrowing. Examples of this type of arrangement at the European level are the Maastricht Treaty with the no-bailout clause and the Stability and Growth Pact and, more recently, the Fiscal Compact with an emphasis on domestic debt brake arrangements. Such rules may either ban certain levels of deficit or debt for good, or – perhaps less draconian – administratively impose higher borrowing costs (which may or may not be called fines) on countries following a somewhat reckless fiscal path. However, such arrangements, while helpful, may have credibility limits even for today's purposes,

¹ Delpla, J. and J. von Weizsäcker. 2010. *The Blue Bond Proposal*. Bruegel Policy Brief. May.

let alone with eurobonds where moral hazard issues would be more severe.

This is the fundamental reason why we prefer a more complicated design for eurobonds where the present rules based discipline is complemented by market based discipline for borrowing at the margin.

2 Two-Tier Structure: Blue Bonds and Red Bonds

With this objective in mind, one immediately arrives at the two-tier structure which is at the core of our proposal. Intra-marginal borrowing is to take the form of eurobonds with joint-and-several liability which we call Blue Bonds. And borrowing at the margin is to take place in much more expensive Red Bonds with purely national responsibility for those amounts borrowed.



This divide into two tiers of debt immediately raises the question how Blue and Red Bonds will be kept apart legally and in practice. Legally, it is important that Blue Bonds would have senior status while Red Bonds only have junior status so that the part of national debt for which the euro area partners have given their guarantee will always

have to be serviced fully before any national Red Bonds are serviced to avoid free riding. But beyond this legal safeguard it would also make sense to back up this arrangement institutionally by means of a centralised European Debt Agency that would issue all debt of participating countries, Blue and Red, which would greatly help to assure compliance with the rules of the system in practice, including the seniority of Blue Bonds.

With the two-tier structure, another crucial issue arises, namely that of the dividing line between Blue and Red debt. How much Red and how much Blue debt should any participating country be allowed to issue? In order for the system to be credible, the Blue debt should not exceed the limit generally deemed to be safe within the general framework of the euro area which is 60% of GDP according to the Maastricht Treaty. While this exact threshold is not rigorously founded in economic theory, it would appear to be unwise to deviate from this well-established upper limit without powerful economic evidence to the contrary. Also, within this limit, the Blue Bond market would already be sufficiently substantial (EUR 5 to 6 trillion) to be on par with the US Treasury bond market (roughly EUR 7 trillion) in terms of liquidity.

This then raises the question whether any participating country should be allowed automatically to borrow up to that 60% limit in Blue Bonds. In our proposal, we opt against such an automatic mechanism for two reasons. First, we think that the quota allocation in Blue Bonds could and should be used as an additional disciplining device to fight moral hazard, including the possibility of gradually phasing out the Blue borrowing of a country if persistent and serious concerns about the sound-

ness of economic and fiscal policy of the country in question were to arise. Second, we believe that parliamentary control of Blue borrowing should remain an integral part of the system to assure regular and continued democratic control. Blanket joint-and-several guarantees for Blue Bond borrowing up to 60% would severely undermine this parliamentary budget authority. This is also the fundamental reason why a gigantic blanket guarantee without this regular parliamentary control would unlikely to be constitutionally acceptable in a country like Germany.

3 Independent Stability Council

But how could the decisions on the annual Blue borrowing quotas with their corresponding joint-and-several guarantee for participating countries by all the national parliaments involved be organised in practice? Without any clear institutional structure to prepare this decision, it could turn out to be a politically messy affair with market confidence in the entire scheme at risk. To resolve that issue, we argue in favour of the creation of a independent stability council with members of impeccable expert standing and a high degree of independence in ways similar to the board of the ECB. This stability council would annually make a proposal for the allocation of Blue borrowing quotas rewarding sound fiscal management and taking macro-risks into account. This proposal would then be put to vote in the national parliaments of all participating countries as a take-it-or-leave-it proposal.

Any country voting against the proposed allocation would thereby decide neither to issue any Blue Bonds in the coming year nor to guarantee any Blue Bonds of that particular vintage. Since the decision of any major participating

country to ease itself out could undermine confidence in the entire scheme, the independent stability council would have a strong incentive to err on the side of caution, thereby safeguarding the interests of the European taxpayer.

Also, to protect the European taxpayer further, it would be important to enshrine the institutional set-up of the Blue and Red bond scheme within a solid treaty framework, not least the critical 60 percent GDP limit for Blue borrowing. The disadvantages in terms of time and effort required by major treaty change would in our view be outweighed by the extra credibility and democratic legitimacy that would come with such a “Blue Treaty”.

4 Credible No-Bailout Clause for Red Bonds

But all of these arrangements to make this critical two-tier structure work in practice only make sense if the reinforced no-bailout clause for Red Bonds became fully credible. If it were felt that a default on Red debt could result in severe financial contagion, it might well be that Red debt would in future crisis be bailed out regardless, just like Greek government bonds in 2010. While Basel III has increased the capital requirements in Banks for government debt as well as capital buffers overall, we have doubts whether these improvements to the stability of the banking sector alone would make the no-bailout on Red debt fully credible. Therefore, we propose a more drastic measure of squeezing the Red debt out of the entire banking system through regulatory means. Specifically, Red debt as opposed to Blue debt would not be eligible for ECB refinancing operations and Banks holding Red debt should be confronted with painful capital requirements. As a result, holding of Red debt would be concentrated with investors

who would generally have much better loss absorption capacity than banks if and when problems with Red debt were to arise.

5 Crisis Mechanism

This leaves us with the question how Red debts could in the future be restructured in an orderly and credible manner in the event of a crisis while assuring the funding of short term primary deficits and rolling over the debt stock. To address this, we suggest relying on the ESM in crisis times. But, as outlined in the following, the ESM could be much leaner and more focused in the arrangement we propose. The reason is that Blue debt could simply be rolled over within the framework of the Blue bond system. As for Red debt, we propose a specific type of automatic restructuring triggered if and when an ESM programme is activated. For the duration of such an ESM programme, the coupon on the Red debt of the programme country would be automatically suppressed and the maturity lengthened for the period that the programme persists. Because this clause would already be included in each and every Red Bond contract *ex ante*, this restructuring would not even constitute a default event. Since no roll-over or interest on Red debt would fall due during the ESM programme, all that would remain for the ESM to cover would be the primary deficit of a crisis country plus interest payments on outstanding blue debt. The current size of the ESM would probably be sufficient as it would leverage itself not through the ECB with a banking licence but through a seamless interaction with the Blue and Red Bond scheme.

6 Transition Regime

Having outlined how the proposal – once fully implemented – would have significant advantages in dealing with future crises, the final and arguably most pressing question arises whether the scheme could be of any help in addressing the present crisis. In particular, there is concern that the introduction of the Blue and Red debt divide might even further destabilise the current situation because Red debt interest rates would be sky high and crisis countries with their large debt overhang would be extremely unlikely to be able to borrow at all in Red debt in the current environment. For crisis countries suffering from solvency instead of mere liquidity problems, there is a straightforward answer to that concern: with the introduction of Blue and Red debt in exchange for legacy debt, a sizeable haircut to eliminate the debt overhang should be applied. If done properly, the potentially destabilising effect of the Red debt would be eliminated as well. Of course, this observation does not answer the question, which of the crisis countries are in fact insolvent and which are merely suffering from a liquidity crisis exacerbated by the resulting jump into a bad interest rate equilibrium which could be reversed with sufficient credibility and firepower of the support mechanism. However, this challenge is of course not specific to the Blue Bond proposal. And at least it creates a framework within which a somewhat bolder take on which crisis countries should be applying a haircut to their debt could be followed through, at least if complemented by an intelligently designed banking union, the very subject of other papers in this volume.



Dinner Speech

Maria Fekter
Finance Minister of Austria



Towards a Common Euro Area Fiscal Policy: the Challenges Ahead

Ladies and Gentlemen,
I am very pleased to hold this dinner speech with you today, particularly after so many interesting speakers and experts on this first day of the conference have shed light on a wide variety of topics relating to the debt crisis within the European Monetary Union.

The task of dealing with the financial crisis has put the previous strategies of EU economic policy and its institutional decision-making structures to a difficult test. The Lisbon Treaty did not provide for sufficient institutional and financial measures to prevent and deal with a banking and debt crisis in the EU. For example: there were no tools available for financial stabilisation of the euro area.

Although the Treaty of Maastricht and the Stability and Growth Pact did contain rules that might have been able to prevent or mitigate the current impacts of the crisis, this would have required the Member States to adhere to the economic and budget policy standards they had set for themselves. Furthermore, the decision-making processes foreseen by these treaties were too cumbersome to deal with a crisis situation. In addition, coordination of economic policy via the “open coordination method”, e.g. in the context of the Lisbon strategy (a soft, non-binding mechanism based on peer review and benchmarking) was revealed to be largely ineffective.

We saw that there was a willingness within the euro area of financial solidarity and that even Member States that had come under pressure were prepared to implement sustainable budget policies at the national level over the long term. Thus, in order to ensure the success of the euro over the longer term, we need a comprehensive, over-

all common strategy. In light of these insights, a reform of EU economic policy management was agreed in October 2010, based on the findings of the Van Rompuy Task Force.

In our struggle to deal with the crisis, a comprehensive package of measures has been put together as a basis for sustainable public finance and thus for stability and sustained growth within Europe. These measures will significantly assist in restoring confidence in the EU and in particular, in the euro area, and will place public finance on a sustainable footing. This governance reform is made up of several strands:



- Improving the synchronisation and substantive interplay of the EU mechanisms of oversight regarding economic and budget policy with the national budget processes by introducing the European semester:
- The aim of the European semester is to achieve better ex ante coordination and substantive interplay of economic policies with budget policies.
- Annual oversight of economic and budget policies, but also: The basic policy orientation will be holistic, in that economic policy and budget

policy will now no longer viewed in isolation from each other, but rather will be handled jointly and in an integrated way.

- All of this is intended to ensure that the major priorities at the EU level relating to economic and budget policy will be jointly discussed and that the activities of individual Member States will be “in synch” with the community goals at the EU level.
- This, however, represents an end to the „open method of coordination“ and a commitment to joint action by Member States even where such action goes beyond the individual interests of Member States.
- We will use the new rigour of the “six-pack” to combat deficits and mountains of state debt. These EU legislative measures, six in total, will give rise to efficient budget coordination by affecting a reform of the



Stability and Growth Pact and by implementing a new macroeconomic oversight mechanism:

- In the context of the “six-pack” the coordination of budget policy within the EU (particularly within the euro area) and the monitoring of national fiscal frameworks have been significantly strengthened.

- In terms of the goal of medium-term budget planning, in basic respects, we now look for „budgets to be balanced or in surplus.“ To this end, the Treaty on Stability, Coordination and Governance (Fiscal Compact) stipulated a maximum permitted structural deficit of 0.5% of GDP (for 25 Member States).
- Where a Member State fails to achieve this, then that Member State will be required to achieve structural consolidation measures on average of 0.5% of GDP per annum until such time as it is again able to comply with this requirement.
- Added to this is the rule on expenditures, linking expenditure dynamics primarily to economic growth trends.
- In addition, we have introduced the requirement that Member States adhere to debt criteria, and we have imposed the mandatory requirement to bring debt down to levels under the reference level of 60% of GDP wherever the 1/20th rule is exceeded.
- Financial sanctions will be imposed at a significantly earlier stage, even preventively, whenever deviations from the adjustment path grow too large (i.e. 0.5% of GDP).
- Beyond mere budget oversight, monitoring of macroeconomic imbalances (including private debt levels and foreign debt, competitiveness, property prices) is being introduced.
- Early detection of macroeconomic imbalances based on specific indicators (in tandem with a stringent oversight mechanism) is supposed to prevent (and/or to correct) the incidence of such imbalances, particularly the lack of competitiveness and non-sustainable levels of

debt in the private and public sector, in the financial sector as well as debt owing to third countries. This process likewise contemplates imposing financial sanctions.

- The “two-pack” is intended to help countries to avoid exceeding their budgets and to offer them protection in times of crisis. In specific respects, preventive coordination of national budget processes and increased preventive monitoring of problem countries within the euro area are intended to prevent a “second Greece” situation from developing:
 - With respect to the “two-pack”, we now find ourselves in the midst of the legislative process.
 - Member States’ budget plans will be required to be submitted prior to adoption of national budgets and they will be required to contain detailed information on State spending and revenues.
 - In addition to this, a new framework for monitoring vulnerable countries is planned in order to obtain timely information on the financial status of the affected Member States and to be in a position to react in time.
- The European Fiscal Compact against loose fiscal policy will represent a further and broader strengthening of budget discipline and convergence of Member States’ economic policy within the euro area:
 - The Fiscal Compact, which was signed on 2 March 2012 by the heads of state and governments, contains further extended measures to strengthen coordination of economic policy within the euro area.
 - The Member States are undertaking to balance their budgets or to generate surpluses. This rule will require measurement of the struc-

tural deficit, which is not permitted to exceed a reference value that will be specifically defined for each country (maximum -0.5% of GDP).

- This rule should preferably be enshrined in the constitutions of Member States (debt brake).
- With the establishment of the European Stability Mechanism (ESM), an important step has been taken towards achieving financial solidarity within the EU:
 - The ESM was established to be a permanent financial “shield” for euro area Member States.
 - Access to ESM financial assistance is to be based on more strict conditions, relevant to the tool in question. Those conditions can range from macroeconomic adjustment programmes to compliance with criteria specified in advance.
 - The ESM is to take up its work in mid-2012, and is to have an initial loan fund volume of EUR 500 billion.

The euro area Member States have profoundly changed and improved their way of working together in respect of coherent crisis management and uniform communications vis-à-vis the public and the financial markets.

They will need to continue acting in concert in order to improve confidence in the ability of EU institutions to resolve crises and in order to restore the credibility of those institutions as a whole. However, it remains to be seen how this new system of “euro governance” will perform in practice. The big challenge of the coming year will be to rapidly and precisely implement these new rules. We know that uncertainties regarding future European developments continue to be very great, just as they have been until today. However, the measures we have implemented

should contribute to further stabilisation and simultaneously lay a foundation for new, innovative growth in Europe.

This is all the more important in light of the fact that our major issues for the future continue to be globalisation, demographic ageing and the climate change.

And for this purpose we will also need a significantly broader leeway in our public budgets than we have today.

The crisis and the consequences of that crisis have afforded us a major opportunity to change many things that have gone wrong in the past and that had been tacitly tolerated.

In this regard, we will also need a new culture of honesty – including in respect of Member States' finance – and a paradigm shift which will have to be driven by Member States' citizens, companies and banks.

We have launched and implemented these necessary steps and paradigm

shifts both at the EU level and at the national level here in Austria.

With the debt brake and package of reforms we have adopted, we have taken the proper steps to place Austria on a firm footing. I am proud to say that we have managed to adopt this package of reforms, which has a ratio of 76 to 24; three quarters of the reforms were spending cuts, one quarter were savings achieved by closing tax loopholes. This represents a unique achievement in Europe in respect of expenditure consolidation and it is our best result in 25 years. This package of reforms gives us breathing space, takes the burden off the backs of our children and will make Austria fit for the future.

Thanks to the course of consolidation on which we have embarked, we are putting Austria on a path towards a zero deficit. Our national efforts have paid off and the result is that we need not fear international comparisons.



40th ECONOMICS CONFERENCE 2012



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Session 3:
Strengthening Solidarity versus
Strengthening Discipline

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The Euro and the Global Crises:

Finding the Balance between Short-Term Stabilization and Forward Looking Reforms²

This paper analyzes reforms and adjustments in the context of the euro and the global financial crises. Taking the perspective of the evolutionary approach to institutions, the formation of a new currency area is not unidirectional. The process leading to the euro is an example of a common upbeat and optimistic attitude to the formation of new institutions. Such a Panglossian attitude to policies may reflect built-in fiscal myopia, possibly both at the level of the principal (the policy maker) and of the agents (consumers and households). Next, the paper reviews the evolution of institutions buffering the stability of unions in the aftermath of crises, where fiscal restraints and the allocation of significant bargaining clout to the Federal Center increase the stability of a union. The paper concludes with an overview of the challenges associated with finding the proper balance between financial integration and financial regulations.

JEL Classification: F02, F33, F34, F42

Keywords: currency unions, financial regulations, financial reforms, evolutionary approach to institutions

A few years after the US-originated global crisis, the world economy finds itself grappling with another crisis emanating from the OECD countries. The anaemic recovery of the US economy, and the fears of the slowing down of Emerging Markets leave the global economy vulnerable. Against this background, the euro area sovereign debt crisis currently poses the single biggest downside risk to the global outlook. The crisis is rooted in the uneven growth performance of the different euro area Member States, the unsustainably large public debts of some EU periphery countries, and the European banks' exposure to these debts. These developments exposed the possible dynamic inconsistency of the euro project, dubbed by Pisani-Ferry (2012) as the *Euro Impossible Trinity*.³

The US financial crisis and the euro sovereign debt upheaval raise impor-

tant questions regarding the balance between short term stabilization and forward looking reforms. While this question applies to all countries, it is especially relevant for the euro area, as the crisis is threatening the integrity and the viability of the euro. The short history of the euro project has been remarkable and unprecedented: during the last fifteen years the euro project moved from the planning board, into a vibrant currency. Earlier concerns about the stability of the transition from national currencies to the euro, and skepticism regarding the gains from forming the euro, were deemed overblown during the 2000s. The global share of the euro increased rapidly from about 18% to about 28% in its first decade. After a short initial depreciation against the dollar, the euro appreciated substantially. This remarkable performance of the euro during its

² I would like to thank Michael Bordo, Brian Pinto, Albrecht Ritschl, Federico Sturzenegger, and the participants at the 40th OeNB Economics Conference European Monetary Union: Lessons from the Debt Crisis, May 2012, Vienna, for their comments. Any views presented are those of the author and not of the NBER or the Oesterreichische Nationalbank.

³ The three attributes of the euro project hindering the adjustment capabilities of the euro area countries are: the strict no-monetary financing; the bank-sovereign interdependence, and the no co-responsibility for public debt in the euro area. Pisani-Ferry (2012) pointed out that at least one of these attributes should be modified to enhance the stability of the euro project.

first decade was celebrated by the ECB and other European institutions in 2008.

Jonung and Drea (2010) exemplified the buoyant view regarding the euro. “Never before have some of the world’s largest economies surrendered their national currencies in favor of a



common central bank. The euro is one of the most exciting experiments in monetary history.” Deutsche Bundesbank president, Axel Weber, remarked in a keynote address in May 2008, “What are the determinants of the Eurosystem’s success? ...the bulk of confidence in the fledgling European single currency was generated by the Eurosystem’s institutional framework... Key elements have been transferred to the Eurosystem from the national central banks, including the Deutsche Bundesbank.”

