Vol. 34 April 2013 ISSN 0261-5606

ELSEVIER



*Journal of*

# INTERNATIONAL MONEY and FINANCE

**SPECIAL ISSUE**
The European Sovereign Debt Crisis: Background & Perspective

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Available online at www.sciencedirect.com
SciVerse ScienceDirect

Journal of International Money and Finance 34 (2013) 1–5

Contents lists available at SciVerse ScienceDirect

Journal of International Money and Finance

journal homepage: www.elsevier.com/locate/jimf

Editorial

# The European Sovereign Debt Crisis: Background and perspectives, overview of the special issue

## 1. Introduction

A few years after the US-originated global crisis, the world economy finds itself grappling with another crisis emanating from the OECD countries, this time from the Eurozone. The anemic 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 zone sovereign debt crisis currently poses in 2012 the single biggest downside risk to the global outlook. The crisis is rooted in the uneven growth performance of the different Euro countries, the unsustainably large public debts of some EU periphery countries, and the incompleteness of the euro project. While the euro zone crisis is by no means over, its first four years provide preliminary insights into the challenges facing the euro zone. In order to gain a better understanding of the issues involved, a conference under the aegis of the *Journal of International Money and Finance* took place on April 13–14, 2012, at the Danmarks Nationalbank in Copenhagen.[1] The conference dealt with the topic "The European Sovereign Debt Crisis: Background and Perspectives." This volume provides the refereed proceedings of a keynote and nine papers presented in the conference. The focus of the volume is on two broad and intertwined themes: the Euro debt crisis, and fiscal policy and fiscal space in a currency union and stand-alone countries.

## 2. Euro debt crisis

In the keynote address Jean Pisani-Ferry examines "The Known Unknowns and Unknown Unknowns of European Monetary Union." The pre-crisis literature outlined several fault lines of the emerging EMU (the "Known Unknowns"). Pisani-Ferry asks why these warnings were largely ignored by policymakers, especially as regards the risk of economic divergence. He concludes that if concerns were not transposed into concrete action, the blame should be put on the policy community that opted for complacency when designing the building blocks of what turned out to be a perilously weak monetary union. The real surprises (the "Unknown unknowns") came from what was considered to be the most significant achievement of monetary unification, i.e. financial integration. The first surprise has been the strength of the negative feedback loop between banking fragility and sovereign weakness – a salient feature of the euro crisis. What was not seen was the effect that the degree to which bank-sovereign interdependence could create a potential for self-fulfilling crises. The second "unknown–unknown" revealed by the euro crisis has been the fact that countries within a monetary union can

[1] The conference was sponsored by the Department of Economics, Copenhagen Business School; the Santa Cruz Institute of International Economics, University of California, Santa Cruz; Danmarks Nationalbank; and JIMF. We are grateful to Professor Svend E. Hougaard Jensen, CBS, and the Danmarks Nationalbank for coordinating, funding and hosting the conference.

0261-5606/$ – see front matter 
http://dx.doi.org/10.1016/j.jimonfin.2012.11.001

become subject to balance-of-payment crises. Whereas state solvency crises were clearly anticipated, the very possibility of such a sudden stop affecting a country, rather than specific economic agents within it, was mostly ignored in the pre-EMU literature. The financial fragility displayed by the EMU and the fact that it has turned out to be vulnerable to the very kind of crisis it was supposed to make impossible call for a rethinking of the original architecture. Financial fragmentation is evidently a lethal threat to monetary union. Three strategies could be envisaged. The first solution, widely discussed in the autumn of 2011, was to give the ECB the role of a lender of last resort for the sovereigns. A second possibility could be to move closer to a fiscal union by mutualizing the guarantee on the public debt issued by Eurozone counties, via some form of 'Eurobonds'. There are significant hurdles in the way to Eurobonds or making the ECB the lender of last resort to the EMU sovereign countries. The remaining possibility is to build a banking union, which could help breaking the vicious cycle between banks and sovereigns, acting on the side of banks. This was the road chosen by the heads of state and government in June 2012. Pisani-Ferry cautions that it remains to be seen whether banking union will be sufficient to repair financial integration in the euro area. To protect the states from their banks – and the banks from their sovereigns – is certainly needed, but may not be sufficient to lead investors to purchase bonds from countries they have learned to distrust.

