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# Overview

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On September 13–14, 2011, the Brussels-based think tank Bruegel and the Peterson Institute for International Economics hosted a conference entitled "Resolving the European Debt Crisis." Held at a conference center near Paris, the event assembled about four dozen policy experts and practitioners, mainly from Europe and the United States. The conference was designed to articulate and clarify the implications of alternative approaches to resolving the crisis, in particular, the dynamics of interaction among various stakeholder groups as policy decisions evolve. It brought together leading former policymakers, academics, and market participants to discuss, interact, and learn from each other.

At the conference, Bruegel and the Peterson Institute explored an innovative technique for understanding complex policy issues: a dynamic policy simulation with a large number of players. Crisis simulation of this nature makes it possible to obtain a deeper understanding of the constraints and opportunities facing real policymakers, market players, and the public at large. Such a simulation permits grasping real-life decision making; it goes beyond the typical conference format in which participants present their views and ask and answer questions. A simulation game forces real interaction and real decision making on players in a short space of time, thereby revealing preferences for and constraints upon action.

This volume collects the papers that were presented at the conference and, in the final chapter, summarizes the central insights from the simula-

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tion game. This opening chapter provides a short overview of the two-day conference.

## Conference Structure

On the first day there were three panels aimed at providing a comprehensive understanding of the current and prospective situation surrounding the European debt crisis. The first of these assessed the current economic and political situation in the key euro area creditor and debtor nations and the associated constraints facing policymakers. The second focused on the lessons learned from past experiences of sovereign debt crises and their resolutions, including lessons having to do with legal and accounting issues, and their relevance for current European circumstances. The third analyzed the pros and cons, including the costs and benefits, of the different options available to policymakers for bringing the euro area debt crisis to a successful resolution.

On the second day, the simulation game took place among the conference participants in what amounted to a stress-test for European debt policy. Prepared with the assistance of experts from Bruegel and the Peterson Institute, the game was directed by Andrew Gracie of Crisis Management Analytics. No sitting officials participated, and the game was played under Chatham House rules. Participants played the roles of governments (of France, Germany, Greece, Ireland, Italy, Portugal, and Spain); of decision makers for the European Central Bank (ECB), International Monetary Fund (IMF), and United States; and of decision makers in commercial banks in the countries involved and nonbank financial market actors. In addition, in response to successive rounds of the game as it developed, other participants provided expertise in the areas of credit ratings, legal and accounting issues, and political repercussions.

## Background and Policy Discussion

The papers on the political-economic environments in Greece, Ireland, and Portugal argued that there is a strong degree of domestic political support for fully honoring sovereign debt obligations and remaining in the euro. The papers and discussion on the recent market deterioration in the much larger economies of Italy and Spain underscored the need for euro area institutional reform providing for much greater fiscal integration. Such reform would make it possible to spread the umbrella of creditworthiness of the stronger countries by enforcing far more central control on fiscal policies. There was an accompanying sense that the time inconsistency between the immediate need to address the current emergency and the lengthy process of building new euro area institutions poses an unresolved problem.

The best vehicle for forceful action in the bridge period was generally seen to be the ECB. Several participants had misgivings about the ECB's involvement in sovereign debt purchases and the prospect that it might need to expand those purchases on a much larger scale, however; and others urged that



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the ECB send a strong signal that future support would be highly conditional on prompt fiscal adjustment. For France, the session revealed an intense commitment to sustaining the euro. For Germany, it revealed that any notion of exit from the euro remains very much a minority view.

## Country Political-Economic Environments

### *Greece (Chapter 2)*

Loukas Tsoukalis (University of Athens) observed that it remains to be seen whether Greece will prove to be the odd man out or the precursor of things to come elsewhere in Europe. Whereas early polls showed acceptance of the inevitability of austerity measures, Tsoukalis said, Greeks are growing increasingly angry and see no light at the end of the tunnel. He pointed to the need for a radical renewal of the political class, although at present the current government has the best chance of implementing the needed adjustment and reform.