The markets in 2008 seemed to agree with this assessment, attaching low risk premia to the sovereign debt of the euro area members. Beyond the universal low risk assessment of Germany, negligible risk premia were attached to the other 16 euro area countries. However, the 2008 first decade celebrations of the euro were premature. The real test of a currency union happens at times of sizable asymmetric shocks, like recessions impacting some

states in the Union, while other states boom. The first test of the euro occurred at the aftermath of the 2008/09 global crisis. The slowing down of peripheral euro area at a time when Germany kept growing, awakened the market in 2010 to the growing debt overhang of the peripheral euro area, and the incompleteness of the euro project. The resultant euro crisis is testing the viability of the euro project. As articulated by Pisani-Ferry, it is not too late to fix the necessary issues, but it would require the will to engage in deep structural changes of the European Monetary Union institutions.

Beyond the challenges of the euro, the near collapse of financial intermediation in the USA, and the ensuing global crisis revealed the fault lines of the global financial system. Understanding the process that led to the vulnerabilities exposed by the global crisis is a precondition for grasping the needed short term stabilization and reform.

The generic answer to the timing of short term stabilization and forward looking reform challenges is simple: It is best to enact the reforms in a forward looking manner, during good times, reducing the cost of short term stabilizations. A good example for this prescription is the structural budget Institutions pioneered by Chile since 2000 (Frankel, 2012). But, as with any generic answer in economics, reality is more complex. Chile adopted forward looking reforms following a painful learning process, including the economic collapse of the 1980s. In practice, unlike the generic answer, reforms are rarely enacted in a forward looking manner, during good times. A multitude of reasons may account for the failure of the generic answer.

Taking Chile’s historical perspective, and looking at the experience of

other countries, one may deduce that “no pain, no gain.” This paper analyzes two fundamental challenges facing reforms and adjustment. First, I will review evolutionary aspects of economic changes – illustrated in the context of the formation of the euro and the history of other currency unions. Second, I will discuss the paradox of regulation, providing an interpretation of the history of financial regulations in the USA, and the challenges facing financial globalization.

1 Evolutionary Aspects of Currency Unions

The formation of the euro is an example of a common Panglossian attitude to policies and the formation of new institutions – an upbeat optimism that may help overcome the opposition. The hope is that the formation of a currency union (like the euro) may lead to dynamic forces inducing “ever closer union” (Hass, 1958), as the processes of market integration and cooperation do mutually reinforce each other. This approach reflects also an optimistic assessment of the “bicycle theory” of unions (Moravcsik, 2005), and the “Endogenous OCA Theory” (Frankel and Rose, 1997).

Frequently, a Panglossian attitude to policies may reflect built-in fiscal myopia, possibly at the level of both the principal (the policy maker) and the agents (consumers and households). Individual fiscal myopia may reflect hyperbolic discounting, where the present-biased consumer excessively discounts future consumption relative to the conventional expected utility (Leib-

son, 1997). Belt tightening is delayed for tomorrow, but “tomorrow never comes.” Policy makers’ fiscal myopia may reflect the “short-termism” associated with a limited time in office, and the possible short-sightedness of hyperbolic discounting voters.⁴ Both patterns are associated with probable time inconsistency. In these circumstances, proper institutions may help. Yet, effective institutions cannot be imposed in a *Deus EX Machina* fashion from the outside. Forming the institutions dealing with fiscal myopia frequently requires painful learning from crises, which in turn may galvanize the will to reform.

These considerations suggest an alternative perspective to the formation of institutions and policies: The Evolutionary Approach, where the formation of a new currency area is not unidirectional.⁵ Evolutionary pressure purges arrangements and institutions that do not survive the realized shocks. Yet, survival does not necessarily imply the ability to withstand future turbulences. Thus, convergence to “ever closer union” is not assured. Taking this perspective, the “Optimal Currency Area” literature has been too simplistic. Unions and Regional Cooperation arrangements are challenged by exogenous forces, testing the willingness and ability to persevere during bad times. Market integration and cooperation may overshoot the willingness to integrate. The collapse of Yugoslavia, and the move towards more limited fiscal federalism in Canada provides vivid examples of these patterns. Frequently, the reasons for the formation of cur-

⁴ See Aizenman (1998) for a model of the moral hazard associated with policy makers’ short-termism and states’ overspending in a union; and the papers in Sturzenegger and Tommasi (1998).

⁵ Applying evolutionary logic in Economics goes back to Veblen (1899) and the Austrian evolutionary school, with further developments applying Evolutionary Game Theory (Hodgson, 1998 and Young, 2001 for overview and references).

rency unions and regional cooperation blend economics and politics. The euro has been the outcome of Europe's 19th and 20th century history, rather than the "optimal currency areas" logic (Bordo and Jonung, 1999; Bordo, Markiewicz, and Jonung, 2011, for detailed overviews of the history of unions).

Putting the euro crisis in the proper historical context, the US dollar is a "successful" union of 50 states. Yet, this is the outcome of painful learning and a turbulent history of more than 200 years. Key chapters in this history include defaults of eight US states on sovereign debt in the early 1840s; the Great Depression; the Civil War; the emergence of the Federal Reserve System (Fed) as a key institution, and the greater fiscal role of the federal system in post World War II. The euro area is a "baby union," facing its first painful maturing crisis. The spectrum of options facing the euro project includes progressing towards a Canadian or US type of a union, with a more significant role of the fiscal center than the one framed by the euro founding fathers, or scaling down the euro project. Euro area countries attempted to ignore the learning process of the USA and other unions, at their own peril. The crisis forces the emerging euro to move fast on the learning curve. The process is quite painful, as has been the learning process of the USA.

Reflecting on the history of the US dollar union, there are alternative views of the fiscal factors contributing to the stability of Unions:

a Adding built-in fiscal restraints

Wallis (2005) attributes the success of the US dollar union to the institutional changes following the sovereign debt default of eight US states, leading to fiscal prudence: "After the fiscal crisis of the early 1840s, states changed their constitutions to eliminate taxless finance in the future."

b Are built-in fiscal restraints enough? Not necessarily

Von Hagen (1991) is skeptical about the effectiveness of fiscal restraints on states in the US: "Fiscal restraints significantly affect the probability of fiscal choices and performance, without however preventing extreme outcomes."⁶

c Fiscal restraints supported by the proper allocation of bargaining clout

An alternative perspective may combine the above two takes on the stability of a union. When the fiscal center gets sizable taxes from the states, and provides significant discretionary transfers to the states, the Union's Center has plenty of bargaining clout. If a state misbehaves, the center may cut the transfers to a degree that would prevent such behavior. The center's bargaining clout strengthens the fiscal restraints on states' over-borrowing. If this mechanism is powerful, the threat is enough to impose the needed discipline. The states would refrain from running a large public debt/GDP, and the threat of cutting transfers would be rarely used. In the USA, this mechanism

⁶ Some observers view California as "Greece in the USA," an example of extreme fiscal outcomes in the USA ("California is a greater risk than Greece, warns JP Morgan chief," *The Telegraph*, 26 February 2010). Yet, the facts are much more involved. The needed fiscal adjustment to deal with the debt overhang of Greece was estimated by the IMF to be about 15% of the GDP, whereas the needed fiscal adjustment of California is modest, less than 2% of its GDP. Thus, California's fiscal fiasco is the outcome of a war of attrition regarding who will make a modest adjustment in a rather rich state where the tax base relies heavily on taxing capital gains. In contrast, in Greece the fiscal challenges are associated with a much larger debt overhang, in a poor country (relative to the USA), with low tax compliance and a sizable income inequality.

seems to be potent, as state governments receive a hefty share of their general revenue directly from the federal government – about 32% in 2009.⁷ Yet, if the credibility of the threat is questionable, it would be tested and used. Intriguingly, this mechanism was enacted in Brazil, and is credited for stabilizing provincial overspending and overborrowing there (Melo, Pereira and Souza, 2010).⁸

2 Implications for “Stabilization versus Reform”

Granting more bargaining clout to the center will help the euro project to move forward. There are numerous ways of doing so, and it is up to the members to choose a way fitting their vision.

Improving fiscal discipline will help: *Don’t eat more than you can chew and digest*: borrow only if your tax base is big enough to support serving it. The fiscal distortions of the euro project go back to the Maastricht Treaty criteria of fiscal prudence, where public debt/GDP below 60% and fiscal deficit/GDP below 3% were determined as key indicators of fiscal fitness. Yet, Aizenman and Jinjark, (2011) and Aizenman, Hutchison and Jinjark (2011) pointed out that more robust and informative criteria for fiscal exposure are low public debt/average tax revenue and low fiscal deficit/average tax revenue. While deflating public debt and fiscal deficits by the GDP has been used frequently, the *de facto* fiscal burden is better measured by deflating public debt and fiscal deficits by the average

tax base. Ideally, the ratio of public debt to the net present value of future primary surpluses is a good measure of fiscal burden. Yet, properly estimating this net present value is elusive.⁹

In practice, the average tax revenue provides a good statistics on the *de facto* taxing capacity, being the outcome of the tax code and its effective enforcement. While the public debt/GDP ratio may increase rapidly at times of peril (see Ireland in the recent crisis, more than doubling its public debt/GDP in one year), the *de facto* taxing capacity changes slowly at times of peril, as parties tend to be locked in a war of attrition, attempting to minimize their adjustment burden. Thus, the *de facto* tax base is hard to change overnight, as it reflects a social contract. This contract depends on the tax



enforcement capacities of a country, which are anchored by the public’s perception of tax fairness and the gains from public sector expenditure, factors that are hard to change at times of peril. As the present crisis illustrates, increas-

⁷ See *State and Local Government Finances Summary 2009*: www2.census.gov/govs/estimate/09_summary_report.pdf. Retrieved on May 30, 2012.

⁸ In Minas Geras (1999), and Rio (2003), the newly sworn-in state governors blamed their predecessors for passing budget imbalances, and declared a moratorium on the pre-election state debt, prompting the federal government to withhold federal transfers.

⁹ Estimating the net present value of primary surpluses hinges on good estimates of the future growth rates and future real interest rate, both of which are notoriously hard to estimate tightly.

ing the *de facto* tax base in a recession turned out to be unfeasible for most countries. This view is consistent with recent empirical literature finding that tax compliance and individual's willingness to pay taxes is affected by perceptions about the fairness of the tax structure. An individual taxpayer is influenced strongly by his perception of the behavior of other taxpayers (Alm



and Torgler, 2006, and the references therein). If taxpayers perceive that their preferences are adequately represented and they are supplied with public goods, their identification with the state increases, and thus the willingness to pay taxes rises (Frey and Torgler, 2007).

We can illustrate this point by noting that, had Panama been part of Europe, there is a good chance that it would have passed the Maastricht treaty criteria, despite being a country with a very low tax base. Specifically, in 2005, the public debt/GDP of Austria (a euro area country) and Panama were about 60%, implying that both countries were viewed by the Maastricht criteria as having a comparable fiscal burden.

Yet, Austria's tax collection was about 45% of its GDP, whereas Panama's only 10%. Thus, Panama's public debt/tax revenue was about 6, whereas Austria's was about 1.5. The substantially higher tax base of Austria implies that it has greater capacity to serve the given public debt/GDP than Panama. By revealed preferences, Austria manages to enforce and collect sizable taxes, whereas Panama, as most Central American countries, does not. For a given similar unanticipated adverse fiscal shock, Austria would have considerably more room to adjust by reallocating its priorities of using the relatively high tax base, in contrast to Panama. This logic suggests that public debt/average tax collection and fiscal deficits/average tax collections account better for the sovereign risk than indicators deflating public debt and fiscal deficits by the GDP. Indeed, Aizenman, Hutchison and Jinjarak (2011) confirmed this observation.¹⁰

To sum up, improving fiscal discipline in the euro block would help, but would not substitute for the need to increase the bargaining clout of the center, and for mitigating the moral hazard associated with the presumption that the center will bailout the states.

3 The Challenge of Financial Reforms: The Paradox of Regulation

The global crisis came at the end of the illusive "Great moderation."¹¹ The "Great Moderation" period coincided with a long spell of financial deregulations in the USA. This chain of events provides a vivid example of the tendency to un-

¹⁰ This result reflects the fact that the cross country coefficient of variations of public debt/average tax revenue and fiscal deficits/average tax revenue are substantially higher than the coefficient of variations of public debt/GDP and fiscal deficits/GDP.

¹¹ The great moderation referred to the drop in volatility and risk premium during the 1990s and early 2000s. See Stock and Watson (2002) for an analysis of the Great Moderation hypothesis. Recent observers refer to 1987–2007 as the "Great Moderation" period.

der regulate during a prolonged period of “good times,” and of the challenges of creating and maintaining a balanced Goldilocks regulations, “not too cold, not too hot, but just right!” These challenges are the outcome of the paradox of regulation (Aizenman, 2011), where dynamically there is a resistance to regulate, due to a built-in bias against financial regulation.

The essence of this bias is that all the crises that were avoided by tighter financial regulations are imperceptible and not credited to the policy maker — it is hard to gauge the losses that did not occur because of the regulations enforced by the policy maker. Yet, the cost of financial regulation is transparent and debited to the policy maker.¹² When regulations are the outcome of a political process, the longer the spell of no crisis, the greater would be the erosion of regulation intensity relative to the socially desirable level, as the counterfactual becomes illusory for the public. The less informative is the public’s prior regarding the probability of a crisis, the faster will be the drop in regulations induced by a no-crisis, good luck run.¹³ The support for financial regulations is further eroded in systems where the financial sector can channel its rents to lobby against regulations that may cut its profitability. While the regulator may point out the hazard of

the deregulation process, its access to lobbying resources is frequently outgunned by the financial sector.

Arguably, the above dynamics characterize well the process of financial deregulation in the USA during 1985–2005. The substantial drop in macroeconomic volatility during the “Great Moderation” provided the impetus for the acceleration overtime of financial deregulations. Observers and markets were tempted into reading the declining macro volatility as an indication of improved policies. Notwithstanding concerns raised by minority views, financial deregulation was promoted as part of a win-win strategy for the households and the financial system.¹⁴ While supposedly we are aware that correlations are not indicative of causality, the longer is the observed favorable regularity, the greater is the tendency to attach causal interpretations, and for policy makers to take credit for it.

The reverse side of the paradox of regulation is that a crisis that leads to a cost of higher order of magnitude than the anticipated one, may induce the pendulum to shift from under-regulation to over-regulation. Large unexpected economic depression may put in motion a process where the cost of erring on the side of over-regulation is viewed as being lower than the cost of erring on the side of under-regulation.¹⁵

¹² *The direct budgetary cost of regulating institutions is the most visible budgetary outlay. Jackson (2002) noted “The total budgets of financial regulatory authorities in the United States in 2002 was in excess of USD 5.6 billion, and staffing levels were reported at 43,244.” In addition, compliance results in private costs that are hard to estimate tightly. Coates (2007) reviews the costs/benefits associated with the Sarbanes-Oxley Act, concluding that the act should bring net long-term benefits. Yet, he noted some alarming estimates of overall market reactions to the costs of the Sarbanes-Oxley legislation.*

¹³ *See Aizenman (2011) for a model and further discussion.*

¹⁴ *The moderation trend reduced the appetite for regulation, with growing acceptance of Greenspan’s seductive “market-stabilizing private regulatory forces,” exemplified in his April 12, 1997 speech: www.bis.org/review/r970502b.pdf. Retrieved on May 30, 2012.*

¹⁵ *While it is premature to know the ultimate impact of the 2008/09 crisis on financial regulation, the over-regulation hypothesis has clearer validity for the post Great Depression than for the present crisis. The globally coordinated macro stabilization in the aftermath of the collapse of Lehman Brothers, preventing a deep economic depression, probably had the side effect of mitigating the support for deep regulatory changes.*

The interpretation for over-regulation is the reverse side of the paradox of regulation. In repressed financial systems, the stakeholders that would have benefited from financial intermediation are under-represented in the decision making process.¹⁶ Over-regulation may lead to a static economy, where the benefit of crisis avoidance comes with a large cost of stagnation, a cost that is under-



represented in the political discourse.

Steps that can mitigate the risks associated with the paradox of regulations include:¹⁷

Information gathering: a necessary condition for regulation is mandatory periodic confidential reports of the balance sheet exposure of all financial in-

stitutions above a minimum size, operating in the domestic market.

Greater independence of the regulatory agency from the political process helps. Due to principle-agent problems, the regulator's independence is needed to avoid "regulatory capture." Interested parties prefer under-regulation as a way to facilitate excessive risk taking subsidized by the tax payers (Rajan and Zingals, 2003 and Rajan, 2005).¹⁸

Adopting global standards of minimum prudential regulation and information disclosure, enforced by the domestic regulator. Global minimum standards increase the costs of deregulation, acting as a commitment device. Such a minimum prudential standards of regulation mitigate "regulatory arbitrage" across countries. Under-regulation attracts capital inflows in search of higher returns induced by the implicit subsidy provided in more underregulated countries. A vivid example of this configuration was the pre-crisis insurance market in the USA. Under-regulation allowed AIG to sell underpriced insurance contracts to European institutions, arrangements that were subsidized by US tax payers. This episode exposed a common fallacy is the naïve interpretation of the gains from financial deepening, presuming that it allows approaching full insurance against macro calamities. Yet, complete markets allow insuring fully only idiosyncratic risks. Promises to

¹⁶ This happens in the presence of uncertainty regarding the individual incidences of successful investment, analogues to Fernandez and Rodrik (1991).

¹⁷ See the Geneva Report (2009) for an in depth discussion and references of blueprints for reforming the global financial system.

¹⁸ Common wisdom is that the US Fed is independent. Yet, the chairman and vice-chairman of the Fed are chosen by the President from among the sitting Governors for a four-year term, without a formal term limit. This opens the door to a "continuation game" of the chairman, adjusting his views to the administration, in order to increase the probability of reappointment. Similarly, Federal Reserve Bank Presidents are appointed by the board of directors of the Bank, for a term of five years. This implies that the presidents are appointed by a board impacted by the banks that are regulated by them, raising the odds of regulatory capture. Chances are that appointing the Fed Chairman for a single fixed one term, appointed by publically elected officials may help. To provide a proper balance, the power of the chair or president may be constrained by an impeachment process, subject to a strong majority rule.

deliver macro insurance, if large enough, expose the tax payer to costly bailouts and higher future taxes.¹⁹

To conclude, a major fault line exposed by the financial crisis of 2008/09 is that financial globalization was successful in globalizing arbitrage, yet the tax base remains national. The globalized arbitrage increases the odds that at times of trouble, the national tax bases will be saddled with costly bailouts of big financial players, some of them offshore based. Failure to tame the globalized arbitrage increases the risk that a

large enough future crisis will induce overshooting the needed regulatory adjustment. Crises are testing the capabilities to stabilize and to adopt forward looking reforms that will prevent similar crises down the road. Failure to do both will bring about evolutionary pressure that will purge ineffectual systems. Most reforms take place under the gun of history, during or in the aftermath of a crisis, as long as the memory is fresh. The challenge is to form a resilient system that will be immune to the paradox of regulation.