Paul De Grauwe and Youmei Ji, in "Self-Fulfilling Crises in the Eurozone: An Empirical Test," explore whether government bond markets in the Eurozone are more fragile and susceptible to self-fulfilling liquidity crises than stand-alone countries (14 advanced countries). They find evidence that a large part of the surge in the spreads on 10-year government bond rates of the peripheral Eurozone countries during 2010–2011 was disconnected from underlying increases in the debt to GDP ratios and fiscal space, and was the result of time dependent negative market sentiments that became very strong since the end of 2010. The exception is Greece where they find that the major increase in the spread was due to deteriorating fundamentals. The stand-alone countries in their sample were seemingly immune from liquidity crises during this period and did not see increases in sovereign bond spreads.

They also find evidence that after years of neglecting high debt to GDP ratios, investors became increasingly worried about the high debt to GDP ratios in the Eurozone, and reacted by raising the spreads. No such worries developed in stand-alone countries despite the fact that debt-to-GDP ratios were equally high and increasing in these countries. The authors argue that their results validate the fragility hypothesis, i.e. the markets appear to be less tolerant toward large public debt accumulations in the Eurozone than toward equally large public debt accumulations in the stand-alone countries. They conclude that the story of the Eurozone is a story of a self-fulfilling debt crisis, which in turn led to multiple equilibria. Countries hit by liquidity crises were forced to apply stringent austerity measures that in turn led to recessions, thereby reducing the effectiveness of these austerity programs. The authors warn that there is a risk that the combination of high interest rates and deep recessions could turn the Eurozone liquidity crisis into a solvency crisis.

In "What is the Risk of European Sovereign Debt Defaults? Fiscal Space, CDS Spreads and Market Pricing of Risk," Joshua Aizenman, Michael Hutchison, and Yothin Jinjarak investigate the degree of market mispricing of the Eurozone-periphery sovereign debt before and during the eurozone and the global financial crises. The research aims to determine whether the perception of relatively high sovereign-default risk of the fiscally distressed Eurozone countries, as seen in market pricing of credit default swap (CDS) spreads, may be explained by existing past or current fundamentals of debt and deficits relative to tax revenues – which they term de facto fiscal space – and other economic determinants. To this end, they develop a pricing model of sovereign risk for 60 countries, including many in Europe, before and after the global financial crisis, based on fiscal space and other economic fundamentals. They also "match," on the basis of similar fiscal space, each of the five Eurozone-periphery countries with a corresponding middle-income country. The matches are Spain – South Africa, Greece – Panama, Ireland – Malaysia, Italy – Mexico and Portugal – Colombia. They find a key role of fiscal space in pricing sovereign risk, controlling for other relevant macro variables. The risk of default in the five Eurozone-periphery countries appeared to be somewhat underpriced relative to international norms in the period prior to the global financial crisis; and substantially overpriced during and after the crisis, especially in 2010, with actual CDS values much higher than the model would predict given fundamentals. In addition, they find that Eurozone periphery default risk is priced much higher than the "matched" countries in 2010, even allowing for differences in fundamentals. One interpretation is that

the market has mispriced risk in the Eurozone periphery. An alternative interpretation is that the market is pricing not on current fundamentals but future fundamentals, expecting the periphery fiscal space to deteriorate markedly and posing a high risk of debt restructuring. Adjustment challenges of the Eurozone periphery may be perceived as economically and politically more difficult than the matched group of middle income countries because of exchange rate and monetary constraints.

In their "The Pricing of Sovereign Risk and Contagion during the European Sovereign Debt Crisis," John Beirne and Marcel Fratzscher are concerned with the same basic issue as Aizenman et al., the pricing of sovereign risk, but their focus is somewhat different. In addition to CDS spreads, Beirne and Fratzscher examine two other measures of sovereign risk, long-term government spreads and sovereign ratings. They relate all three to economic fundamentals over the period 2000 to 2011. In this analysis they use data for a sample of 31 countries comprising both advanced economies and emerging market economies. The specific question of interest is whether there has been contagion during the crisis. Here the authors distinguish between three types of contagion – fundamentals contagion due to increases in the sensitivity of financial markets to existing fundamentals, regional contagion entailing an intensification of spillovers of sovereign risk across countries, and herding contagion entailing a temporary overreaction of financial markets that is clustered across countries.

Their results show that countries' own economic fundamentals and fundamentals contagion account for most of the level of sovereign risk and its increase during the crisis period. Regional contagion, in contrast, explains a much more modest magnitude of sovereign risk. This is true for all regions, including the euro area. The authors also detect evidence consistent with the presence of herding contagion in sovereign debt markets during the crisis, but this contagion has been concentrated in time and among a few markets. Finally, they find that empirical models with economic fundamentals generally do a poor job in explaining sovereign risk in the pre-crisis period for European economies, suggesting that the market pricing of sovereign risk may not have been fully reflecting fundamentals prior to the crisis.