The decisive battle in Greece today is about rationalizing a bloated and inefficient public sector. Tsoukalis called the July 2011 support package a great improvement but judged the private sector involvement (PSI) portion of it to be costly and cumbersome. In general discussion, it was argued that so far there had been too much austerity and too little reform (such as deregulation), and that cacophony in the euro area was making country adjustment efforts more difficult. It was agreed that, although there is little political consensus, there is widespread agreement within Greece that bankruptcy-type debt restructuring should be avoided and that Greece must remain in the euro area.

### *Ireland (Chapter 3)*

Alan Ahearne (National University of Ireland, Galway) emphasized that Ireland has already carried out fiscal adjustment amounting to 13 percent of GDP and that the total adjustment will reach 20 percent. He stressed the degree of internal devaluation, citing a 15 percent cut in public sector wages over the past three years. He noted the strong consensus that the sovereign debt must be paid in full because Ireland, as a small economy dependent on international investment and trade, must honor contracts.

However, he also indicated the distinction in domestic political perceptions between sovereign debt resulting from budgetary deficits and exceptional debt attributable to emergency support of banks. At about 40 percent of GDP, the latter is larger than in almost any other international experience. Controversy about treatment of senior bondholders of bank debt had notably involved ECB opposition to any haircuts. However, except for a small portion of this debt, the government has put this issue in the past.

The current government has an unusually large majority in Parliament, and the next general election is in 2016. One point raised in the discussion was that the ECB had judged any savings through senior bank bondholder



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haircuts to be far too small to warrant the associated market disruption. More broadly, discussion during the course of the day tended to reiterate the view that Ireland has gone the farthest and fastest in its adjustment to the crisis.

### *Portugal (Chapter 4)*

Pedro Lourtie (former Portuguese secretary of state for European affairs) emphasized that there is broad political support for the adjustment program and that the new government has a comfortable majority in Parliament. In assessing Portugal's performance before the global crisis, he argued that during its period of slow growth after 2001–02, the country entered a path of slow adjustment to the new euro monetary setting and of regaining lost competitiveness. He stressed that, with the sovereign debt crisis hitting the euro area, such a soft approach ceased to be an option. Furthermore, he underlined the risk of crisis contagion to the most vulnerable euro area economies during the current sovereign debt crisis and emphasized the importance of external events and euro area decisions in influencing market spreads for Portugal.

Lourtie emphasized that in 2011 Portugal entered a phase of hard adjustment, and he stressed that the country is following an ambitious road map of fiscal consolidation and structural reforms included in the adjustment program. Overall structural fiscal adjustment targeted over the 2011–13 period amounts to 9 percent of GDP, with half of that adjustment in 2011. He argued that Portugal has the political and economic conditions to come out stronger and more competitive from this adjustment, and emphasized that the continuation of strong export growth is a key element in a successful adjustment. He also underlined that the stabilization of the broader euro area is essential.

### *Italy (Chapter 5)*

Riccardo Perissich (Council of the United States and Italy) began with the observation that although Italy's debt is large relative to GDP and in absolute size (where it is behind only the United States and Japan), Italy had maintained fiscal balance for a decade before the crisis and has large private savings. The economy has a strong manufacturing sector. Contagion from Greece in July 2011 forced a new fiscal package, which unraveled because of internal dissension in the majority party. In the face of heightened market pressure, by the end of August the government agreed to a new package cutting transfers to local authorities, raising the capital gains and value-added taxes, and renegotiating the social security system.

### *Spain (Chaper 6)*

Guillermo de la Dehesa (Centre for Economic Policy Research) argued that euro area leaders made a serious mistake in seeing early IMF involvement in



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Greece as a stigma, given that the United Kingdom, Italy, and Spain had IMF programs in the late 1970s. He stressed the strong growth record that Spain had achieved. Its fiscal position had been excellent in 2007 and its debt-to-GDP ratio was less than two-thirds the levels for France and Germany. Lower interest rates with adoption of the euro, along with massive labor immigration, had spurred Spain's growth. But large external imbalances resulted from fast growth (not an increase in relative wages), and the bursting of a property bubble in the financial crisis provoked a sharp recession.