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¹⁹ Similarly, the May 2012 losses of JP Morgan probably reflect the observation that giant financial institutions are “too big to hedge” effectively (see *Lessons from Trades Big and Bad*, *The New York Times*, May 17, 2012).

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Panel 3:

Resolving Sovereign Debt Crises:
Opening or Closing the Tap?

Sylvie Goulard

Member
European Parliament



No Problem of a Tap

Thank you. It is a great pleasure to be in Vienna today.

In response to Professor Aizenman: He describes the Europeans as “Panglossian” i.e. too optimistic in his view. Usually the Americans tell us “be positive”... one could be surprised...

It is not a problem of a tap. And as you have invited a German and a French speaker, I want to underline that I do not want to open the tap... This is a systemic crisis and not only of the financial sector. With another reference to Voltaire and Pangloss, we have experienced an earthquake. In my opinion, this is a systemic crisis of democracy at the national and at the European level. At the national level, in many Member States, we are confronted with short termism, a lack of competitiveness, loss of productivity and/or deficit and debts.

1 Recent Efforts to Improve a Flawed Governance of the EMU

Mr. Praet and Mr. Regling reminded us of the rules put in place since May 2009:

- Financial supervision: at the macro level creation of the European Systemic Risk Board (ESRB)/ and at the micro level the European Banking Authority (EBA)
- The Heads of State create the European Stability Mechanism (ESM) and commit to the strengthening of financial market regulation and economic governance
- The euro area ministers establish the European Stability Facility (ESF) with a lending facility of up to EUR 440 billion
- Reinforcement of economic governance in the EU and the euro area: adopting the so called “six-pack”, a legislative package consisting of six proposals providing for improved surveillance and enforcement

- Introduction of the “European semester” in order to close the gap between the national and the European level
- the European Fiscal Compact to be ratified

These decisions represent huge steps forward. However, there remain challenges to be addressed:

- Creation of a banking resolution fund
- Incentives for investment/growth strategy
- EU budget for growth and counter cyclical actions



2 The Democratic Deficit Remains

The problem is not the democratic deficit which everybody is talking about referring to the European Commission or the ECB bureaucracy; these institutions are more accountable than many people believe.

In my opinion, the main problem lies within the European Council:

- Each member is legitimate in his/her own country but none of them is elected to rule the neighbourhood; there is a lack of collective legitimacy; the Europeans can never express their views on the “governing” body of the EU;
- There is a lack of transparency; discussions behind closed doors; no public debate;

- No accountability (not even Mr. Van Rompuy)
- Big/small and rich/poor confrontation; the risk of having a hegemony of triple-A countries; very far away from the spirit of the European economic community

In general, there is no public exchange between the governments. In the public, this lack leads to the perception in Greece that the EU stands for diktat instead of help, while the perception in the north is that of irresponsible people in the south. The only place where this debate can take place is in the European Parliament.

3 What Could Be the Solutions?

As Professor Fritz Scharp already underlined, it will not be easy but in any case. However, in my opinion two issues are essential:

- There is a need to improve democracy: input legitimacy (“government by the people”)
- There is a need to improve the output legitimacy (“government for the people”) with respect to unemployment, rise in inequalities, poverty etc.

First steps can be taken within the current treaty framework: more respect for the institutions and all the partners (the end of “Merkozy” is good news).

Particularly with regard to a possible treaty change the following points seem relevant:

- A new “governance”? Trichet’s proposal to create a Minister of Finance of the European Union with a European treasury? Controlling discipline, debt, one day the common emission of debt (See his intervention for the Charlemagne (Karslpreis) Price Ceremony in Aachen, June 2, 2011¹).
- Eurobonds? (with strict discipline, in order to draw the advantages of a global currency/a deep and liquid market)
- A new budget with own resources is essential

¹ www.ecb.int/press/key/date/2011/html/sp110602.en.html. Retrieved on May 30, 2012.

May 10 and 11, 2012

EUROPEAN MONETARY UNION LESSONS FROM THE DEBT CRISIS



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Resolving Sovereign Debt Crises: Opening or Closing the Tap?²

This paper first describes the ingredients the present crisis in the euro area and then evaluates the key options that policy makers face in resolving the crisis and avoiding similar crises in the future. I argue that the crisis should not be seen as caused by government profligacy alone. In many troubled countries, an unsustainable build-up of private sector debt was involved as well. I argue that a more fundamental problem is that the euro area lacks an adjustment mechanism for balance of payments crises that may arise in its member countries, with or without excessive government deficits. The metaphor of taps to be opened or closed by policy is used to discuss the core trade offs that policy makers face. I discuss monetary taps, bailout taps, austerity taps and devaluation taps. I propose a simple model of government bond markets with sovereign insolvency to be used in order to evaluate EU-type bailouts. I discuss the pros and cons of austerity as a precondition for such bailouts, and I criticize the use of TARGET2 as a mechanism to absorb balance of national payments crises.

JEL-Classification: F33, F366

Keywords: Euro, sovereign risk, sovereign default, government solvency, lender of last resort, external balance, balance of payments

1 Introduction

Two years ago, it became evident that the Greek government would face the specter of bankruptcy, if left to finance its deficit through private lenders. Its fellow member countries of the euro area quickly came to the rescue in a joint operation with the IMF, providing concessional lending in the amount of EUR 110 billion (to be dished out over three years). What was the incentive for other euro member states to step in? An obvious answer was that a Greek default would have had severe repercussions for the euro area as a whole, particularly for other countries with high sovereign debt. Yet, at the time official comments were typically keen to point out that what we were witnessing was a pure sovereign debt crisis, not a crisis of the euro.

In the running up to the second bailout operation for Greece, agreed upon in February this year, negotiators of the EU were keen to point out that if Greece was not willing to accept tough conditionality, the EU would be quite willing to let Greece leave the euro area. The sovereign debt of an unre-

formed Greece was seen as a threat to the euro area which other members were apparently willing to avoid by shrinking the size of the euro area. And Greece was not the only member to cause this type of headache. All in all, we have witnessed four bailout packages, totaling more than EUR 350 billion, and yet the sovereign risk premia are not fully on retreat. Quite obviously, we do have a crisis of the euro.

The organizers of this conference suggest that we focus on the sovereign debt aspect of the crisis. However, I shall argue that we risk devising lopsided policy packages if we look at the present situation only as a *sovereign debt* crisis. In particular, as I shall detail below, in almost all of the troubled countries an unsustainable build up of *private sector* debt was involved as well. Indeed, the more fundamental problem may well be one of severe *balance of payments crises* within the European Monetary Union (EMU). These are likely to reoccur even if some of the troubled economies should eventually leave the euro and if the rest adheres to a strict fiscal compact.

² This is a somewhat abridged version of Kohler (2012b).

The panel organizers use a tap metaphor, suggesting that the evolution as well as the resolution of the crisis may be seen as a matter of opening and closing taps. I think this metaphor is quite useful, although I see a whole array of taps, not a single tap. Let me start by briefly identifying the relevant taps. First, there is the *monetary tap*, either in the form of liquidity that is pumped into the banking sector, or in the form of a clear commitment by the central bank to act as a lender of last resort also in government bond markets. Next,



there is the *bailout tap* in the hands of euro area partner governments who still have sufficient fiscal room for manoeuvre, in order to step in if troubled countries lose access to capital markets when trying to refinance their debt, or are able to do so only in paying forbiddingly high interest rates. Related to the bailout tap, there is the *risk “communitization” tap* through the issuance of some form of eurobonds.

And then there are the *fiscal taps* operated by troubled countries’ governments. These taps, however, are closely linked to the bailout tap through conditionality of bailout packages, and they stand for the degree to which a resolution of the crises requires *present*

austerity of the public sector.³ This is a question that has drawn a lot of attention and controversial discussion among economists both in Europe and the USA. And finally, there is what I call the *reserve currency tap* which allows troubled euro member states to deal with a balance of payments crisis in pretty much the same way as reserve currency countries may do in a Bretton Woods-type fixed rate system. This parallel may seem rather odd at first sight, but I shall argue why it is relevant in more detail below.

Obviously, the aforementioned taps are not just open or closed. If open at all, they are open to a larger or lesser extent. They pose the classical economic policy problem of finding the appropriate *degree* of action. All of them are *policy taps*, meaning that they are in the hands of policy makers. This, of course, also raises the question of *credibility*. The implication is that policy makers’ own views on how open the taps are, or will eventually be, need not coincide with the private sector’s view.

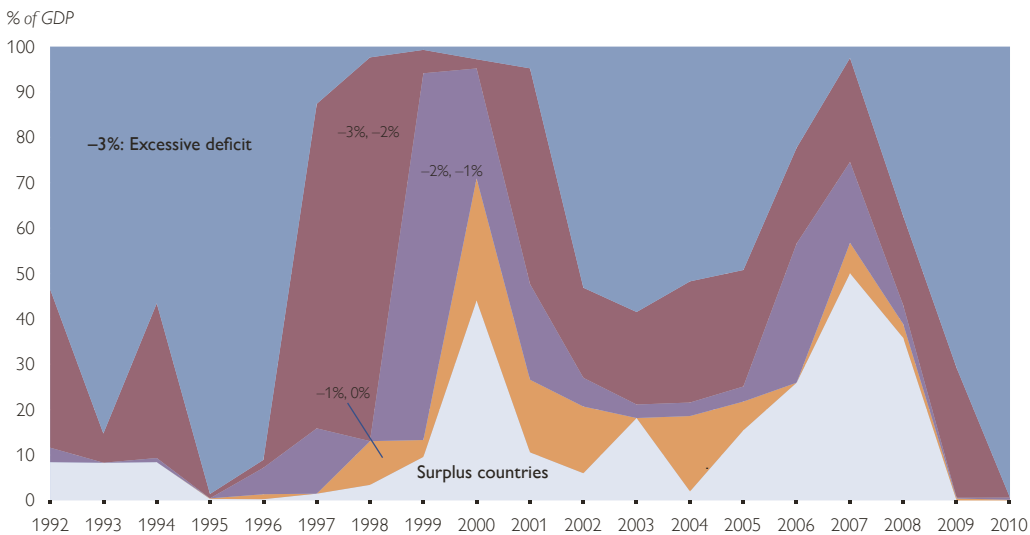
As with all types of plumbing systems, the aforementioned taps are interconnected. Specifically, what happens if any one tap is closed, may depend on the degree to which the others are kept open, or closed as well. A key question in this context is whether closing one or more of the aforementioned taps leads to one or more countries leaving the euro area. In a sense, one might consider this as opening up yet another tap, i.e., the *devaluation tap*.

In this paper, I first investigate the nature of the crises, and then proceed to a brief analysis of the policy problems and trade offs that are relevant for the above taps.

³ The same applies to eurobonds, although this has not moved much beyond loose proposals.

Chart 1

GDP Shares of 17 Euro Area Member States in Different Ranges of Net Lending



Source: European Commission, General Government Data and AMECO Database.

2 The Crises

2.1 Public and Private Sector Borrowing

It is quite clear that up to this point fiscal discipline in the euro area has been disappointing. Chart 1 gives a quick overview on the success of Maastricht, and the subsequent failure of the Stability and Growth Pact (SGP). It depicts the share of member countries of the euro (17) area, measured in terms of their GDP, that fall into different ranges of the general government net lending position. The figure considers deficit ratios higher than 3%, between 2% and 3% etc., for all years between 1992 and 2010. By 1999, the start of the monetary union, everything looked bright against the Maastricht benchmark, but within a matter of four years the share of excessive deficit countries (deficit ratios exceeding the 3% threshold) was up again, exceeding 50%, with a share of almost 80% for countries exceeding the 2% value.

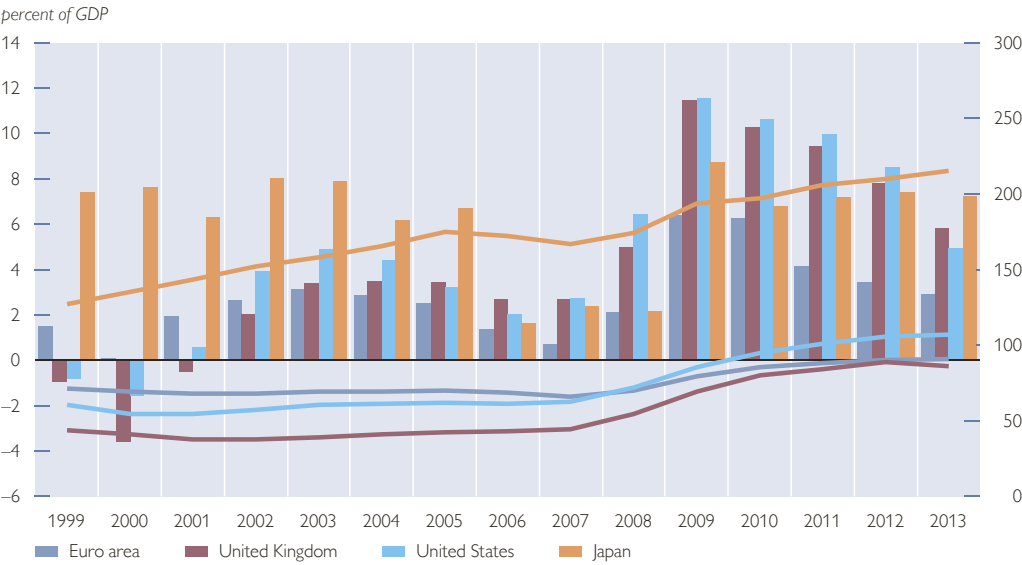
Meanwhile, we seem to have reached a situation even worse than at the beginning of the Maastricht con-

vergence process in the early 1990s. However, the years after 2007 reflect an external shock with disastrous fiscal effects. The world-wide recession sparked by the financial crisis of 2007/08 has prompted governments to resort to expansionary policies that were bound, together with the automatic stabilizers, to swell public debt beyond levels observed in “normal times”. Although it should have been clear from the start that reinventing Keynesian policies would lead to a build-up of debt, at least temporarily, the specter of sovereign default within the euro area that arose in 2010 came as a shock that no one really had anticipated.

But violation of the SGP is not what makes the present situation a crisis. The Maastricht and SGP numerology is an arbitrary standard. Moreover, as I have just argued, some of the movement portrayed in chart 1 is surely due to time-specific effects that are not specific to the euro area or to individual countries. Chart 2 therefore compares debt accumulation in the euro area with the United Kingdom, the

Chart 2

Government Balance and Debt



Source: European Commission AMECO database.
Notes: Annual deficit (bars) on the left-hand scale, debt levels (lines) on the right-hand scale.

USA and Japan. The figure tells us that the USA and the United Kingdom, at least in recent years, have been equally, or even more, prone to run deficits as was the euro area, not to mention Japan.

However, two further observations are more important. The first concerns the role that the *private* and the *public sector* have played in the evolution of the crises. And the second relates to the cause and the effect of private and public sector debt accumulation.

Take the first concern. Table 1 looks at the average annual net lending by the public and the private sector during the pre euro 1990s, during the first periods of the euro era from 1999 up to 2006, and then for the individual years since 2007. All figures are percentages of national GNP (GDP for public net lending). A first striking result is that the first episode of the euro, prior to the 2007/08 financial crisis, has mostly seen higher net lending ratios (lower deficit ratios) of the public

sector than in the 1990s. In contrast, in most countries the private sector exhibits lower net lending ratios in the euro era than in pre euro times, the exceptions being Germany, Austria and Finland. Thus, violation of the SGP as evidenced by chart 1 notwithstanding, one cannot say that the euro area as a whole has quickly returned to old habits of reckless government borrowing that was characteristic of the early 1990s. Moreover, putting Greece aside, it was not the troubled countries of the present, often referred to as the GIPSIs (Greece, Ireland, Portugal, Spain and Italy), that were responsible for this violation. Indeed, Spain and Ireland stick out as troubled economies which even had positive public net lending during this era. Admittedly, one has to be cautious when interpreting these pre-2007 numbers, since these were unusually good times for governments, featuring low bond yields and high GDP growth rates. However, as we shall see below, they were unusually good for all coun-

Table 1

Net Lending in the Pre Euro and in the Euro Era: General Government and Private Sector

	Average 1990–1998		Average 1999–2006		2007		2008		2009		2010		2011		2012	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
	% of GDP															
Euro area	-4.26	x	-2.12	1.99	-0.71	0.98	-2.14	0.54	-6.41	5.63	-6.25	5.21	-4.13	x	-3.43	x
Belgium	-5.20	8.59	-0.46	4.84	-0.32	3.89	-1.30	1.90	-5.85	6.20	-4.19	7.14	-3.66	5.88	-4.66	6.65
Germany	-3.57	2.57	-2.67	4.65	0.23	7.18	-0.06	6.17	-3.21	8.77	-4.28	9.88	-1.34	6.31	-1.04	5.37
Estonia	2.72	-9.32	1.05	-9.40	2.39	-18.30	-2.95	-5.25	-2.01	10.17	0.26	7.74	0.79	6.36	-1.74	6.77
Ireland	-1.30	x	1.68	-5.20	0.06	-5.15	-7.34	0.81	-14.19	11.09	-31.31	38.84	-10.29	13.32	-8.60	12.66
Greece	-9.02	4.78	-5.44	-4.45	-6.80	-8.46	-9.91	-7.02	-15.79	2.30	-10.76	-0.04	-8.91	1.11	-6.98	1.50
Spain	-4.94	5.37	0.20	-4.28	1.92	-11.77	-4.49	-4.83	-11.18	6.60	-9.34	5.45	-6.65	3.81	-5.94	3.47
France	-4.16	4.78	-2.79	3.28	-2.75	1.45	-3.34	1.44	-7.57	5.43	-7.08	4.80	-5.85	2.69	-5.36	2.24
Italy	-8.06	8.99	-3.20	2.61	-1.59	-0.19	-2.67	-0.47	-5.36	3.28	-4.51	1.02	-3.84	0.29	-2.21	-0.69
Luxembourg	2.15	x	2.13	0.71	3.68	5.64	3.02	-1.25	-0.90	1.27	-1.06	x	-0.56	x	-1.08	x
Netherlands	-3.52	7.25	-0.73	6.86	0.16	7.91	0.49	3.97	-5.55	8.19	-5.00	9.65	-4.32	8.84	-3.13	9.58
Austria	-3.47	1.15	-1.81	2.90	-0.99	5.10	-1.00	5.86	-4.15	7.23	-4.38	8.00	-3.43	6.07	-3.08	6.03
Portugal	-5.38	1.11	-3.81	-4.01	-3.21	-5.90	-3.71	-7.95	-10.17	0.48	-9.79	1.48	-5.83	-0.20	-4.48	1.19
Slovenia	-3.53	2.93	-2.56	0.58	-0.05	-4.71	-1.86	-5.17	-6.08	4.85	-5.85	5.17	-5.75	4.93	-5.27	5.95
Slovakia	-6.24	-0.53	-5.44	-1.09	-1.81	-3.50	-2.09	-3.21	-7.98	5.49	-7.67	6.47	-5.84	7.30	-5.02	5.51
Finland	-2.85	2.78	3.79	2.81	5.18	-1.01	4.14	-0.98	-2.85	5.45	-2.76	5.64	-1.19	2.05	-0.89	1.80
United Kingdom	-4.30	2.99	-1.57	-0.95	-2.74	0.41	-4.98	3.36	-11.40	9.21	-10.28	6.64	-9.46	7.04	-7.75	7.04

Source: European Commission AMECO database.