On a related theme, Roel Beetsma, Massimo Giuliodori, Frank de Jong, and Daniel Widijanto, in "Spread the News: the Impact of News on the European Sovereign Bond Markets during the Crisis", explore co-movements among interest spreads vis-à-vis Germany on European public debt and spillovers in response to macroeconomic and financial news. They investigate both how "news" affected domestic interest spreads and how it was propagated to other countries during the recent crisis period, thereby distinguishing between the so-called GIIPS countries (Greece, Italy, Ireland, Portugal and Spain) and other European countries. They use Eurointelligence newsflash to construct news variables based on the amount of news that is released on a country on a given date.

The authors find that more news about a country, as measured by the number of times a GIIPS country is mentioned in the newsflash, drives up the interest rate spread of the country. They also find spillovers of the news concerning the country onto other GIIPS countries related to the value of the financial claims of the banking sector of the other countries on the country under consideration. Investors apparently view banking sector linkages among countries as particularly important (as opposed to trade linkages). Not surprisingly, news effects are concentrated in the second half of their sample period, i.e. the period September 2009–February 2012. Further, while most of the attention during the past couple of years has focused on the GIIPS countries, the authors also find spillovers from the GIIPS to several non-GIIPS European countries (except Germany). However, while those spillovers are in the same direction, they are smaller in size. Finally, when they split their news variable into bad and good news, they show that the domestic and cross-border effects of news are confined to bad news. This is the case both for the spillovers from GIIPS to other GIIPS countries and the spillovers from GIIPS.

The contribution by Jakob De Haan and Mark Mink, "Contagion During the Greek Sovereign Debt Crisis," investigates how news about Greece during the crisis in 2010 has transmitted to 48 banks in Greece and elsewhere in Europe. The objective of the study is to determine whether Greek news mainly affects Greek banks, or spreads to banks throughout the Euro area in a contagious fashion. To identify contagion the authors identify country-specific events that affect asset prices other than the sovereign bond price of the country concerned. To this end, they adopt an event-study approach where events are identified as the trading days in 2010 with the largest volatility in yields on Greek government bonds and relate those days to the 'news' that caused these fluctuations.

They distinguish between two types of news, that which is specific to Greek public finances (idiosyncratic news about the specific circumstances of Greece) and that which relates to the Greek bailout. The latter, the authors argue, not only affects Greece but has broader implications by reflecting European governments' willingness to use public funds to combat the financial crisis. They find that news about Greece per se does *not* affect bank returns outside of Greece. But news about potential bailouts for Greece have an impact on European bank returns generally, even for banks without exposure to Greece or other highly-indebted Euro countries. The authors also find that sovereign bond prices in Portugal, Ireland and Spain respond to both news about the Greek economy and politics and to news about Greek financial support.

## 3. Fiscal policy and fiscal space

Torben Andersen's paper "Fiscal policy targeting under imperfect information" provides a brief overview of the methods used to estimate the cyclically adjusted budget balance (CAB) and presents empirical evidence showing the "excess volatility" in this measure which is supposed to capture more slowly evolving structural factors. He points out that public finances are in most OECD countries under severe pressure due to failures to consolidate, and to undertake appropriate reforms to address approaching demographic changes. The financial crisis has further worsened the situation and brought the problems to the fore. CAB has attained increasing importance in fiscal policy making and monitoring. This is most clear in the case of the EU. While the Stability and Growth Pact initially was formulated in terms of nominal public finance indicators (deficits and debts relative to GDP), it soon became clear that this was problematic due to the cyclical sensitivity of these measures. With the revision of the SGP in 2005, the role of the CAB was elevated through the emphasis on ensuring budget positions that are "close to balance or in surplus over the business cycle". With the recently agreed fiscal compact for the EU, the CAB has become an explicit target in the form of the "lower limit of a structural deficit of 0.5% of the gross domestic product at market prices." Next, Andersen considers how fiscal policy should be conducted when the uncertainty or noise in the CAB measure is taken seriously. A strict targeting of the CAB leads to excess volatility in policy instruments which runs counter to the smoothing argument underlying the rationale for policy rules. The optimal fiscal policy responses are worked out when taking into account a concern for smooth policy responses. Two key problems with policy rules are highlighted – how to deal with the filtering problem, and the error-correction problem which is important since deviations from the budget target are accumulated in the debt level. Finally, the determination of targets for the structural budget balance is discussed with outset in the new fiscal pact for the EU countries.