The government responded with fiscal stimulus even as revenue was falling, leading to a budget deficit of 11 percent of GDP in 2009 (with about one-third attributable to unemployment benefits for 21 percent of the labor force). Adjustment is now under way, with the deficit to be cut to 6 percent of GDP in 2011 (although the actual outcome was 8 percent) and a target of 3 percent by 2013. A new constitutional rule limits growth of government spending to that of the economy. Labor reform will increase flexibility. The banking system is efficient and performed well in the recent stress test.

### *France (Chapter 7)*

Zaki Laïdi (SciencesPo) focused on the tensions between the French anticapitalist tradition and the necessities of crisis management. Even the Socialist Party now agrees to the goal of a zero fiscal deficit. The president sheltered the French banks, and the public sees the banking system as a public service necessary to maintain. France sees an increasing role for Europe, and domestic support for the euro is increasing (polls show 61 percent favoring the euro, with those calling for a return to the franc falling to 29 percent from 38 percent in May 2010).

There is also support for financing Greece, and support for European fiscal federalism is increasing. Laïdi also stressed the unusually strong power of the president in the French system, an arrangement that facilitates decisions though not consensus building. The crisis has shown that the French model is vulnerable to market pressures, likely placing a premium on a technocratically sound candidate in the next election.

### *Germany (Chapter 8)*

Daniela Schwarzer (Stiftung Wissenschaft und Politik [SWP]) began with the reminder that Germany accounts for 28 percent of euro area GDP. It has come out of the global crisis quickly, with 2.9 percent growth in 2011. Its fiscal deficit is down to 1.7 percent for 2011, and will be zero in 2014. In the present crisis, Chancellor Angela Merkel has committed to "do whatever it takes" to maintain the euro.

Although the government has a comfortable margin in Parliament, it is seen as weak. Its crisis management strategy has little public support and the coalition parties have lost regional elections. It was a great relief that the con-



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stitutional court approved the European Financial Stability Facility (EFSF), and the Bundestag is likely to ratify it despite two-thirds opposition to it in the polls. Much of the public feels it has lost the Economic and Monetary Union it once joined, and fears inflationary consequences of ECB intervention in the debt crisis. In the discussion, there was a sense that if fiscal federalism comes to the euro area, it will be on German terms. Some expressed concern that the consequence could be a contractionary bias.

## Lessons from Past Restructuring Experience

With the partial exception of Greece, so far the peripheral euro area economies involved in the current debt crisis have not been forced to carry out formal debt restructurings. Nonetheless, past international experience in such restructurings can help shed light on the policy choices presently facing the euro area, especially if the official refinancing and other interventions to date prove to be insufficient.

### *Economic (Chapter 9)*

Jeromin Zettelmeyer (European Bank for Reconstruction and Development) identified five lessons from restructuring experience in 1998–2008. First, collective action problems are overrated; excluding Argentina, creditor participation was high and average completion of restructuring took only 13 months. Second, purely voluntary exchanges rarely work. Restructuring in Uruguay in 2003 was soft but not voluntary. Third, market-perceived haircuts substantially exceed debt relief for the country because markets discount at a high "exit" risk premium, whereas the proper discount rate from the standpoint of the country is somewhere between the risk-free rate and the country's borrowing rate in normal times. Fourth, markets punish haircuts, especially if they derive from lack of willingness, rather than lack of ability, to pay. New research shows that a 20 point increase in the haircut boosts borrowing costs by 150 basis points in year 1 and 70 basis points by year 5. Also, a coercive approach to debt restructuring significantly reduces access of domestic firms to foreign credit. Fifth, preventing a banking crisis is the key to avoiding severe output loss from debt restructuring.