Note: Net lending is income minus consumption expenditure minus capital formation minus acquisition of non-financial non-produced assets plus net capital transfers, private in % of GNP, public in % of GDP. Private: Financial and non-financial corporations and households. Euro area definition: 16 countries.

tries, hence, Spain and Ireland still stick out.

When the financial crisis hit Europe in 2007 and thereafter, it did not hit countries that looked terribly vulnerable, judged from recent net lending records, again putting Greece aside, although the Italian debt level had traditionally been worryingly high. Yet, the effect of the crisis on the fiscal positions of some of the GIPSIs was disastrous. But again, it is interesting to note the difference between the private and the public sector. As the financial crisis had worked its way through to the public sector, Greece, Ireland, Portugal and Spain have experienced a rapid and protracted worsening of public net lending, while private net lending had mostly been restored to earlier levels or beyond by 2009. But these levels were far too low to match public deficits. Again the notable exceptions are Ger-

many, Austria and Finland. This was bound to lead to current account deficits which turned out impossible to finance through private capital imports, and which in some cases were even paralleled by capital flight. The outcome eventually was a series of balance of payments crises within the euro area. I shall return to this below.

The numbers of table 1 tell us very clearly that the present debt problem is ill diagnosed as the outcome of government profligacy alone. Of course, this is not to deny the presence of sovereign debt crises. But in some cases, particularly Spain and Ireland, these are long-run consequences of unsustainable levels of credit expansion in the private sector, and not a consequence of irresponsible government behavior to start with. One way to describe this is to say that a lot of private sector debt accumulated up to 2007 eventually got passed

on to governments who felt obliged to step in so as to avoid systemic consequences of the financial crisis.⁴ The willingness of fiscal policy makers to accept the present crisis as primarily one of fiscal profligacy may seem surprising. But from a political economy perspective, this seems like a relatively straightforward reaction if it is the political opponent that can be blamed for past profligacy. However, from the above we must conclude that this reaction pattern works counter to a well-balanced reform package that not only helps resolving the present crisis, but also helps avoiding similar crises in the future. Policy reforms that focus almost exclusively on government budgetary discipline are not enough to resolve the present crisis, and they will not be enough to avoid future problems of a similar nature. The subsequent sections will reinforce this point.

2.2 Sovereign Risk Premia

This leads me to the second concern, viz. the cause and effect of excessive borrowing. I argue that both have to do with the failure of financial markets to “correctly” price government debt. In the 1990s, we have observed a rapid nominal convergence as triggered by the Maastricht treaty. As a consequence, the governments of some euro area member countries were enjoying much lower cost of government debt than they had historically been used to. Chart 3 presents the details for the GIPSI-countries as well as the United Kingdom. The premia, relative to German government bonds, that these governments had to pay in the 1990s had reflected *currency risk* as well as *sovereign default risk*. Once the monetary union had started in 1999, investors

saw no currency risk any more. In other words, the monetary union as such was deemed credible. This was not too surprising. What was surprising, however, at least to some observers, was that they assumed sovereign risk had disappeared as well. With hindsight, we must state that this amounted to a severe mispricing of government debt.

One interpretation making sense of zero risk premia after 1999 would be that investors collectively did not put faith into the “no bailout clause” of the treaty of Maastricht. However, they would then have factored in a collective risk and charged a risk premium for all countries of the euro area. However, the fact that yields have converged to the *lowest* level observed prior to the euro contradicts this interpretation. Moreover, if risk premia are explained by debt levels, as suggested in the literature (see for instance De Grauwe and Ji, 2012), the amount of debt reduction that had taken place in high debt countries during the 1990s could hardly explain a reduction of sovereign risk premia down to zero by 1999; see again chart 3. The only interpretation left, then, is the “naive view” that all countries would be disciplined by the SGP and that this, in and of itself, would avoid all solvency problems. We might as well call this market failure.

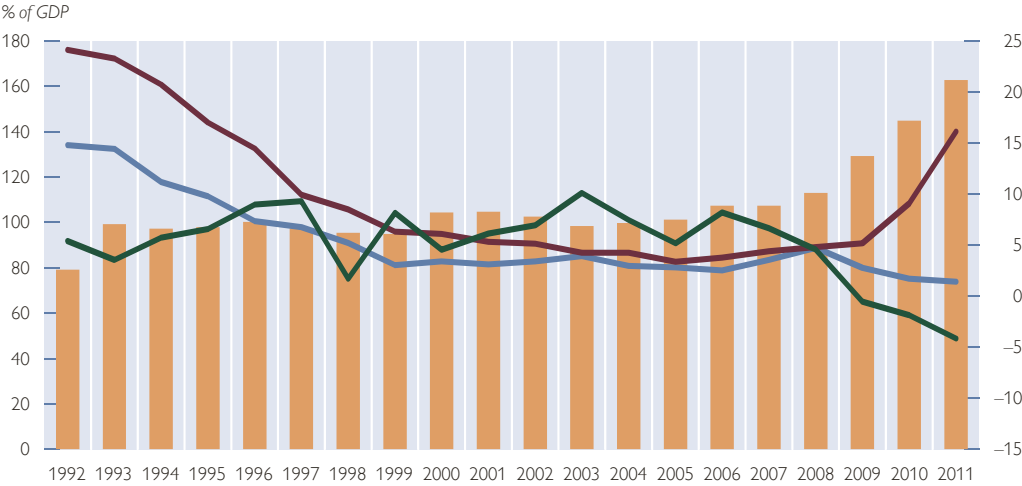
An important consequence of the vanishing sovereign risk premia was that the *real* cost of government debt had fallen quite dramatically. As evidenced by chart 3, over some episodes the GIPSIs were enjoying close to zero or even negative real cost of government debt, measured by the difference between the nominal bond yield and the national rate of inflation. The figure measures the rate of inflation

⁴ This line of argument is also found in Buiter and Rahbari (2010). Spain and Ireland are the most important cases in point.

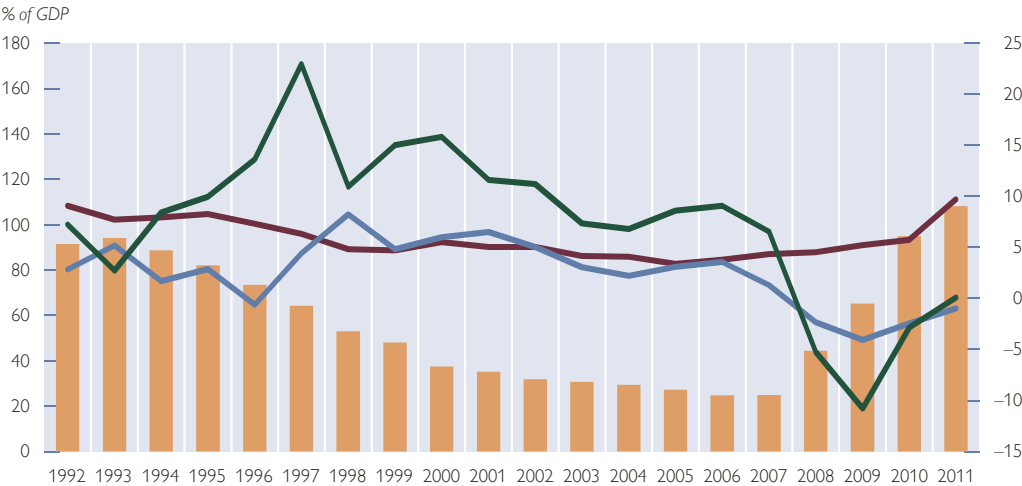
Chart 3

Debt Accumulation, the Cost of Government Debt, Inflation and Growth

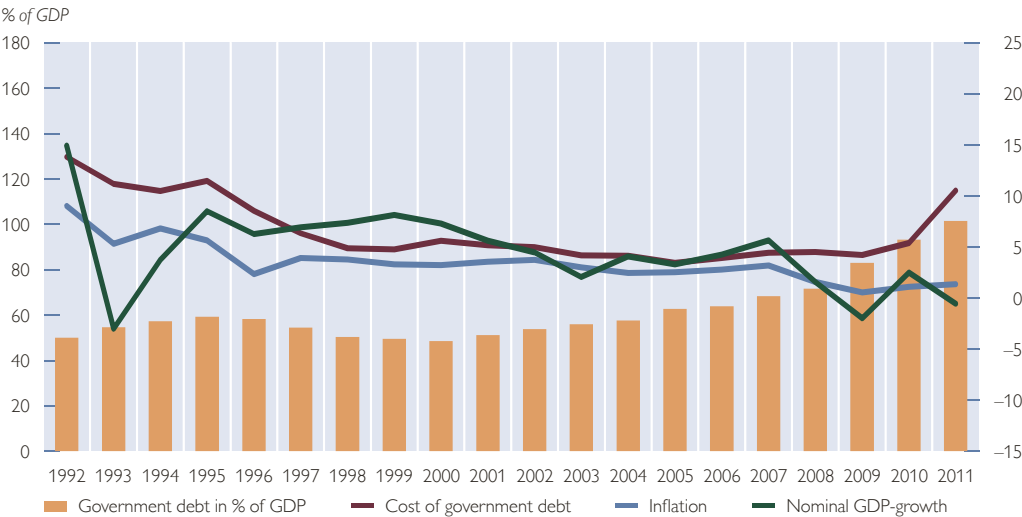
Greece



Ireland



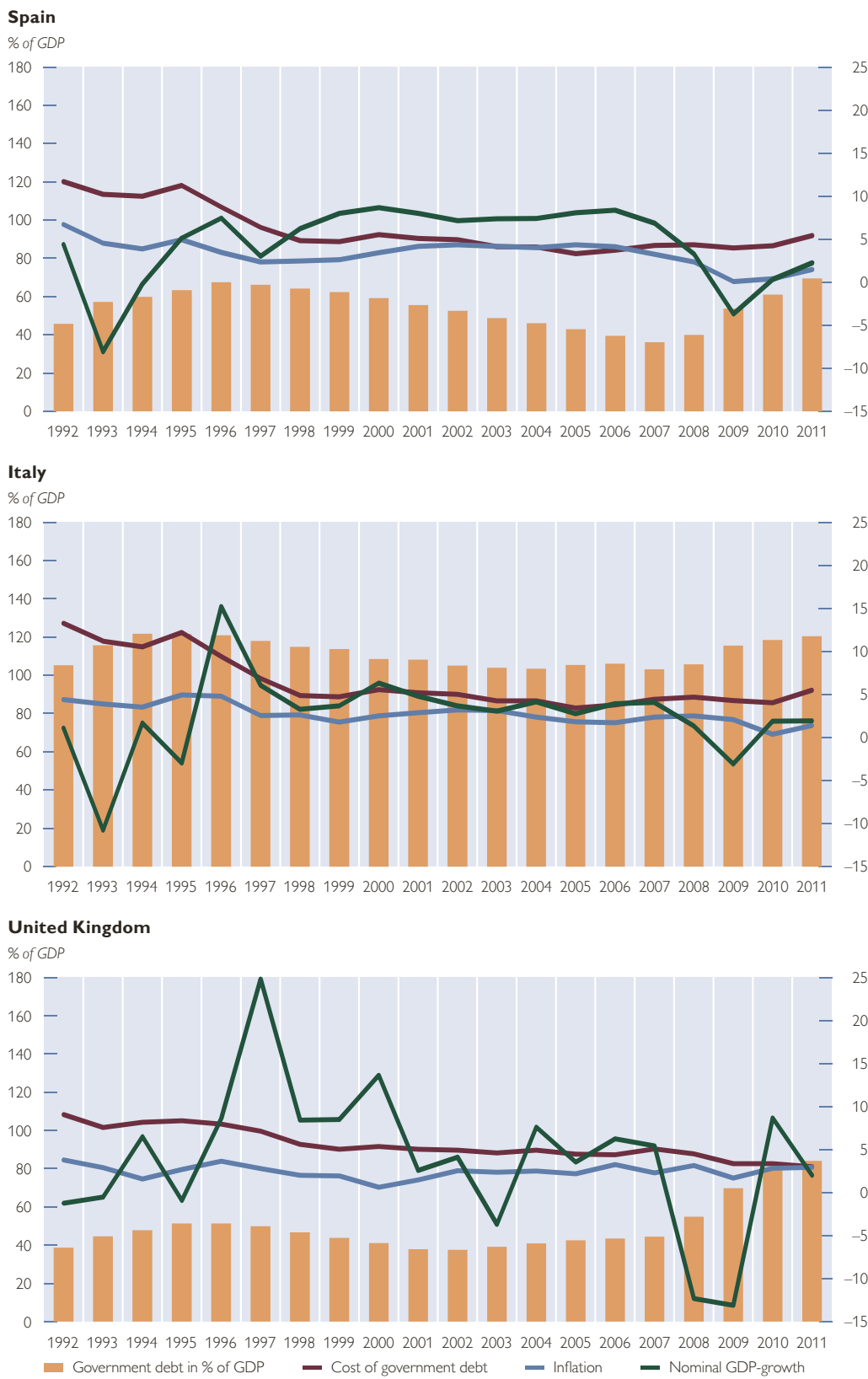
Portugal



Source: European Commission AMECO database, IMF International Financial Statistics, ECB Statistical Data Warehouse.

Note: Government debt in % of GDP on the left-hand scale, rest on the right-hand scale.

Chart 3 continued



Source: European Commission AMECO database, IMF International Financial Statistics, ECB Statistical Data Warehouse.
Note: Government debt in % of GDP on the left-hand scale, rest on the right-hand scale.

through the GDP price deflator, which was typically higher in these countries than in core countries of the euro area. Indeed, while Germany had experienced a much lower real cost of its government debt than these countries in the pre euro era of the 1990s,⁵ in each and every year since the start of the union, all of the troubled countries of the present have enjoyed a significantly lower real cost of government debt than Germany, which traditionally serves as the risk-free benchmark.

Other things equal, the interest paid on government debt is an important driver for debt accumulation, but so is nominal growth. I repeat the well known equation of motion as a lens through which to look at a further implication of the missing risk premia on government debt:

$$d_t - d_{t-1} = f_t + \frac{i_t - g_t}{1 + g_t} d_{t-1}, \quad (1)$$

where d_t is the stock of government debt at the end of period t , relative to GDP (at current prices) of period t , and f_t is the primary government deficit (i.e., excluding interest payments on existing debt) during period t . In turn, i_t and g_t , respectively are the nominal rate of interest paid during period t on pre-existing debt d_{t-1} and the growth rate of GDP between periods $t-1$ and t . Note that $-(i_t - g_t)/(1 + g_t)d_{t-1}$ gives the primary surplus necessary to hold gov-

ernment debt constant at the level inherited from the previous year $t-1$.⁶ Paradoxically, a positive debt level $d_{t-1} > 0$ would allow a government to run a primary deficit, $f_t > 0$, and still avoid any further accumulation of debt, provided that $i_t < g_t$. In theoretical models this is discussed as a state of dynamic inefficiency and mostly considered as a theoretical curiosity which is unlikely to occur with moderate levels of population growth.⁷ Yet, for euro area governments of the 2000s, $i_t < g_t$ is what we observe for several of the economies prior to 2007, as evidenced by chart 3.⁸ This further reinforces the conclusion that the vanishing sovereign risk premium has played a key role in pandering to the excessive borrowing that has eventually lead to the present sovereign debt crises.

But a complete neglect of sovereign default risk, and a situation where $i_t < g_t$, could not go on forever. Once the automatic stabilizers as well as Keynesian policies and public bailouts of troubled financial intermediaries had swelled public debt in the first two years after the financial melt down of 2007/08, sooner or later awareness of, and worry about sovereign risk was bound to set in. In some countries, particularly Spain and Ireland, the debt implications of the fiscal policy response was aggravated by the budgetary impact of the government stepping

⁵ Ireland is an exception where in 1997 and 1998 the rate of inflation was relatively high.

⁶ Denoting absolute levels by upper case letters, the equation follows from $D_t - D_{t-1} = F_t + i_t D_{t-1}$, where F_t is the excess of non-interest expenditure of the general government over government revenue. Dividing through by period t GDP, denoted by Y_t , we have $d_t - d_{t-1} = f_t + i_t d_{t-1}$, where lower case letters denote ratios to contemporaneous GDP. We have $Y_t = (1 + g_t)Y_{t-1}$, hence we may write $d_t = f_t + \frac{1 + i_t}{1 + g_t} d_{t-1}$, which may equivalently be written as

$d_t - d_{t-1} = f_t + \frac{i_t - g_t}{1 + g_t} d_{t-1}$. Alternatively, using π_t to denote the rate of inflation and defining the real interest rate r_t according to $1 + r_t = (1 + i_t)/(1 + \pi_t)$, and defining the growth rate of real GDP according to $1 + q_t = (1 + g_t)/(1 + \pi_t)$, we may rewrite $d_t = sf_t + \frac{1 + r_t}{1 + q_t} d_{t-1}$, hence we arrive at $d_t - d_{t-1} = f_t + \frac{r_t - q_t}{1 + q_t} d_{t-1}$.

⁷ See, for instance, Obstfeld and Rogoff (1996), page 171ff.

⁸ Note that the within-year spikes of risk premia are not visible in annual averages.

in to avoid the systemic risk from bank failures. But even before this was going to happen, and independently thereof, failing to acknowledge the special and temporary nature of the extremely favorable conditions for government finance constitutes a policy failure that has aggravated the capital market failure mentioned above. Once the unavoidable turnaround had happened, debt accumulation according to (1) with i_t far in excess of g_t proved a relentless force that apparently took many policy makers by surprise. The effect of this can be seen at the far right of the panels in chart 3.