In "Fiscal Space and Sovereign Risk Pricing in a Currency Union" Atish Ghosh, Jonathan Ostry and Mahvash Qureshi examine how membership in a currency union affects public debt sustainability and market assessments of default risk in eurozone countries. They argue that expectations of bailouts tend to make a given level of debt more sustainable, lowering bond yields and CDS rates, but constraints on the use of monetary policy in the Eurozone would tend to have the opposite effect, pushing rates up especially as room for fiscal maneuver gets exhausted. The authors posit that governments typically act responsibly, raising the primary balance in response to rising public debt. But there is a limit to this process: as the requisite primary balance rises, it becomes increasingly difficult to keep cutting primary expenditures or raising taxes. If the increase in the primary balance does not eventually keep pace with the rising interest burden as debt increases, there will be a point—the debt limit—at which, barring an extraordinary fiscal effort, debt dynamics become explosive and the government becomes unable to fully meet its obligations. The distance between current (or projected) debt levels and this debt limit constitutes the country's fiscal space. They apply their concept of fiscal space to the eurozone countries, investigating how currency union membership affects CDS and bond rates during both quiet and turbulent times for a given amount of fiscal space. They find that in quiet times, CDS and bond rates for eurozone members were below what would be expected given their fiscal space (a bonus from currency union membership). But when the crisis broke, CDS and bond yields rose more sharply for eurozone members than would be predicted based on available fiscal space. Their interpretation is that sovereign bailouts did not occur with the hoped-for alacrity in euro-crisis countries, generating sharper penalties for sovereigns that belong to a currency union.

Agustín Bénétrix and Philip Lane estimate in "Fiscal Cyclicality and EMU" the cyclical behavior of fiscal policy among the set of countries that form the euro area, asking whether the cyclical behavior of fiscal policy has shifted over time, since the elimination of the devaluation option under monetary union should have increased the desirability of running counter-cyclical fiscal policies. To this end, they allow for two structural breaks in the data – the passing of the Maastricht Treaty in 1992, and the actual formation of monetary union in 1999. They find that there is significant time variation in fiscal cyclicality. The improvement in the conduct of fiscal policy in the wake of the Maastricht Treaty does indicate that fiscal reform is possible and does suggest that the institutional environment can assist in promoting better fiscal outcomes. However, the deterioration in the cyclical conduct of fiscal policy after the launch of the euro and the weaker feedback from the outstanding debt stock to the fiscal balance suggests that the incentives to run stabilizing fiscal policies were weak during the first decade of EMU. Insufficiently-countercyclical fiscal patterns during the pre-crisis years was surely a contributory factor to the subsequent crisis, in view of the limited fiscal space associated with the emergence of large fiscal deficits in some countries and the vulnerabilities associated with high accumulated debt stocks in other countries. A key message is that improving the cyclical conduct of fiscal policy for EMU member countries is an important policy objective; in related fashion, ensuring that the primary balance is sufficiently responsive to drift in the level of public debt is also a key target.

Martin Flodén, in "A Role Model for the Conduct of Fiscal Policy? Experiences from Sweden," considers the transition in Sweden from financial crisis in the early 1990s to fiscal solvency and financial stability today. The macroeconomic crisis in the early 1990s saw GDP falling for three consecutive years (1991–1993), unemployment increasing by 9 percentage points, nationalization of banks, and public budget deficits exceeded 10 percent of GDP. However, recovery from crisis was rapid as GDP grew quickly during 1994–1995, and budget deficits were eliminated by 1998. Moreover, growth remained high in the subsequent decade, and the government debt ratio was reduced by almost 50 percent of GDP.

This paper reviews fiscal and other policies and reforms, and analyzes how they contributed to the Swedish recovery and present fiscal and debt position. As the title of the paper indicates, the author addresses whether Swedish policies leading out of the crisis may serve as a role model for GIIPS and other European countries currently struggling with fiscal solvency and debt sustainability. Policy measures undertaken by Sweden in the wake of the crisis include abandoning the fixed exchange rate, fiscal austerity, a new stricter fiscal framework, and several structural reforms in the 1990s. Flodén argues that these policies were appropriate for handling the Swedish crisis, but the Swedish experiences have limited applicability for the current debt crisis in Europe because currency depreciation in combination with strong growth on export markets—key ingredients in the Swedish recovery—are not options for GIIPS. Moreover, the debt problems in Sweden were never as severe as they presently are in GIIPS, and strengthening public finances were only partly attributable to budget surpluses and high GDP growth. Other factors include privatization, asset price fluctuations and the impact of demographic transitions on the social security system that also reduced net government debt as a percentage of GDP.

The studies in this volume raise pertinent questions regarding the stability and the future of the Eurozone. Our hope is that they will motivate continuing research on these topics.

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