### *Legal (Chapter 10)*

Lee Buchheit (Cleary Gottlieb) also emphasized avoiding a banking crisis as a consequence of restructuring, which is difficult to do where local banks are heavy holders of the government's debt. His list of lessons further included avoiding excessive delay before facing up to unsustainability of the debt; keeping accurate accounts of public debt, including off-balance-sheet provincial "quasi-sovereign" debt likely to be seen as public by foreign holders; asking for enough relief initially rather than needing three or four rounds of reschedul-



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ing, as in Latin America in the 1980s; calling on the IMF to help identify the right balance between financing needs and excessive relief; being efficient (and mark to market bondholders of the present have a greater incentive for speedy resolution than bank loan holders of the 1980s); and being evenhanded instead of discriminatory among creditor groups. He noted that peripheral Europe has a unique advantage in restructuring in that its debt is under national law rather than law of another jurisdiction. He emphasized that in a fair deal, national law could if necessary be amended to identify a high but manageable majority required for approval. He also noted that some calls for collateral against EU support could raise issues of negative pledge clauses in existing bonds and loan contracts. In discussion, Buchheit answered a query about contractual implications if the euro were to break up by indicating that, if the contract were under the law of a country that had exited, the country's obligation could be converted to the new local currency despite an original euro denomination.

## Pros and Cons of Alternative Policy Options

### *Peterson Institute for International Economics (Chapter 11)*

William Cline (Peterson Institute for International Economics) argued that the European debt crisis is primarily one of confidence. Examining the severity of the debt problem in each of the five countries, Cline first considered prospects for debt sustainability in Greece. He calculated that the July 2011 package provided the basis for reducing the gross debt-to-GDP ratio from 170 percent to 113 percent by 2020. He stressed that there is a misleading increase in gross debt from the collateral assets set aside for PSI exchanges and that Greek net debt shows considerably less burden, at 120 percent now, falling to 69 percent of GDP by 2020. Similarly, the interest burden falls from 7.2 percent of GDP to 5.2 percent by 2020 instead of rising to 9 percent without the interest relief in the EU package decided upon in July. The package involves an ambitious but feasible fiscal target (primary surplus of about 6 percent of GDP) as well as sizeable privatizations (€50 billion). The PSI package (€135 billion) and the lengthening of maturities for EU support remove the liquidity squeeze by covering amortization through 2020. Cline thus judged Greek debt to be sustainable given the new package.

Consideration of debt sustainability also finds Ireland and Portugal to be solvent. The sustainability test is that the primary fiscal surplus is large enough to equal or exceed the debt-to-GDP ratio multiplied by the difference between the interest rate and the nominal growth rate; both countries pass this test. Italy and Spain also meet this sustainability test. However, if they were to face a serious liquidity squeeze, the financing needs combined could be on the order of €1 trillion through 2015 for debt coming due.

Cline then examined a spectrum of restructuring and buyback policy options as well as three broader changes: expansion of the EFSF, issuance



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of eurobonds with joint guarantee by euro area members, and outright exit from the euro (either by weak countries or by strong countries establishing a new strong currency). Ireland and Portugal have the mildest options on the spectrum, official refinancing only; Greece, the next mildest, refinancing with voluntary PSI. More drastic options—restructuring with moderate debt reduction, like the Brady Plan's 35 percent haircuts, and restructuring with deep debt reduction, like Argentina's 70 percent haircut—Cline judged currently unnecessary even for Greece. At the moderate end of the spectrum, an important market-friendly option is repurchases of debt at a discount, by the country or by the ECB.

The need for the various approaches will depend on the future severity of the problems. Expansion of the EFSF threefold or fourfold could be necessary to deal with acute liquidity stress for Italy and Spain. For the eurobond alternative, Cline made a calculation relating risk spreads to country ratings and found that the weighted average spread for all euro area countries would be only 40 basis points above the German benchmark. The direct costs could be 0.3 percent of GDP annually in higher interest payments for Germany and France but with interest savings of 0.6 percent for Italy (in normal times), 1.3 percent for Ireland, 1.9 percent for Portugal, and 9.0 percent for Greece at its current low rating. After taking account of liquidity gains for the euro as an international currency, as well as gains in exports to partners in stronger economic health, net costs to France and Germany could be close to zero.