Were the risk premia that investors were asking for government debt of the GIPSI-countries justified by their fiscal positions? De Grauwe and Ji (2012) have investigated this question by means of formal statistical analysis. They estimate equations explaining risk premia through government debt levels as well as government deficits and current account deficits (the “fundamentals”) for different sub-periods between 2000 and 2011 (pre and post financial crisis), and for different country sub-samples (euro member countries vs. “stand alone” countries). Two conclusions stand out. The first is that the pricing of public debt through government bond markets has followed different “rules” before and after the crisis, and it follows different rules for euro member countries and “stand alone” countries. With some degree of simplification, the rules may be described as *systematic overpricing prior* to the crisis and *underpricing after* the crisis, particularly for the euro area member countries. De Grauwe and Ji (2012) explain this as an instance of *multiple equilibria*, with an expectation driven occurrence of a bad equilibrium where

high risk premia endanger the solvency of otherwise solvent countries. I shall return to this issue below, but a telling example even on quick inspection is the comparison between Spain and the United Kingdom, as emphasized by De Grauwe (2011b): The United Kingdom government enjoys a close to zero risk premium although it has a higher debt ratio than Spain.

2.3 External and Internal Imbalance

The pattern of public and private sector net savings highlighted above has implications for the relationship between domestic absorption and domestic income and should therefore be reflected in *current account imbalances*, as evidenced by chart 4 which depicts the GIPSI-countries’ current account over the period since 1999. Normally, if a country runs a current account deficit driven by low levels of savings, meaning high levels of expenditure, it should see high levels of employment. However, this need not be the case, if the real exchange rate is misaligned. And in the present case the GIPSI-countries are facing the equivalent of a strong real appreciation that has accumulated over the past decade through diverging unit labor costs in the face of a common currency with such countries as Germany, Austria or the Netherlands. The result was a trend towards an ever larger gap in international competitiveness of the GIPSI-countries, as evidenced by table 2.⁹ The figures in that table seem to vindicate warnings voiced in the 1990s, particularly by US economists, that any currency union extending beyond the core EU Member States would not constitute an optimal, or just a workable, currency union. Moreover, they suggest that any hope that the criteria for an optimum cur-

⁹ I am grateful to Jan Hogrefe for helping me drawing up this table; see Hogrefe et al. (2012).

Table 2

Unit Labor Cost Misalignments in Euro Area Countries

Towards Non-Euro Area Countries

	Misalignment in			
	2007	2008	2009	2010
<i>Export Ratio Weights</i>				
Austria	85.42	84.50	85.09	85.32
Belgium	95.08	94.92	94.18	95.06
Finland	91.50	93.71	98.01	97.65
France	97.70	96.71	95.21	96.79
Germany	79.34	77.71	79.16	78.30
Greece	97.74	98.81	99.09	100.45
Ireland	117.91	120.45	108.70	101.10
Italy	99.24	99.05	98.77	99.15
Netherlands	97.82	95.92	95.84	95.25
Portugal	102.79	101.88	99.51	98.78
Spain	104.92	104.96	101.26	98.66

Towards Non-Euro Area Countries

	Misalignment in			
	2007	2008	2009	2010
<i>Nominal Export Weights</i>				
Austria	88.02	87.93	89.68	90.68
Belgium	96.51	97.03	97.25	98.26
Finland	93.69	96.64	101.90	102.24
France	100.04	99.75	99.13	101.34
Germany	81.34	80.42	82.89	82.45
Greece	98.35	100.10	101.46	102.90
Ireland	120.03	123.58	112.97	105.65
Italy	101.80	102.49	103.42	104.48
Netherlands	99.78	98.72	99.30	98.75
Portugal	104.59	104.41	103.18	102.71
Spain	108.10	109.39	106.28	104.05

Towards Other Euro Area Countries

	Misalignment in			
	2007	2008	2009	2010
<i>Export Ratio Weights</i>				
Austria	93.61	93.39	93.60	94.27
Belgium	99.39	100.01	99.69	101.18
Finland	95.61	98.80	104.00	103.58
France	100.65	99.78	98.93	100.80
Germany	83.92	82.63	84.48	83.54
Greece	101.14	102.57	103.53	105.47
Ireland	123.92	127.01	115.09	107.03
Italy	104.48	104.64	104.64	105.12
Netherlands	104.79	103.30	103.85	103.62
Portugal	103.68	102.81	102.03	102.01
Spain	108.05	109.48	107.08	105.38

Towards Other Euro Area Countries

	Misalignment in			
	2007	2008	2009	2010
<i>Nominal Export Weights</i>				
Austria	99.07	99.49	99.15	100.02
Belgium	103.74	104.83	104.17	105.44
Finland	100.40	104.15	108.87	108.60
France	104.42	103.96	102.51	104.76
Germany	82.00	80.90	83.13	82.00
Greece	102.20	104.13	104.70	106.48
Ireland	126.10	129.73	117.50	109.64
Italy	107.87	108.69	108.54	109.14
Netherlands	110.38	109.65	109.52	109.56
Portugal	105.76	105.28	104.40	104.32
Spain	113.23	115.11	111.80	109.47

Source: OECD.STAT for unit-labor cost and IMF-DOTS for trade. For trade ratio weights, see Hogrefe et al. (2012).

Note: The numbers give unit-labor cost relative to a weighted average of other countries, whereby 1999=100. For Greece, we set 2001=100. Export ratio weights use export ratios as appearing in gravity equations.

rency area would be met “endogenously” has now turned out to be an illusion.

Thus, in addition to high levels of expenditure through a low level of savings by the public and/or the private sector, the current account imbalances for the GIPSI-countries observed over the past decade also reflect expenditure switching towards tradable goods. And in the most recent years of the sovereign debt crises, which is characterized by private

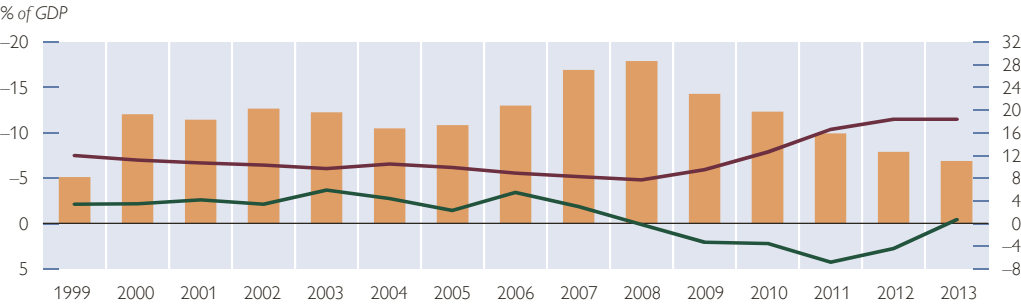
deleveraging (see the savings rates in table 1), we witness a particularly nasty combination of *internal* and *external imbalance* in these countries: Current account deficits, albeit in lower magnitudes than prior to the onset of the crises, and high levels of unemployment.¹⁰ Chart 4 reveals this by juxtaposing current account imbalances of these countries with their rates of unemployment and their rates of real GDP growth.

¹⁰ See Corden (1994) for a nice theoretical treatment of the relationship between internal and external imbalance. The “locus classicus”, of course, is Meade (1951).

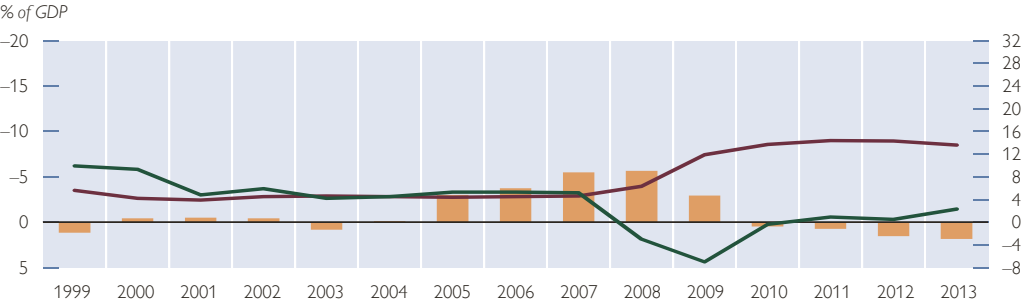
Chart 4

External and Internal Imbalance in Troubled Euro Area Countries

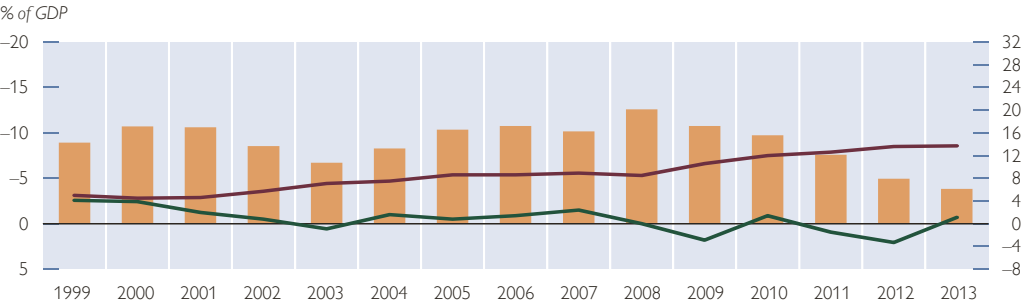
Greece



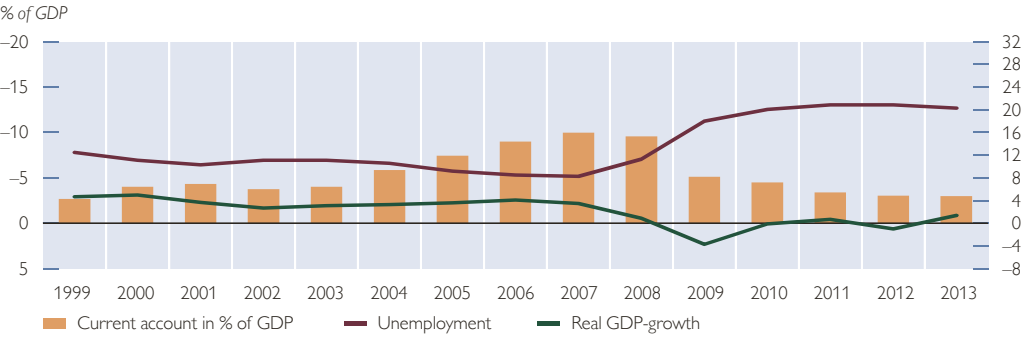
Ireland



Portugal

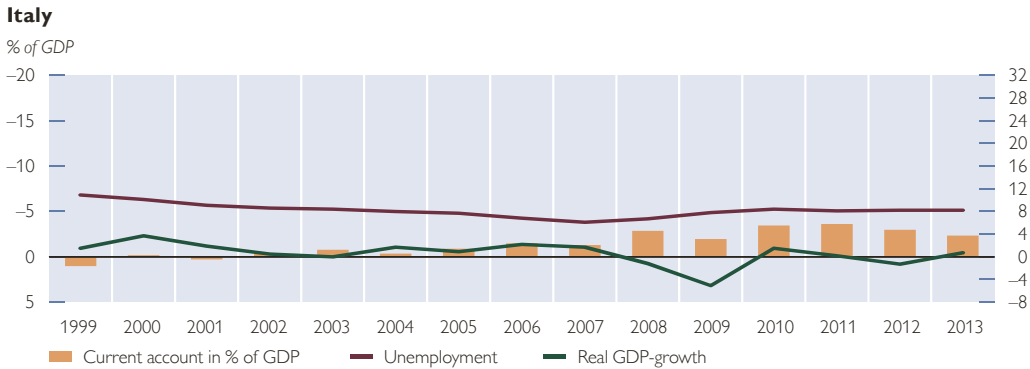


Spain



Source: European Commission AMECO database.
Note: Current account in % of GDP on the left-hand scale, rest on the right-hand scale.

Chart 4 continued



Source: European Commission AMECO database.

Note: Current account in % of GDP on the left-hand scale, rest on the right-hand scale.

All of this may sound a bit like old-fashioned macroeconomics, but in my view it is illuminating, and it delivers an important message. It is difficult to imagine how macroeconomic equilibria in GIPSI-countries can be restored without changing relative prices of traded and non-traded goods produced in these countries. A key policy challenge will therefore be how to achieve such a “revaluation” without falling back behind the euro or, to use the tap-terminology, to resort to the devaluation tap.

Against the backdrop of modern theory and empirical developments, some readers might question the relevance of current account imbalances of countries that belong to a currency area. After all, we do not normally worry about current account imbalances of regions within a country. Moreover, in a world with *capital mobility*, as within the euro area, current account deficits need not constitute external imbalance; they simply reflect inter-temporal trade. The crucial question is whether capital imports financing a current account deficit do or do

not violate a country’s inter-temporal solvency. In a recent paper, Obstfeld (2012b) argues that current account imbalances should remain an important magnitude to watch even with a high degree of capital mobility.¹¹ In particular, longer stretches of current account imbalances caused by real appreciation and credit booms are likely to eventually lead to financial distress. In a world of high powered finance and with gross capital imports and exports several times the magnitude of current account imbalances, there is no guarantee that a country’s net international investment position is in line with the financing needs implicit in past current account deficits.

The early years of the euro area have seen large volumes of capital flowing from the core to the periphery, financing large current account deficits.¹² Partly, these capital flows came about by means of core country commercial banks serving as conduits for world savings finding their way into the euro area periphery. The crucial question at the time was whether these were “good imbalances” reflecting a high marginal

¹¹ See also Obstfeld (2012a) and Courinchas and Obstfeld (2011).

¹² Empirical evidence on international capital flows is less easy to obtain than for current account imbalances. Evidence for the intra euro area capital flows mentioned above is cited in Eichengreen (2012).

productivity of capital and high growth potential in the periphery (now integrated on both goods and capital markets), relative to the core; see Eichengreen (2012). In retrospect, the answer is no, and this became apparent when the financial crisis struck in 2007/08. In part, these countries had been riding on their own real estate bubbles that were going to burst around that time. By 2008, the core country “conduit banks” were no longer able and/or willing to sustain their flows of capital to the periphery. With capital imports drying up, the GIPSI-countries became dangerously exposed with their need to roll over high levels of foreign debt, reflecting past current account deficits. In some countries, particularly Ireland and more recently Italy, this was aggravated by capital flight; see Sinn and Wollmershäuser (2011) and Buiter and Michels (2011). In retrospect, one cannot help asking how the current account imbalances of the GIPSIs in the

balance of payments crises developing after 2007, with net foreign investment positions of minus 104% of GDP in Portugal, minus 95% of GDP in Ireland, minus 92% in Spain and minus 88% in Greece.¹³

Some authors have preferred to speak of a euro area *growth problem* instead of a balance of payments problem; see in particular Shambaugh (2012). This is just another way to describe the above mentioned coexistence of an external imbalance in the form of a protracted (if shrinking) current account deficit leading to high levels of foreign debt and an internal imbalance in the form of high unemployment. Note that an equation similar to (1) drives the evolution of a country’s net international investment position. The crucial question here is what type of adjustment mechanism will eventually lead these countries back to sustainable paths of income and expenditure.

If the GIPSI-countries had had their own national currencies, other things equal, the development that I have just described would most probably have led to severe currency crises. Barring national currencies, however, a currency run could not take place. What has taken place instead is an accumulation of TARGET2 liabilities that these countries now have vis à vis the ECB, mirrored by TARGET2 claims held by core central banks, particularly the Bundesbank. This type of “adjustment mechanism” is described in great detail by Sinn and Wollmershäuser (2011). However, the key concern here, as I shall argue below, is that the “TARGET2 tap” is devoid of any adjustment mechanism that would help restore external equilibrium in these countries. Strong



2000s could for such a long time have been regarded as a mirror image of “healthy” capital movements from the core to the periphery. In any case, the outcome must be described as severe

¹³ Italy’s position is much better, with minus 25% of its GDP. By way of comparison the net international investment position of the euro area as a whole is minus 11%. The sources of these numbers are publications of national banks, as listed in http://en.wikipedia.org/wiki/Net_international_investment_position and accessed on April 4, 2012.

growth might resolve the internal imbalance and, by implication of equation (1), would also alleviate the sovereign debt problem, but it would not resolve the external imbalance. This requires undoing the severe real appreciation that these countries have undergone during the past decade.

There are two ways in which this may happen: *Internal relative devaluation*, with the GIPSI countries remaining in the euro area, or *external devaluation* after they reintroduce their own national currencies. In turn, internal devaluation may take place with *absolute* nominal devaluation of wages and the euro area as such maintaining its present degree of price stability, or devaluation of the periphery *relative* to the core facilitated through a more inflationary euro area.

3 The Taps

Against the backdrop of this very rough analysis of the crises, what can we say about the taps mentioned at the outset? Which of them should be opened or closed, relative to what we have observed up to this point? Naturally, I cannot go into great detail with any of the taps, and I shall treat some of them in less detail than others.

3.1 The Monetary Tap

I define this tap as being operated by the ECB. I see two key aspects. The first is the provision of *liquidity to the banking sector* through standard refinancing operations, the second is ECB activity in the *secondary government bond market*. The ECB has responded to the crises through both types of activity. Up until late 2009, the monetary base in the euro area was on a pretty

stable trend path, but then the monetary base departed visibly from this trend in four successive spikes (with contractions in between), the latest expansion starting mid-year in 2011 at EUR 1.05 trillion and adding EUR 0.55 trillion until the present. By mere inspection, the present stock of roughly EUR 1.6 trillion is above the long term trend in the amount of roughly EUR 0.4 trillion, which is about 30%.¹⁴ Importantly, however, this expansion of the monetary base has not swelled the conventional monetary aggregates by nearly as much. For instance, while the monetary base has almost doubled since 2009, M1 has risen by just about a quarter.¹⁵

The second type of activity, purchasing government bonds in the secondary market, has started in May 2010 (in connection with the first Greek bailout) under the Securities Market Program. Over the past two years the ECB sovereign bond holdings have run up to over EUR 200 billion. However, this is very small, relative to the US Fed which holds more sovereign debt in the amount of USD 1 trillion (Shambaugh, 2012).

Are we to conclude that these taps are unduly opened and should be closed, to some extent at least? Against the backdrop of the previous section, a first key policy question regarding liquidity is whether the ECB wants to get into the business of alimentering a more inflationary environment, in order to facilitate an easier devaluation (of wages etc.) in troubled GIPSI-countries, relative to the core, and thus to contribute to restoration of these countries' external balance. Prominent voices advocating this policy are Rogoff (2011a) and

¹⁴ These numbers are taken from the ECB Statistical Data Warehouse under sdw.ecb.europa.eu/ (retrieved on April 5, 2012) and referring to the definition of Base Money [$\text{sum}(\text{L010}\&\text{L021}\&\text{L022})$].

¹⁵ Again, the numbers have been taken from the Statistical Data Warehouse; see previous footnote.