The paper closed with a matrix relating each policy approach to its impact on the five countries facing debt difficulties, on Germany and France, and on the rest of the G-7, showing an impressionistic index of the intensity and sign of the impact. The current policy programs, perhaps supplemented by market buybacks, show the most uniformly positive effects if they can succeed. The option of exit from the euro would be negative for the troubled debtors (ballooning domestic currency burden of euro debt), negative for France (for social-good reasons of high value attached to the single currency), and either negative or positive for Germany (depending on whether avoidance of lender-of-last-resort burdens were more or less valuable than the loss of competitiveness from appreciation of a new currency if Germany and France were to exit).

### *Bruegel (Chapter 12)*

Guntram Wolff (Bruegel) took the opposite view on Greek solvency but argued that other euro area countries appear solvent. Citing other Bruegel work, he considered Greece to be insolvent and noted that many economists believe it requires a 50 percent haircut. More broadly, he saw the euro area challenged by both a debt overhang and a need for price adjustment.

In the case of Greece, he argued that debt haircuts need not be costly, especially if the primary deficit is zero and borrowing is no longer needed. Instead, Wolff saw the principal cost of sovereign debt haircuts as the impact on banking systems. By far the largest impact would be on the banking system of



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the country in question, according to the most recent stress tests conducted by the European Banking Authority (EBA). A 50 percent haircut for Greek debt would require only €25 billion in bank recapitalization funds, of which the financial assistance program for Greece already foresees €10 billion. Given the limited exposure of banks in other euro area countries, a haircut addressing Greek insolvency would cause relatively limited direct losses for Irish, Italian, Spanish, Portuguese, French, and German banks. Wolff argued that the ECB would need to change its collateral policy and accept debt of a government that had defaulted in order to provide the necessary liquidity to the banking system. Wolff then discussed further policy options, in particular with a view to avoiding self-fulfilling crises. The Blue Bond (euro area guaranteed)/Red Bond (not guaranteed) proposal includes joint and several liability (Delpla and von Weizsäcker 2010). Adopting this proposal would likely require a new EU treaty. He questioned the argument that this proposal would raise borrowing costs, and argued that greater liquidity could offset any higher interest costs. He further suggested that a "big bang" would be required to split each current bond into blue and red, because the alternative of gradual issuance of blue bonds would distort incentives and provoke legal challenges. Gradual introduction would also delay structural reforms.

Wolff argued that there is an internal contradiction involved in a major EFSF expansion: the large size that would be needed to address Italy (for example) would spur contagion to core countries, including France. He cited favorably a recent proposal of Daniel Gros to instead turn the EFSF into a bank with full access to ECB refinancing, placing debt management in the hands of finance ministers but ensuring a liquidity backstop.

Finally, Wolff considered euro breakup scenarios and argued that they would be prohibitively costly. A central concern of the current euro area, however, is the lack of competitiveness adjustments and the increasing deindustrialization of the euro area periphery. Practically, debt under home country law would convert to the new home currency. But under current EU law it would be illegal to leave the euro without also leaving the European Union. Describing the economic impact of the breakup of the euro, he stressed the likelihood of massive asset-liability mismatches and resulting chains of bankruptcies. Once one country left, markets would attack the next one most likely to leave. So overall a euro area exit even by one member would have severe economic repercussions for the union as a whole and would be a historic mistake economically and politically.

### *Discussion (Chapter 13)*

Gertrude Tumpel-Gugerell (formerly a member of the ECB) and Rodrigo de Rato (chairman, Bankia, and former managing director, International Monetary Fund) served as the discussants of the two papers on policy alternatives in resolving the European debt crisis. Tumpel-Gugerell agreed with Cline's emphasis on diagnosing debt sustainability and restoring confidence to avoid



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self-fulfilling prophesies. She viewed expansion of the EFSF as the most realistic alternative for increasing financial backstopping. She disagreed with Wolff's view that restructuring Greek debt would not have direct adverse spillover effects on other euro area economies. De Rato argued that transition to a true economic and fiscal union would be necessary to ensure the survival of the euro area monetary union. His suggestions for action included strengthening the EFSF (including through leveraging with partial bond guarantees), implementing reforms to spur growth, imposing central coordination on fiscal policies, and possibly creating an IMF "debt facility" like the 1973 "oil facility."

The general discussion revealed sharp division on whether a default by Greece would spread severe contagion to other euro area economies. One participant observed that even the PSI in the July package had triggered rising spreads in Italy and Spain. Wolff replied that the Italian spreads had risen as markets focused on domestic disagreements on fiscal action. Discussion of concrete steps to be taken emphasized the tension between a horizon of perhaps five years for deep institutional change such as creation of a euro area treasury or development of eurobonds, and the need for action in the short term. The ECB was generally seen as the only entity capable of action in the near term. Some argued that the ECB was being overstretched, and that instead the EFSF could be used in more imaginative ways, such as insuring new bonds. It was also argued that the ECB does not have the comparative advantage in conducting fiscal monitoring, yet currently it is in effect conducting shadow adjustment programs. The contagion to Italy has intensified the short-term problem. One participant feared that in the absence of an EFSF guarantee for banks, European bank equities would be far more severely depressed by the first quarter of 2012. As discussed below, the evolution of the simulation game played on day 2 of the conference did indeed lead to imaginative uses of the EFSF and more forceful measures to guarantee the banks.

### *Luncheon Speech (Chapter 14)*

In a luncheon speech, George Soros (Soros Fund Management) argued that the lack of a common treasury had been an inherent weakness in formation of the euro. An embryonic treasury, the EFSF is not properly capitalized and its functions are ill defined. Tailored for the three small crisis economies, it is inadequate to support Italy or Spain. The German Constitutional Court decision subjects approval of future support of other states to Bundestag approval. The absence of concessional rates for Italy or Spain, and of preparation for possible default and departure from the euro by Greece, casts doubt on government bonds of other deficit countries and euro area banks with large holdings of these bonds. The ECB purchase of Italian and Spanish bonds is not a viable solution; the same move for Greece did not have lasting success. If Italy had to pay 3 percent in risk premiums, its debt too would become unsustainable. An orderly Greek default and exit from the euro may be neces-



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sary; a disorderly default could precipitate a meltdown like that following the bankruptcy of Lehman Brothers, this time without a treasury to contain it. Even if catastrophe is avoided, pressure to reduce deficits will push the euro area into prolonged recession.

Four measures should be taken: bank deposits in Greece must be protected, or else a run on banks would spread to other deficit countries; some banks in defaulting countries have to be kept operating; the European banking system should be recapitalized and put under European instead of national supervision; and government bonds in other deficit countries have to be protected. These measures will require a new treaty turning the EFSF into a full-fledged treasury with the power to tax. Despite German public opposition to it, such a treaty must be approved; assets and liabilities are so intermingled that a breakdown of the euro would cause a meltdown the authorities could not contain. Default or defection of the three small economies would not mean their abandonment. The EFSF would protect bank deposits, and the IMF would help recapitalize banking systems. The ECB, indemnified from insolvency risks and with authorization from the European Council, could serve as the bridge during time-consuming institutional change. A solution in sight would help relieve markets. Because new arrangements would be on German terms, it would take a change in the German attitude toward anticyclical policies to allow resumption of growth.

## Simulation Game (Chapter 15)

The strategic game undertaken on the second day of the conference was played in a large room at the conference center. About 50 people, stationed at tables labeled for each entity in the game, participated in or observed the simulation. The players included the ECB, the IMF, market participants, commercial banks, political analysts, and governments of Greece, Ireland, Italy, Portugal, Spain, France, and Germany. Also participating were players representing the rating agencies and the US authorities. The game unfolded over several hours as participants voted their preferences on policy and in the marketplace. These choices were informed by the periodic infusion of new data from market participants on interest rates, bond spreads, and other market developments.