Krugman (2012). This policy would also effectively heed the more general advice that many economists, above all Olivier Blanchard, have issued subsequent to the financial crises, although the argument there is different. It has to do with an enhanced degree of freedom to lower nominal interest rates to cushion recessionary shocks, if in “normal” times nominal interest rates are somewhat higher due to higher inflation; see Blanchard et al. (2010). In any case, I see no indication for this to happen, nor would I think this would be a successful policy to resolve the GIPSI-problem. For one thing, opening up this tap does not automatically mean more inflation; see my earlier remark on the link between liquidity and M1. And even if the room for more inflation should eventually be utilized, there is still a long shot from higher inflation in the euro area as a whole and the relative devaluation needed to restore external balance in the GIPSIs.

A second important question relates to whether the ECB should commit to playing the role of a lender of last resort also on government bond markets. It is important to recognize that when the ECB has purchased government bonds under the Securities Market Program it was *not* acting as a lender of last resort. This program was put in place to “address the malfunctioning of securities markets and to restore an appropriate monetary policy transmission mechanism”, with no mention of the ECB acting as a lender of last resort. In theory, the need of such a lender hinges on a specific condition, viz. that there are multiple market equilibria driven by expectations, with the distinct possibility of a so-called “bad equilibrium” where fundamentally solvent debtors are driven into insolvency by self-fulfilling expecta-

tations. It is commonly accepted that the banking market suffers from this deficiency, when central banks are ready – more or less explicitly – to step in as lenders of last resort in case such a “bad equilibrium” (i.e., a bank run) arises. Most of the time the commitment itself is sufficient to avoid such equilibria.

The question is whether government bond markets have this same characteristic or not. In a series of papers, Paul De Grauwe has forcefully argued that they do, and that the ECB should therefore be prepared to let markets know it will serve as a lender of last resort on government bond markets; see De Grauwe (2011b) and De Grauwe (2011a). His argument rests on a political economy model in the spirit of the theoretical literature on sovereign default.¹⁶ This model portrays a government that is hit by a negative shock and considers the benefit and cost of default. The benefit of default plausibly rises with the magnitude of this shock, and a key assumption of the model is that for any given shock the benefit is larger, if the default is expected than if it is not. This is plausible against the backdrop of a sharp rise in the cost of debt that follows from bond holders expecting a (partial) sovereign default (chart 3). Under reasonably general conditions regarding the cost of default, this leads to a range of shock magnitudes that entail multiple equilibria, similar to the multiple equilibria in the banking market that is induced by the specter of a bank run. If there is a lender of last resort, then the “bad equilibrium” no longer is an equilibrium.

A lender of last resort would thus prevent solvent governments from becoming insolvent as a result of a specu-

¹⁶ See Rogoff (2011b) for a concise overview of this literature.

lative attack on their bonds. A credible lender of last resort needs to have the power to print money. Hence, it can only be a central bank. Specifically, the European Stability Mechanism (ESM), even an enlarged one, cannot fulfil this role, quite apart from the fact that the ESM is designed as a bailout facility. But according to this doctrine, lending of last resort must be restricted to solvent governments. It must not be used towards a bailout. Nor may it be used as a vehicle to finance government expenditure under “normal times”, where there is no threat of a “bad equilibrium” to arise. One way to avoid this is to make such lending available only at punitive cost (Bagehot doctrine). And it must be coupled with prudent supervision of borrowers who receive the benefits of last resort lending. All of this indicates that implementing this type of policy is difficult and requires careful design. But this is no excuse for denying a serious try, in time before the next crisis might arise.¹⁷

Econometric evidence compiled by De Grauwe and Ji (2012) shows that for equal fundamentals (such as debt and deficit ratios) capital markets do not charge sovereign risk premia for stand alone countries while doing so for euro area member countries. Apparently, a country’s ability to print the money in which government debt is issued is interpreted by capital markets as the presence of a lender of last resort, even if the central bank’s statute or policy rules do not contain an explicit commitment to that effect. By the same logic, euro area member countries lack any such de facto lender of last resort. Barring a debt instrument that collectivizes sovereign risk, they are left vulnerable to expectations-driven “bad”

equilibria which may push them to the brink of insolvency. Obviously, this potentially causes high welfare cost, which could be avoided if the ECB was willing to act as a lender of last resort vis à vis bonds issued in euro by national governments, provided that the practical problems of implementation regarding incentives and the line between solvent and insolvent governments can somehow be solved.



3.2 The Bailout Tap

For the present purpose, I define bailout as a refinancing operation for a given level of sovereign debt which involves two elements: *Other sovereigns* (governments or institutions backed by governments) acting as lenders or through guarantees, and a rescue element in the form of *concessional financing* conditions. Concessional finance may range from interest rates below levels charged for competitive borrowing on the capital market, over restructuring maturities to outright transfer. The purpose generally is to avoid default, hence it usually involves debtors deemed to be at the brink of solvency. Note the difference to lending of last resort, where it is central banks, not

¹⁷ The most daunting challenge probably is to avoid adverse incentives and moral hazard. For a more detailed discussion of this and other issues, see De Grauwe (2011a).

governments, that become active, and where the financing conditions are punitive instead of concessional, in order to guarantee that it is restricted to solvent debtors. Bailouts are firmly placed in the realm of fiscal policy, while the role of a lender of last resort is a matter of monetary policy, although directed at government bond markets.

Up to this point, the EU has organized four bailout operations for three countries: Greece (May 2010 and March 2012), Ireland (November 2010) and Portugal (May 2011). These have been constructed as loan packages for troubled countries with two EU institutions extending these loans which they finance by issuing debt instruments on capital markets: The Euro-



pean Commission, authorized to do so under the *European Financial Stability Mechanism* (EFSM), and the *European Financial Stability Facility* (EFSF), a special company created in May 2010 by euro area member states, which essentially does the same and is backed by these countries' guarantees. These guarantees now total EUR 780 billion,

giving the EFSF a lending capacity of EUR 440 billion. The EFSF was initially intended as a temporary institution lasting only for three years, to be replaced by the *European Stability Mechanism* (ESM) in 2013. But the ESM is now scheduled to start already in 2012, and the EFSF and the ESM are likely to coexist for some time. In addition to these EU institutions, all four rescue packages also involve lending through the *International Monetary Fund* (IMF).¹⁸

The first Greek loan facility has totaled EUR 110 billion, the second loan facility of 2012 has added a further EUR 130 billion.¹⁹ As of December 2011, a total of EUR 73 billion has been disbursed. The Irish loan package runs up to EUR 67.5 billion, of which EUR 42.25 billion has been disbursed up until March 2012.²⁰ The Portuguese bailout amounts to a total of EUR 78 billion, of which EUR 36.5 billion has already been disbursed. All of these packages involve a significant amount of conditionality relating to fiscal policy but also to other areas of economic policy and governance. I shall return to this below.

What is the rationale for these bailout packages? As argued above, bailouts usually intend to avoid disorderly sovereign default. However, if the debtor government is not fully solvent, it seems questionable whether a bailout will do more than postponing default. Gaining time may be a valuable outcome of a bailout in that it facilitates an orderly default later, provided the time bought is used wisely. Whether anything is gained beyond buying time

¹⁸ Details of these bailout operations are found under http://ec.europa.eu/economy_finance/eu_borrower/index_en.htm (retrieved on June 26, 2012).

¹⁹ The second rescue package involves a private sector write down estimated at well above EUR 100 billion.

²⁰ When all tranches will have been disbursed, the entire rescue lending to Greece and Ireland will have added up to about a third of the respective government revenues projected for the three years during which lending takes place.

much depends on the degree of concessionality. In principle, the concessionality of a bailout package can be tailored such that solvency of the government is restored.

Whether or not the bailout tap should be opened, once a specific case has emerged, is a contentious issue. The common argument is that a bailout avoids losses to private investors holding the sovereign debt in question, but involves a cost for the lending countries' taxpayers who shoulder risk that private lenders would not be willing to shoulder under the concessional conditions in question. Ex post, whether a bailout should be organized first and foremost seems a *distributional* issue. I shall demonstrate below that for the EU-type rescue packages this view is questionable. Depending on the details of the bailout loan package, the risk shouldered by lending countries' taxpayers might be relatively small, while the risk of default for the private sector might increase significantly. But perhaps more importantly, there is an efficiency perspective as well. If lending institutions of the private sector are ill-prepared to take these losses because they lack adequate capital, then there may also be an ex post *efficiency* case for the bailout, which is to fend off a systemic banking crisis.²¹

Efficiency considerations are even more important from the *ex ante perspective*. The presence of a bailout mechanism like the EFSF and the ESM may serve a useful purpose in avoiding "bad" equilibria where insolvency arises in a "non-fundamental" way, through excessive risk premia driven by expectations. However, there is a danger of

adverse incentives deriving from such bailout facilities. Note the difference to last resort lending, which is a very unattractive perspective due to punitive borrowing cost. A further difference seems important: The lender of last resort, by virtue of access to the printing press, has the necessary power to avoid any speculative attack. In contrast, the power of the EFSF and the ESM, even if they are merged as now envisaged, may well not be sufficient to deal with speculative attacks on larger member countries like Spain and Italy. If avoiding "bad" bond market equilibria is the objective, then the ECB as a lender of last resort seems a far superior instrument to use.

Might a bailout still be as useful as a second-best policy measure in order to avoid self-fulfilling expectations to arise, thus helping troubled economies to stay clear from "bad" bond market equilibria? Answering this question requires closer analysis of a bond market equilibrium that is characterized by multiple equilibria and susceptible to speculative attacks, with special focus on government default. Standard models of sovereign default with this property usually follow a political economy approach, meaning that they focus on a government's willingness to pay based on political costs and benefits, as in De Grauwe and Ji (2012).²² In the working paper version of this paper, I present a model that focuses on the government's ability to pay and which similarly features multiple equilibria. These equilibria involve different risk premia, some of which are driven by expectations of government insolvency. I then use this model to explore the conse-

²¹ A further efficiency case may be made on the grounds that numerous private lenders fail to coordinate in exerting pressure on borrowing governments to carry out reforms needed to avoid insolvency, and a large player like a bailout institution might be able to resolve this coordination failure.

²² For a useful survey of this literature, see Rogoff (2011a).

quences of an EU-type bailout loan package in a case where the economy is in an unstable, but “relatively good” equilibrium. “Relatively good” means that there is a risk premium based on expected insolvency, but the risk premium is “relatively modest”. There are two other equilibria, one where the government is solvent, and one where risk premia are “very high”.

The outcome of my analysis is that in such a situation an EU-type bailout package is likely to shift the economy from a “relatively good” equilibrium with a modest risk premium to a “bad” equilibrium where the risk premium is much higher.²³ The reason for this seemingly paradoxical result is the assumption that the bailout loans command seniority over private creditors. Although, to my knowledge, this has not been part of the official EU loan packages, but it is probably fair to say that all of the past bailouts have been agreed upon under an implicit understanding of such seniority. It also seems a fair element of the bailout since the second typical element of the package is that loans are extended under concessional conditions, i.e., with an interest rate significantly below the rate that the troubled government would have to pay on private capital markets.

3.3 Austerity – Unavoidable Yet Dangerous?

The analysis of EU-bailout packages for governments threatened by insolvency that I have just alluded to at the end of the preceding subsection does not do full justice to the bailouts that European institutions have organized for Greece, Ireland and Portugal, and to the institutions that have been put in place in order to organize future bail-

outs should the need arise. Perhaps the most important element of EU-type bailouts ignored in the above is *conditionality* of the loans extended on government austerity in the recipient countries.

The analysis needs to be modified in two ways. The first relates to the assumption of a given permanent primary surplus. In practice, the GIPSI- economies have come into trouble because they were perceived as being on a path of excessive government deficits. The deficits were deemed *excessive* in two different ways. First, in the formal sense of violating the SGP criteria. And secondly, in a more fundamental way, because there was no credible plan or strategy for how the present deficits would eventually be *changed* into something vaguely connected to the notion of a permanent surplus that is consistent with inter-temporal solvency, given the debt accumulated in the past. The whole idea of bailout was to help the troubled countries finding a credible turnaround of their fiscal stance that is in line with, or at least not in blatant contradiction to, the inter-temporal budget constraint.

Of course, if the government is insolvent in the above sense, then there is no way around *writing off* part of the existing debt. The debate will then be about who bears how much of this adjustment burden, and the policy challenge is to establish workable procedures to resolve this debate with due speed. I shall not analyze this aspect any further in this paper.

An issue arising in all cases of excessive deficit, whether solvency is involved or not, is to define a long-run permanent primary surplus that reflects the *policy preferences* of the coun-

²³ Details can be found in the working paper version of this paper, available under www.wiwi.uni-tuebingen.de/forschung0/working-papers-in-economics-and-finance.html.

try regarding the size of the government in terms of public expenditure and tax revenues, while at the same time being “*solvency-consistent*” with the inherited debt ratio. To proceed we now change the dating convention of the above equation of motion for government debt in (1). We define \tilde{d}_t as the level of debt *at the beginning* of period t , relative to period t GDP. Accordingly, we assume that the flow magnitudes (revenue, expenditure) behind the deficit are falling due at the beginning of period, and we denote this deficit as \tilde{f}_t , again relative to period t GDP. Obviously, this is somewhat more than a mere change in the dating convention, as it has to do with the availability of flows. With this modification, the equation of motion is

$\tilde{d}_{t+1} - \tilde{d}_t = \frac{1+i_t}{1+g_t} \tilde{f}_t + \frac{i_t}{1+g_t} \tilde{d}_t$, which may be rewritten as

$$\tilde{f}_t = \frac{1+g_t}{1+i_t} \tilde{d}_{t+1} - \tilde{d}_t. \quad (2)$$

Let us now look at conditions under which the government debt ratio remains stationary. Given an inherited debt level $\tilde{d}_t < 0$, a constant debt ratio, $\tilde{d}_{t+1} - \tilde{d}_t = 0$, implies

$$\tilde{f}_t^* = \frac{g_t - i_t}{1 + i_t} \tilde{d}_t < 0, \quad (3)$$

provided that $i_t > g_t$, which is likely to be fulfilled in the long run.²⁴ A negative primary deficit \tilde{f} means a primary surplus. If $-\tilde{f}_t^*$ as determined in (3) is below the upper bound \bar{z} , the country would be able to stabilize the inherited debt ratio by aiming for a permanent primary surplus equal to $-\tilde{f}_t^*$. Of course, this might already be a formidable challenge, if the present primary balance is negative, as in the GIPSI-countries

around 2010. But the country might be well advised to aim for a more ambitious long-run target, so as to avoid being exposed to bond market vagaries through a high debt ratio. In any case, having a clear and *credible target* value for the *long-run debt ratio* and the corresponding primary surplus is an indispensable element of any plan for a troubled economy to return to normalcy in government finance.

The second aspect which is ignored in the above analysis is that both, the cost of government debt g and the nominal growth rate of GDP g are not independent of fiscal policy, i.e., on the government deficit and the debt ratio. Arguably, this concern is more relevant in the short run than in the long run. Indeed, it seems relatively safe to assume that the long-run cost of government debt as well as the long-run growth potential are independent on the long-run debt ratio and the associated primary surplus, provided they



credibly satisfy the long-run solvency condition (3). What should be born in mind, however, is that even solvent governments may be subject to “speculative attacks”. And from the previous subsection we learn that a government

²⁴ See my earlier remark on dynamic efficiency. Notice the difference to equation (1), which is explained by the above mentioned change in our dating convention from end of period to beginning of period notation of stocks and flows.

with a higher debt ratio is more heavily exposed to such attacks than a government with a lower debt ratio.

Suppose policy makers have succeeded in finding a consistent and credible long-run target for the debt ratio and the associated primary surplus.



The *short-run* challenge for a troubled economy then is to find an optimal *adjustment path* to the long run, permanent stock and flow. It is at this point that the bailout activities of the euro area have recently met strong criticism for their *single-minded focus on austerity*. The issue here is not whether or not austerity is needed at some time, but whether there is a danger of trying to implement too much of it too quickly, given the present macroeconomic conditions. Specifically, too much discretionary fiscal adjustments may be implemented at a time of poor economic growth. To the extent that the fiscal policy has “Keynesian effects”, such adjustments, particularly if implemented simultaneously in many countries, will

amount to a critical drag on aggregate demand, thus aggravating the poor short-run growth perspectives. In turn, poor growth aggravates the fiscal position of the government through the automatic stabilizer as well as through the adverse effect of low growth rate g_t on debt accumulation; see equation (1). This concern has been voiced by many prominent observers, both with a view on the euro area and with respect to the USA and other industrialized countries.²⁵

While the general concern is probably valid, it is very difficult to judge whether or not present fiscal policies are placing too much emphasis on austerity. Corsetti and Mueller (2011) point out that across countries and time high government risk premia have been correlated also with high borrowing cost for the private sector. Although the causality is not perfectly clear, this sovereign risk channel suggests an argument against leniency that has so far received little attention. If austerity measures succeed in reducing the government risk premium, and if this leads to lower private borrowing cost, then this at least mitigates the contractionary effect of austerity. Other defendants of tough fiscal adjustment even in an environment of poor growth have gone much further in turning to the idea of a “*double dividend*” of austerity. The argument is that austerity, if implemented in the right way, not only has the direct effect of limiting (or even turning) debt accumulation through a lower primary deficit, but also an indirect effect through a positively effect-

²⁵ To mention just a few, see Blanchard and Cottarelli (2010), Blanchard (2012), and Stiglitz (2012). *The Economist* warns of the danger to repeat a terrible mistake that was made by the US during the Great Depression. Worried by debt accumulation, the US administration was urging the US Congress to implement a fiscal adjustment amounting to 5.5 % of GDP during the years 1936–1938, in order to stop debt accumulation. Interestingly, the debt ratio that gave rise to the concerns was no more than 40% of US GDP, which pales against the present debt levels even of sound governments. In any case the result was a “recession within the great depression”. *The Economist* estimates that the fiscal adjustment has caused an 11% drop in GDP and a 4 percentage point increase in unemployment; see “There could be trouble ahead”, *The Economist*, print edition of December 10, 2011. See also Krugman (2012).

ing the real growth rate. The argument primarily rests on oft-quoted evidence presented by Alesina and Ardagna (2010), who look at numerous large, discretionary fiscal adjustments implemented in OECD countries between 1970 and 2007 in order to reduce public debt. They differentiate between tax based and expenditure based adjustments, finding that adjustments based on expenditure cuts have tended to be more successful than adjustments based on tax increases. Moreover, they find that in some cases fiscal adjustment has even lead to higher growth, albeit with a several year time lag.²⁶

What can we conclude from this evidence for the concern about too much austerity in EU-type bailout activity that I mentioned above? Taking the evidence at face value, one might be tempted to conclude that the concern is misplaced and even dangerous in giving fiscal policy a pretext for procrastination. However, a case for procrastination cannot be constructed if the concern about overly restrictive policy is expressed in a well balanced and thoughtful way, as in the references that I gave above. There is certainly a case for *careful timing* of the necessary adjustment, coupled with a clear and credible commitment to a long-run target value of the debt ratio and the corresponding permanent primary government surplus.

Conversely, advocating particularly tough austerity on the grounds of a possible “double dividend” is very difficult to construct from the evidence presented in Alesina and Ardagna (2010) and Guajardo et al. (2011). There are several specific conditions that one can

think of, under which a fiscal adjustment might be followed - with a certain lag – by real expansion. But one can easily imagine conditions where the opposite is true. Growth having picked up *in a few years time* seems a necessary condition for GIPSI-countries’ return to solid government finance in any case. What present policies must try to avoid is a further aggravation of the *present* recession. Without knowing the specific conditions that were prevailing in the expansionary cases identified by Alesina and Ardagna (2010), it seems very difficult to draw reliable conclusions about whether such an effect might also be expected fast enough in any one of the troubled economies of the present.²⁷ Perotti (2011) has looked into successful fiscal adjustments that have been implemented in EU countries during the past two decades. He argues that the specific conditions leading to expansions in these cases (Denmark, Ireland, Finland, Sweden) are unlikely to play a role in the adjustments implemented in GIPSI countries at the present: external demand from devaluations and lowering of interest rates.

On the other hand, one conclusion seems relatively safe and robust to draw from Alesina and Ardagna (2010) and Guajardo et al. (2011): Under many circumstances, fiscal adjustment to correct excessive government debt is more successful if done through *expenditure cuts* than through *tax increases*. However, even here it is relatively easy to think of cases where the opposite is true. Chart 5 gives a quick overview on the magnitude and pattern of fiscal adjustments that have so far been implemented in GIPSI-countries. In all coun-

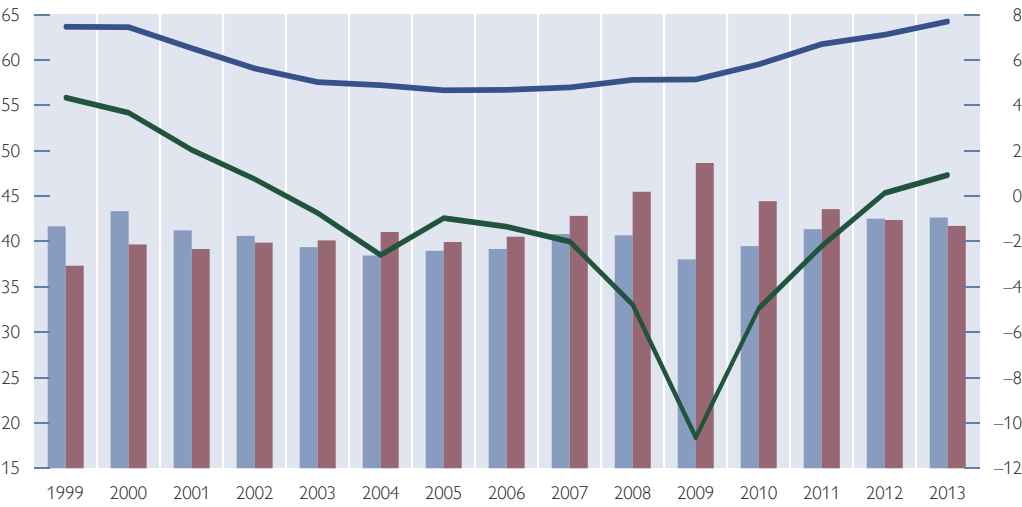
²⁶ The study by Alesina and Ardagna (2010) has drawn criticism on methodological grounds; see in particular Guajardo et al. (2011) and the reply by Alesina under www.economics.harvard.edu/faculty/alesina/Alesina (retrieved on June 26, 2012). For the present purpose, however, we need not enter this debate.

²⁷ This case has also been made by Krugman (2010).

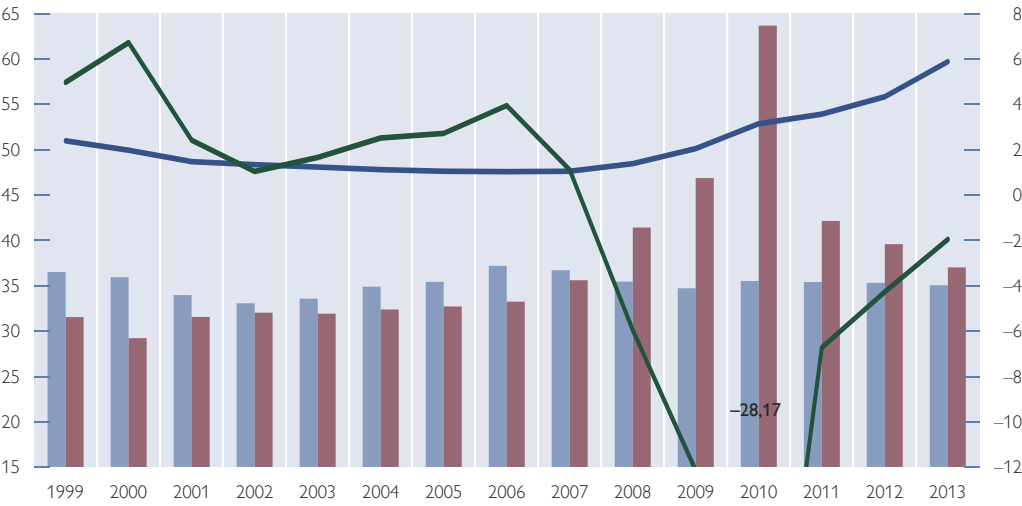
Chart 5

Austerity in Troubled Euro Area Countries

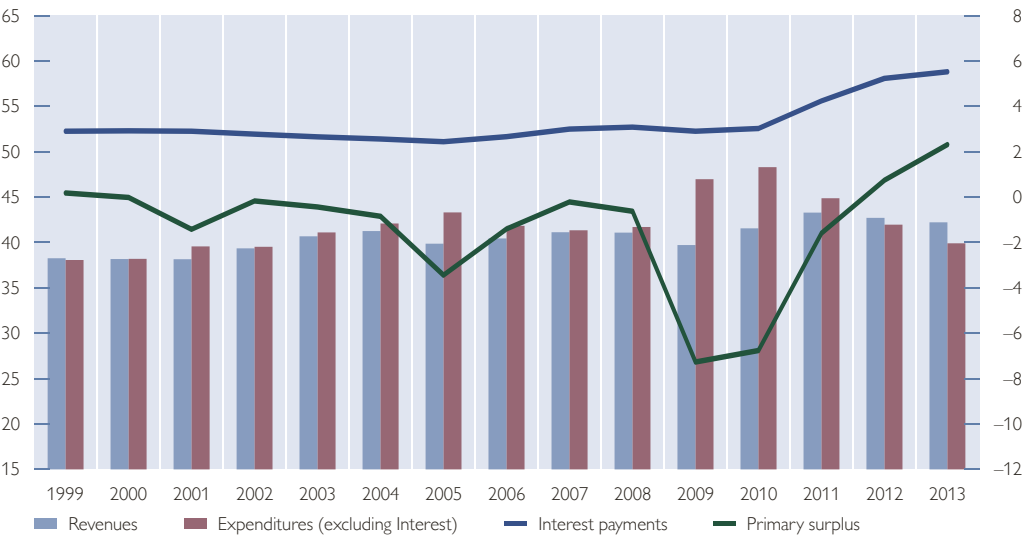
Greece



Ireland



Portugal



Source: European Commission AMECO database.

Note: Revenues and expenditures (exluding interest) on the left-hand scale, interest payments and primary surplus on the right-hand scale.

Chart 5 continued



Source: European Commission AMECO database.

Note: Revenues and expenditures (excluding interest) on the left-hand scale, interest payments and primary surplus on the right-hand scale.

tries there was a fair amount of emphasis on expenditure cuts, but in Greece and Italy, tax income has increased as well. And this is for good reason, since part of the underlying problem is tax evasion and a large shadow economy. From quick inspection of these figures it is also difficult to conclude overly strong austerity.

3.4 The “Debt Multipliers”

The discussion should not revolve around whether or not fiscal adjustment is likely to enhance growth. What matters for a debt adjustment policy is

to aim at a fiscal package with a large “debt multiplier”. By this I simply mean the magnitude of debt reduction that is likely to follow from a given magnitude of discretionary fiscal adjustment (on the revenue or expenditure side of the budget). Thus, consider a certain pre-reform path of debt accumulation as characterized by equation (1) above, and assume that a package of fiscal reform is implemented during period t which features a certain change in the primary deficit $f_t = x_t - r_t$, where x and r denote the ratio of government expenditure and revenue ratio, respectively,

to GDP. Suppose that this reform is described by $\Delta x_t = \Delta X_t/Y_{t-1} = (\Delta X_t/Y_t)(Y_t/Y_{t-1}) = (\Delta X_t/Y_t)(1 + g_t) > 0$ and $\Delta r_t = \Delta R_t/Y_{t-1} = (\Delta R_t/Y_t)(1 + g_t) < 0$. These are the discretionary changes vis à vis a pre-reform level of deficit projected at the beginning of period t . Note that Δr_t and Δx_t express the revenue and expenditure changes implied by the reform relative to period $t-1$ GDP. Hence the reform affects the primary deficit according to $\Delta f_t = (\Delta X_t/Y_t) - \Delta R_t/Y_t = (\Delta x_t - \Delta r_t)(1 + g_t)$.

Now suppose that the cost of government debt depends on the debt level, such that $q_t = q(d_t)$. An equation of this form was estimated by De Grauwe and Ji (2012). Given the the inherited debt level d_{t-1} , the change in the debt level is determined by the present deficit, and the debt-cost-effect of fiscal reform follows as $\Delta q = q_d(\Delta x_t - \Delta r_t)/(1 + g_t)$. This assumes that the change in the debt level induced by the fiscal adjustment (relative to the status quo), is equal to the fiscal adjustment itself. As we shall see, this very interest rate effect implies that this is not the case. To simplify my argument, I assume that lenders ignore the indirect debt reduction effects that derive from the risk premium and the fiscal multipliers.

Suppose, moreover, that the short-run policy effects may be described by Keynesian expenditure and revenue multipliers such that $\Delta Y_t = Y_R \Delta R + Y_X \Delta X$. I am not suggesting that fiscal policy should generally be based on such short-run multipliers, or that they are different from zero under all circumstances. I simply want to explore the role of these multipliers for the debt reduction effect of a given fiscal adjustment. More

specifically, I want to identify threshold values of these multipliers that need to be surpassed for the debt reduction effect to be dampened by the aggregate demand effects on GDP.

I measure the success of this reform package by the resulting change in the deficit level at the end of period t , denoted by Δd_t . Notice that this is the change relative to the non-reform path of debt accumulation. With the above assumptions, it can be shown that the success emerges as follows:²⁸

$$\Delta d_t = \frac{\Delta x_t}{1 + g_t} \left[1 - D_t \left(\gamma_t Y_X - \frac{q_d}{q_t - g_t} \right) \right] - \frac{\Delta r_t}{1 + g_t} \left[1 - D_t \left(\gamma_t Y_R - \frac{q_d}{q_t - g_t} \right) \right] \quad (4)$$

In this equation, $D_t := \frac{q_t - g_t}{1 + g_t} d_{t-1}$, q_t and g_t are the pre-reform levels of the interest rate and the nominal growth rate, and $\gamma_t = (1 + g_t)/(q_t - g_t) + 1$. The equation tells us that for heavily indebted economies the magnitude of debt reduction that may be expected from a given austerity program $\{\Delta r_t, \Delta x_t\}$ is also determined by the indirect effects on the interest rate and the growth rate. Everything boils down to the magnitude of the *aggregate demand multipliers*, i.e., on Y_X , Y_R , and whether this channel can overcompensate the *interest rate effect* q_d . The aggregate demand effect is what critics of austerity have emphasized, whereas advocates of strong austerity emphasize the direct debt reduction effect of a higher primary surplus as well as the effect of a lower cost of government debt through the interest rate effect.²⁹ The term D_t

²⁸ The equation is derived in the extended working paper version of this paper (Kohler, 2012b).

²⁹ Although the literature emphasizes a positive response of the cost of government debt to an increase in the debt ratio, some observers plausibly argue that investors also factor in economic growth as an important precondition for a government to honor its debt (Krugman, 2012). However, it seems questionable that investors would place much long-run confidence in aggregate demand effects for a country's long-run growth potential. See also the sovereign risk channel pointed out by Corsetti and Mueller (2011).

measures the “leverage” for these multiplier and the interest rate effect that is afforded by the inherited debt level.

To be a little more precise, we may refer to De Grauwe and Ji (2012) for the magnitude of q_d . For a linear specification of $q(d)$, they report an estimate of $q_d = 0.0190 + 0.0844 = 0.1034$ for euro area countries. Assuming “Greek values” of $d_{t-1} = 1.6$, $q_t = 0.15$, and $g_t = -0.05$, we obtain $D_t = 0.337$ and $\gamma_t = 0.95/0.2 + 1 = 5.75$. Given these values, we may calculate expenditure and tax multipliers, and, that would dampen, or even nullify, the debt reduction effect of fiscal adjustment. Setting the terms in parentheses on the right-hand side of (4) equal to zero gives a threshold value of Y_x or Y_R equal to 0.09. Multipliers exceeding this value imply that the aggregate demand effect of fiscal adjustment overcompensates the interest rate (or risk premium) effect, so that the magnitude of the debt reduction is lower than the fiscal adjustment itself. Setting the square-bracketed terms equal to zero, we obtain a threshold equal to 0.606. Multipliers exceeding this value imply, somewhat paradoxically, that fiscal adjustment even worsens the debt ratio, due to a strong aggregate demand effect.

Should fiscal adjustment aimed at reducing euro area sovereign debt levels be based on the indirect effects represented by the parentheses terms in (4)? The above calculations indicate that for extreme debt levels, these effects might be quite important, *temporarily*. However, in general it seems questionable whether we have reliable information on the empirical magnitudes involved in the countries in question. Unfortunately, there seem to be as many estimates of fiscal multipliers as there are historical episodes to draw upon. For a useful very brief summary of estimates obtained in the literature,

albeit for the USA (Boskin, 2012). For a discussion of why multipliers might be unusually large in the present situation (Stiglitz, 2012). It is obvious from (4) that the empirical significance of the indirect channels for the debt reduction effect of fiscal adjustment heavily depend on the inherited debt ratio d_t . Perhaps the deeper message conveyed by my above calculation of the upper threshold level of 0.5322 is just how “astronomical” a “Greek debt ratio” of 1.6 really is.

If relevant at all, such considerations will help only for the very short run. Relying on aggregate demand multipliers for a *long-run* strategy to resolve the euro area sovereign debt problem would, indeed, be voodoo economics (Barro, 2009). Long-run target levels of the debt and the primary surplus need to be based on long-run growth rates, which are beyond the control of



demand-oriented fiscal policies. However, if labor markets are subject hysteresis effects on unemployment, avoiding short-run unemployment does have a long-run level effect on output.

3.5 The Curse of External Imbalance

When thinking about an appropriate fiscal policy package to resolve the present mess in the euro area, it is important to bear in mind that the coun-

tries in question are not only suffering internal imbalance, but external imbalance at the same time. I have already emphasized this awkward double imbalance in section 2. Here, we need to observe that any lenience on austerity, much as it might be suggested from the channels identified in the previous subsection, aggravates the external imbalance. This is the classic policy dichotomy analyzed in detail in Corden (1994). The external imbalance is



caused by a misalignment of the real exchange rate, which in turn is the result of a long-run path of an ever widening gap between unit labor cost in different euro area countries that cannot be compensated by nominal exchange rate adjustments.

As to the magnitudes of the misalignments for various countries, I refer to table 2 above. As regards the policy conclusion, we face a very difficult situation. I would argue that any long-run solution of the present crises requires changes in relative prices, so as to restore external imbalance. In other words, in addition to resolving the problem of *government* debt that we have highlighted above, euro area countries also need to bring their expenditure *levels* as well as their expenditure *patterns* (on non-traded, imported and exported goods) in line

with their inter-temporal budget constraints relative to the “outside world” (including other non-euro countries), given their respective inherited net *foreign* indebtedness. Importantly, this holds true not just for the deficit countries, but also for the surplus countries. The mechanics behind this type of constraint is formally analogous to the above condition of government solvency, although it tends to receive less attention in the public debate. As I have shown above, the inherited debt levels for the GIPSI-countries are formidable, the largest observed in the developed country world.

If we agree on the need of correcting misaligned real exchange rates, what are the possible adjustments? I see three possible adjustments, two of which I have already briefly pointed out when commenting on the “monetary tap” in subsection 3.1. The first of these is returning to national currencies and go for external devaluation. The second is to stick to the present euro area and try to implement internal devaluation, i.e. cuts in nominal incomes. In terms of the metaphor used in the title, one might speak of two *devaluation taps*.

It is often argued that *internal* devaluation of the necessary magnitude faces insurmountable political resistance. If this is true, then it also has severe implications for the *external* devaluation tap. The point is that either type of devaluation involves broad and severe *real income cuts*. If there is political resistance to such cuts, then a successful adjustment through nominal devaluation of the external type is likely to be frustrated by domestic inflation, with misalignments unchanged, at least in the long run. We have ample evidence of this from historical episodes of systematic use of nominal devaluations. This, in addition to several other considerations relating to practical problems of

“undoing” the euro area as well as fundamental policy considerations regarding European economic integration, should prompt us to think twice before suggesting to “open the external devaluation tap”.

The hope, in my view, lies in the third adjustment which is a change, not of relative prices in line with given productivity levels, but of productivity levels so that these are in line with relative prices. In terms of the present metaphor, we might speak of a *productivity tap* that needs to be opened fast. There is evidence of a significant potential in the GIPSI-countries to increase their productivity levels. Again, I cannot go into detail here, but it is relatively obvious that existing regulation of both product and labor markets in GIPSI countries should constitute significant potential for improvement.³⁰ More specifically, it is well known that the Mediterranean member countries of the euro area suffer from a bias towards small firm sizes, which is likely to involve a cost in terms of low productivity. Although one has to be cautious in reading productivity effects into firm size as such, and also in attributing small firm size to regulation, there is evidence that in the case of GIPSI-countries a fair amount of both is justified.³¹

Some improvement is to be expected from the new EU procedures to tackle excessive imbalances (EIP) within the euro area. An important precondition for troubled economies to return to growth and an increase in productivity is that they regain a sound system of financial intermediation that fulfils its role of channeling savings to

high productivity use. This, in turn, requires resolving the banking crisis, which may be considered a crisis in and of its own (Shambaugh, 2012), and which I do not touch upon in this paper.