The game drew on many of the insights reached in the earlier discussions and presentations, but with a different focus. Whereas day 1 concentrated on the broad political, economic, and legal challenges to the stability of the euro area, day 2 grappled with more immediate responses to the crisis. The goal was to address the deteriorating situation in the euro area caused by market pressure on several troubled economies. The participants ended up devising a collaborative mechanism to provide additional assistance to ailing countries in the euro area. The market reaction that unfolded in the game suggested that this approach could help quell the serious risk of contagion spreading from the periphery to the core of Europe.



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The main feature of this innovative mechanism was a dramatic expansion in the lending capacity of the EFSF combined with collateralized financing from the ECB. The scheme would make available substantial additional resources through the new leveraged EFSF mechanism: depending on haircuts applied in repurchase agreements, the amount would be between €3 trillion and €5 trillion. The ECB played a pivotal role in the game in encouraging and helping the euro area leaders to set up this arrangement.

The primary initial beneficiary of the new EFSF lending mechanism was Greece, which was provided €100 billion in new loans. Athens could use these funds to buy back its existing debt at a premium over current market prices, still reducing its existing stock of debt by considerably more than €100 billion. This capacity was seen as easing Greece's solvency and budgetary concerns and encouraging the markets to offer it lower interest rates. In the game, the market reaction was to reduce these rates slightly. Diminishing risk for Greece was also seen as a significant contribution to overall stability in the euro area.

In a notable feature of the game, and in contrast to some of the discussions of the first day, no concerns surfaced among the players about a possible breakup of the euro area. Lingering wariness over the economic outlook in Europe was widespread, on the other hand.

The reaction of the market players indicated some confidence that the new facility could effectively address the liquidity crises of the ailing countries. For all these positive developments, many of the players expressed concerns that they fell short of solving the euro area's long-term growth and financial prospects. Many players warned that even as the short-term financing and budget problems of Greece were eased, all the debtor countries needed to continue on a path of fiscal consolidation and structural reform in the years ahead. The new mechanism would leave unresolved the issue of how structural reforms could be fostered and conditionality imposed. Ultimately, it would risk being tested by the market. There were also concerns expressed about a possible political backlash against such an extensive new lending program, particularly in Germany, where previous expansions of ECB and EFSF lending have also raised legal and constitutional concerns.

A striking feature of the game, many players agreed afterwards, was that the devised solutions were not effectively communicated, including to the markets. The workings of the proposed leveraged EFSF facility had to be explained repeatedly by those playing ECB and IMF officials. In side meetings, participants from the euro area countries, often convening separately to discuss their possible decisions, sometimes had difficulty in arriving at a consensus on how to proceed. The ECB and IMF came forward on several occasions with key suggestions to address the problems faced in Europe. The ECB also contributed a small cut in interest rates, as well as unlimited long-term liquidity, as the crisis deepened in the first phase of the game. These difficulties illustrated the well-known challenge of achieving effective decision making in the euro area and of communicating with the markets.



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The large new lending facility was seen by some players as free money for errant countries without sufficient conditionality. But those devising and supporting the program argued that, on the contrary, it was mobilized to help countries that were on track in implementing their fiscal and structural reform commitments but needed assistance in order to cope with the adverse effects of a slowing world economy and other exogenous factors. A lesson from the game was that the euro area needs to better define the framework for precautionary EFSF operations in support of countries with credible policies.

A team from the United States participated in the game and made a series of announcements, including a maturity extension of the Federal Reserve's balance sheet, a third round of bond purchases (known as quantitative easing), and new dollar swaps with the ECB. These actions appeared to have little effect on the European situation. Players representing the United States pointed out that the new EFSF lending mechanism was somewhat similar to what the Fed and Treasury had established in the depths of the financial meltdown in 2008–09.

The simulation game thus turned out to be an innovative way to improve economic policy advice. It provided a dynamic and strategic setting in which players were faced with real and pressing choices. It revealed the difficulties that current policymakers face given the large number of actors. We hope that the insights derived from the simulation game will contribute to the ongoing development of policies to resolve the European debt crisis.