3.6 TARGET2 and the Reserve Currency Tap

If none of the above mechanisms of resolving external imbalance is tried or, if tried, all of them should fail to deliver, where are we heading? In this final subsection, I want to point out a special adjustment mechanism that the euro area has resorted to in order to deal with internal balance of payments crises. Identifying this adjustment mechanism sheds some light on where we are heading. As emphasized above, these crises have evolved due to the misalignment of real exchange rates, coupled with high expenditure levels. Together, these two forces have led to a build-up of current account deficits that eventually turned out to be impossible to finance through private capital imports, and were partly aggravated by capital flight; see Sinn and Wollmershäuser (2011) and Buiter and Michels (2011).

In a fixed exchange rate mechanism of the Bretton Woods type, such imbalances would have been reflected in a loss of foreign exchange reserves, unless the deficit country happens to be the country that enjoys the reserve currency privilege, like the USA in the Bretton Woods system. In the latter case, the country would be able to finance its deficit by printing additional reserve currency, which would, in turn, show up as an increase in foreign exchange reserves in the surplus countries' central banks' balance sheets. Ac-

³⁰ For instance, Greece, Italy and Spain are all ranked low (below rank 77) in the World Bank Indicator of “Starting a Business”: www.doingbusiness.org/rankings (retrieved on June 26, 2012).

³¹ New evidence in this direction is discussed in a recent article entitled “Decline and Small” in *The Economist*, print edition of March 3, 2012.

according to classical balance of payments theory, this would be coupled with long-run adjustment through the price specie flow mechanism. In very simple terms, this process implies that the surplus countries undergo inflation which eventually leads to the type of external devaluation that I have identified above. The Bretton Woods system was abandoned in the early 1970s, because the surplus countries of the time were no longer willing to tolerate this build up of inflationary potential.

In Kohler (2012a), I have argued that something very similar to this process has been going on within the euro system through its TARGET2 mechanism. This mechanism not only facilitates the cross-country *use of existing central bank money* for the purpose of international transactions within the monetary union, but it also facilitates varying cross-country distributions of the *creation of new central bank money* within the union.³² In the present context, the central aspect of the TARGET2 system is that a *current account deficit* of any euro area country vis à vis other member countries which is not financed by private capital imports from these countries leads to additional central bank money *created* in the deficit country, but used in surplus countries. The same applies if there is *capital flight* from a member country to other euro area countries which is not mirrored by a corresponding current account surplus. If such imbalances accumulate according to a systematic trend, then in the course of time deficit countries will accumulate net liabilities under the TARGET2 system, while surplus countries accumulate net claims. Importantly, however, these are liabilities and

claims held by the respective countries' central banks *vis à vis the ECB*.

The evolution of facts has been extensively described in Sinn and Wollmershäuser (2011). Chart 6 gives an overview by comparing the balances of selected countries as of February 2012 and two arbitrary points in "earlier times", December 2007 and 2003. The numbers hardly need much comment as such. The point is that, starting in 2007, a systematic trend has set in leading to a stark imbalance, while in "earlier times" no such trend was present. In light of my earlier remarks on fixed rate systems, the claims held by the German Bundesbank correspond to the accumulation of foreign exchange reserves denominated in the reserve currency. And the liabilities of, say Spain, correspond to reserve currency issued in the deficit country and ending up as foreign exchange reserves of the surplus country. An important limitation of the analogy to the Bretton Woods system is that in the present case the surplus countries were not forced, or indeed able, to let the process end up in an inflation of the stock of central bank money. The decision about the overall amount of central bank money circulating in the euro area is, of course, made by the ECB and not by any one of the national central banks. And up to the present, the whole process has *not* led to such inflation.³³

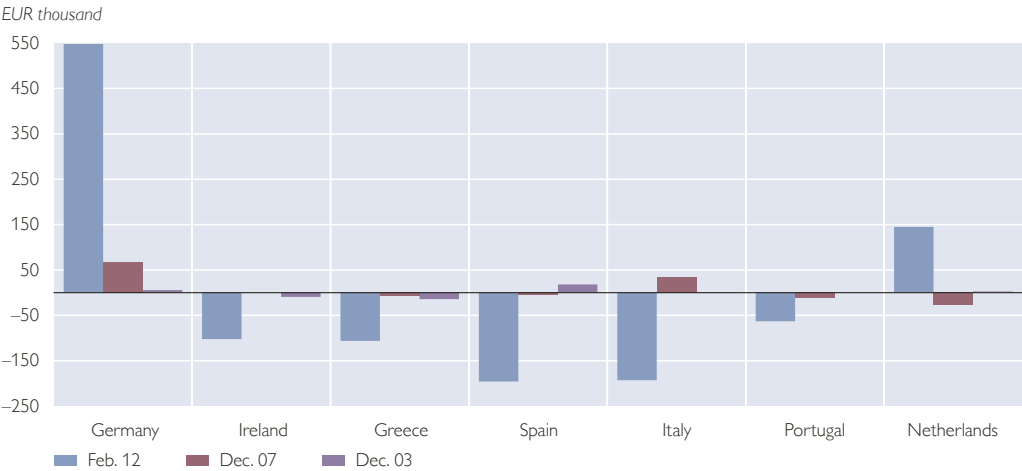
A heated debate has arisen about the correct way to interpret the TARGET2 balances. I see two crucial questions that are logically distinct and should be separated from each other. The first relates to whether the balances may legitimately be called loans. The fact that they constitute liabilities and claims,

³² Sinn and Wollmershäuser (2011) for a detailed description of TARGET2.

³³ See the detailed figures presented in Sinn and Wollmershäuser (2011). See Kohler (2012a) for a detailed treatment of the analogy between the TARGET2 system and the reserve currency privilege.

Chart 6

Net Balance with the TARGET2 System



Source: Institute of Empirical Economic Research, Euro Crisis Monitor, www.iew.uni-osnabrueck.de/en/8959.htm.

not vis à vis other countries, but vis à vis the ECB, has prompted some observers to question the description of TARGET2 balances as *cross-country loans*. Ultimately, this leads us to the fundamental question of whether the euro area can or should be viewed as a quasi-fixed-rate system or as a true monetary union. In a nominal sense, the answer quite trivially seems that it is a monetary union. However, in substance it seems legitimate to call it a quasi-fixed-rate system, for the simple reason that it lacks political union of the countries using the euro. And if this is the lens of interpretation, then quite clearly TARGET2 balances do constitute cross-country loans.

Given that we may thus speak of cross-country loans, the second question then is what it is that these loans have been financing. Since for some countries, particularly for Ireland and Italy, the TARGET2 liabilities have evolved in strong disparity with (higher than) their current account deficits, it is sometimes argued that it is wrong to speak of the TARGET2 system as being

used to finance GIPSI-countries' current account deficits.³⁴ Some of the comments that I have come across seem to indicate that TARGET2 balances that reflect capital exports or capital flight must be seen as entirely disconnected from financing of current account defi-



cits (Bornhost and Mody, 2012). Let me conclude by briefly commenting on this issue.

By construction, changes in TARGET2 claims or liabilities reflect unbalanced bilateral exchange in the sense that a country's expenditure on present

³⁴ As regards the figures, I may again refer to Sinn and Wollmershäuser (2011).

goods, or on claims on future goods of a specific other country within the euro area, exceeds the revenues from its sales of present goods or claims to that country. On a fundamental level, whatever the pattern of expenditure on present goods or claims, it seems rather futile to construct a relationship between the TARGET2 balances and any one type of expenditure. If a country faces capital flight, this is presumably because investors have lost confidence in the claims that they have hitherto held on future payments, ultimately on future goods, from this country. One way or another, these claims have been issued in the past in order to finance the country's current account deficits of the past. If for whatever reason in-



vestors now shed these claims, then the country faces the need to refinance foreign debt that reflects these past current account deficits. If private investors who are willing to step in cannot be found, then, with a system like TARGET2 in place, a change in TARGET2 balances is what we will observe instead. Although they do not reflect financing of a contemporaneous current account deficit, they do reflect refinancing of past current account deficits. But financing a current account deficit is what happens regardless. Emphasizing that TARGET2 balances mir-

ror capital flight and insinuating that this is fundamentally different from TARGET2 balances that reflect current account deficits is thus misleading.

4 Summary and Conclusions

In the public debate, the present crisis in the euro area is largely portrayed as a sovereign debt crisis. At times it appears that almost all of the policy energy in Brussels is mustered for rescue and reform packages aimed at avoiding sovereign default in troubled economies of the euro area. Yet, looking at it solely from the perspective of excessive government debt does not do justice to the situation and risks lopsided policy conclusions. Based on simple descriptive statistics, I have argued that the euro crisis has to do almost as much with the build-up of private debt as with government debt. Indeed, the more fundamental problem that the euro area is facing is that it lacks an adjustment mechanism for internal balance of payments crises. I argue that such crises are likely to occur even if countries adhere to strict fiscal compacts.

During 2010 a situation has emerged where a significant number of euro area countries have faced delicate combinations of internal as well as external imbalance. There were multiple reasons: excessive build-up of private debt prior to the financial crisis of 2007/08, misalignments of real exchange rates due to the lack of nominal exchange rate changes, and a fair dose of government profligacy. Excessive government borrowing had been fostered by the complete disappearance of sovereign risk premia for government debt immediately after the start of the monetary union in 1999. I have argued that this must be regarded as a failure of capital markets, to be followed by an opposite failure in terms of excessive

risk premia after the onset of the financial crisis in 2007/2008.

I have used a simple model of government insolvency to show that expectations-driven multiple equilibria in the government bond market may create a situation where fundamentally solvent governments are driven towards appearing insolvent through excessively high cost of government debt. I conclude that this generates a case for the European Central Bank to act as a lender of last resort in government bond markets. Moreover, this same model also suggests that bailout packages of the type recently orchestrated under the EFSF and the EFSM may have the perverse effect of increasing, rather than decreasing, sovereign risk premia.

These bailout packages have placed much emphasis on austerity in the public sector of the troubled economies. However, a single-minded focus on austerity is often criticized as aggravating the situation, or at least causing unnecessary cost in terms of lost growth, with a negative feedback on debt accu-

mulation. I have critically evaluated the pros and cons of partly relaxing this austerity, to conclude that in the long-run austerity will be unavoidable. However, a careful timing and pattern of contractionary measures may reduce some of the adjustment burden, although it seems questionable whether the relevant Keynesian multipliers are of the required magnitudes.

As to the internal balance of payments crises within the euro area, I have argued that the recent accumulation of imbalances under the TARGET2 mechanism of the Eurosystem has played the role of an adjustment mechanism akin to the mechanism of a fixed-rate system, where the country enjoying the reserve currency privilege is able to finance its deficit by printing and issuing additional reserve currency. It is all too obvious that this mechanism is not viable in the long run. Installing an adjustment mechanism that is more in line with the price specie flow mechanism of a fixed rate system constitutes a key reform challenge for the euro area.

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Ewald Nowotny is the Governor of the Oesterreichische Nationalbank (OeNB) and a Member of the Governing Council of the European Central Bank (ECB). Before taking on his current position in September 2008, Ewald Nowotny held a number of high-level positions in financial institutions. He was CEO of the Austrian BAWAG P.S.K. banking group from 2006 to 2007, served as Vice President and Member of the Executive Board of the European Investment Bank (EIB) in Luxembourg from 1999 to 2003 and, between 1971 and 1979, he was a Member and then President of the Governing Board of Österreichische Postsparkasse (P.S.K.). Moreover, from 1992 to 2008 Ewald Nowotny served as member of the supervisory board of several banks and corporations and was a member of the OeNB’s General Council from 2007 to 2008. Ewald Nowotny was born in Vienna, Austria, in 1944. He studied law and government sciences at the University of

Vienna and economics at the Institute of Advanced Studies in Vienna. In 1967, he received his doctorate in law from the University of Vienna. After working as assistant to Professor Kurt W. Rothschild at the Economics Department of the University of Linz, Austria, from 1968 to 1973, Ewald Nowotny received his postdoctoral qualification (Habilitation) in General Economics and Public Economics in 1973 and subsequently held research tenures and professorships at Harvard University, Technische Universität Darmstadt, Germany, and the University of Linz, Austria. From 1981 to 2008 Ewald Nowotny served as Full Professor at the Vienna University of Economics and Business, where he also held the position of Vice Rector from 2003 to 2004. In 2008, Ewald Nowotny received a honorary doctorate in Social and Economic Sciences from Alpen-Adria Universität Klagenfurt, Austria. Ewald Nowotny has published numerous articles in refereed journals. He is also the author or coauthor of nine books; the fifth edition of his internationally renowned textbook *Der öffentliche Sektor – Einführung in die Finanzwissenschaft* was published in 2008. Ewald Nowotny was an elected Member of the Austrian Parliament from 1979 to 1999 and served as chairman of the parliamentary Finance Committee from 1985 to 1999. Ewald Nowotny is married and has a son.

Loriana Pelizzon

Loriana Pelizzon is an Associate Professor at the University of Venice (Department of Economics). Prior to this engagement, she worked as Assistant Professor at the University of Venice (2004–2005) and at the University of Padua (2000–2004). She earned her Ph. D. in Finance from the London Business School in 2002. She has been

teaching economics at the universities of Venice and Padua since 2000, and prior to this at the CUOA Business School. Loriana Pelizzon received several awards, for example, for the Most Significant Paper published in the Journal of Financial Intermediation 2008: *Credit Derivatives, Capital Requirements and Opaque OTC Markets*, the Best Symposium Paper Award at EFA 2005, Best Paper at FMA 2005; Best Teacher Award premi per la qualità della didattica, Facoltà di Economia 2005/06 and 2006/07). Her research interests include risk management and capital requirements, credit derivatives, credit risk, systemic risk, financial crisis and contagion to name but a few.



Peter Praet

In 2011, Peter Praet joined the European Central Bank as Member of the Executive Board. He is responsible for economics, human resources, budget, organization and Target2-Securities. Before joining the ECB, Peter Praet was Executive Director of the National Bank of Belgium between 2000 and 2011. He was responsible for international cooperation, financial stability and oversight of financial infrastructures and payments systems. Between 2002 and 2011, he was also Member of the Management Committee of the

Belgian Banking, Finance and Insurance Commission (CBFA), where he was responsible for prudential policy for banking and insurance. Mr. Praet served as Chief of Cabinet for the Belgian Minister of Finance from 1999 to 2000, as Chief Economist of Générale de Banque and Fortis Bank from 1988 to 1999, as Professor of economics at the Université Libre de Bruxelles from 1980 to 1987, and as Economist at the International Monetary Fund from 1978 to 1980.



Mr. Praet earned a Ph. D. in economics from the Université Libre de Bruxelles in 1980. He taught Money and Banking at the Université Libre de Bruxelles, and he held the Chair of Business Ethics at the Faculté polytechnique and the Solvay Business School of the Université Libre de Bruxelles. Mr. Praet served on several high-level international committees, including the Basel Committee on Banking Supervision, the Committee on Payment and Settlement Systems, the Committee on the Global Financial System, and the European Banking Authority. He was First Alternate of the Board of Directors of the Bank for International Set-

tlements. Also, he was chairing the Banking Supervision Committee of the European System of Central Banks, as well as a number of task forces and working groups, including recently the Working group on Fixed Income Strategies of insurance firms and pension funds of the Committee on the Global Financial System and the Research Task Force of the Basel Committee on Banking Supervision. Mr. Praet was a Member of the Board of the European think tank BRUEGEL (Brussels European Global Economic Laboratory) between 2004 and 2011 and is a Member of the International Advisory Council of the International Centre for Financial Regulation (ICFR).

Klaus Regling

Klaus Regling has been the CEO of the European Financial Stability Facility (EFSF), based in Luxembourg since July 1, 2010. He has worked for 35 years as an economist in senior positions in the public and the private sector in Europe, Asia and the U.S.A., including a decade with the IMF in Washington and Jakarta and a decade with the German Ministry of Finance where he prepared Economic and Monetary Union in Europe. From 2001 to 2008, he was Director General for Economic and Financial Affairs of the European Commission. During 2008–2009, he spent a year at the Lee Kuan Yew School of Public Policy in Singapore where he researched financial and monetary integration in Asia. Subsequently, he opened an economic and financial consultancy in Brussels. Previously, Klaus Regling had gained experience in the private sector as Managing Director of the Moore Capital Strategy Group in London (1999–2001) and as an economist with the German Bankers' Association. Mr. Regling studied economics at the Universities of Hamburg and Regensburg.

Albrecht Ritschl

Albrecht Ritschl earned his doctorate at the Ludwig-Maximilians-Universität in Munich, where he continued to work as a DFG research fellow until 1994. Between 1994 and 2007, he held professorships at the Universitat Pompeu Fabra of Barcelona, the University of Zurich and the Humboldt University of Berlin. Since 2007, Albrecht Ritschl has been holding the position of a Professor at the London School of Economics in the History Department. His main research area has been the Great Depression of the inter-war years. He has worked extensively on Germany's macroeconomic performance during that period, including the reparation conflict and the German debt default. More recently his work has moved into US monetary and labor policies during that period. Other areas of interest include measurement and analysis of historical business cycles and their propagation. Mr. Ritschl has published extensively on economic history and he has also written for mainstream press, radio and TV.

Federico Sturzenegger

Currently President of Banco Ciudad de Buenos Aires and Professor at Universidad Torcuato Di Tella. He holds a Ph. D. in economics from MIT (1991), was Assistant Professor of Economics at University of California (UCLA) (1991–1995), Chief Economist of YPF (1995–1998), Dean of the Business School at Di Tella (1998–2000/2002–2005), Secretary of Economic Policy of the Republic of Argentina (2001), and Visiting Professor of Public Policy at the Kennedy School of Government, Harvard University (2005–2007). He

has written or edited seven books, and has published extensively in the area of international finance and macroeconomics. He appears regularly in the press, and is a regular consultant of corporations and International Organizations. In 2005, the World Economic Forum of Davos selected him as Young Global Leader.

Martin Summer

Martin Summer is Head of the Economic Studies Division at the Oesterreichische Nationalbank (OeNB). Before joining the OeNB in 2000, he worked as a lecturer at the University of Vienna, the University of Birmingham and the University of Regensburg. He also worked as a visiting researcher at the Bank of England and the Financial Markets Group of the London School of Economics in 2004. His research interests are banking regulation and systemic risk, financial stability and financial economics.

Jakob von Weizsäcker

Jakob von Weizsäcker heads the Department for Economic Policy and Tourism at the Thuringian Economics Ministry in Erfurt and is a non-resident fellow at Bruegel where he was resident fellow from 2005 to 2010. He previously worked at the World Bank in Washington (2002–2005) where he was country economist for Tajikistan and the Federal Economics Ministry in Berlin (2001–2002) where he headed the office of a junior minister. Before that he worked for Vesta, a venture capital firm, and held research positions at the Center for Economic Studies in Munich and CIRED in Paris.

The Economics Conference hosted by the OeNB is an international platform for exchanging views on monetary and economic policy as well as financial market issues. It convenes central bank representatives, economic policy decision makers, financial market players, academics and researchers. The conference proceedings comprise all papers.

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