## Postscript[1]

As this volume began production in early December 2011, major new developments had occurred in Greece, in Italy, and within euro area institutional arrangements. On October 27, EU leaders announced that representatives of private banks and insurers had voluntarily agreed to a 50 percent haircut in the face value of their claims on the Greek government. The EU leaders also agreed to recapitalize European banks, and to use leverage to increase the capacity of the EFSF. Two approaches were being considered to obtain EFSF leverage: use of EFSF funds to provide partial guarantees on sovereign bonds; and creation of coinvestment entities to mobilize international funding to purchase bonds of euro area governments. (The alternative emphasized in the Bruegel–Peterson Institute conference, EFSF leverage based on backing by the ECB, was specifically rejected by both the ECB and the euro area leaders, especially Germany.)

New uncertainty soon eroded the restoration of confidence from the EU summit results, however. In the face of domestic opposition to the Greek adjustment package, Prime Minister George Papandreou announced he would hold a referendum on it. The move, which raised the specter of the package's rejection, was condemned by euro area partners and a wide range of the do-

1. December 14, 2011.



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mestic Greek political spectrum. After securing an implicit pledge to support the adjustment program from the main opposition party, the prime minister then withdrew the referendum proposal, committed to a unity government, and resigned to make way for a transitional coalition government that would be in place until new elections were held. Parallel political unraveling occurred in Italy. On November 8, after losing his coalition's majority support, Prime Minister Silvio Berlusconi announced that he would resign once Parliament passed austerity measures. By then interest rates on Italian 10-year government bonds had risen close to 7 percent, the level that had come to be associated with a spiral into debt crisis in the earlier cases of Greece, Ireland, and Portugal; and the following day they rose above this level.

A further development occurred at the December 9 Council of Europe meeting when the European Union heads of state reached agreement on a core set of actions affecting the debt crisis. The 17 euro area members agreed to a new legal framework on fiscal rules (although a veto by the United Kingdom, largely prompted by the special UK objectives regarding regulation and taxation of financial services, prevented formal revision of the EU treaty). Each government was to adopt a legal "golden rule" providing for a structural deficit no greater than 0.5 percent of GDP, subject to surveillance by the European Court of Justice and fines for countries with deficits exceeding 3 percent of GDP. The starting date for the €500 billion European Stability Mechanism (ESM, to replace the €440 billion EFSF) was moved forward to July 2012, and its clause requiring private sector involvement was removed—reflecting the growing perception that pressure for PSI in Greece had contributed to contagion to Italy and Spain.[2] The EU members planned to consider providing €200 billion in lending to the IMF, in principle to be supplemented by non-European governments, for the purpose of strengthening the financial "firewall" capacity aimed at curbing debt crisis contagion in the euro area. However, the agreement omitted any immediate movement on the issue of euro bonds, or on more robust assurances by the ECB that it stood ready to intervene forcefully in the sovereign bond market.

The papers in this volume on Greece and Italy provide a rich background for understanding the political crises that have unfolded in these two countries. The debate in the policy strategy analyses on the needed depth of Greek debt forgiveness and the associated risks of contagion similarly set the stage for the real-time developments under way as this volume went to press. The emphasis in the conference on the need to fortify the EFSF in order to deal with the much larger economies of Italy and Spain similarly resonates with the EU summit initiative in late October as well as the earlier date for the ESM and

2. European Council president Herman Van Rompuy stated that ". . . our first approach to PSI, which had a very negative effect on the debt markets, is now officially over." However, he also stated that "from now on we will strictly adhere to the IMF principles and practices" (European Council 2011). Considering that the IMF has at times been hawkish on PSI in country restructurings, the overall effect was ambiguous.



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the special IMF-based initiative for crisis-related lending. Finally, the papers on lessons from past experience in sovereign debt restructurings will serve as a sobering reference if less-voluntary restructuring proves necessary in Greece and if restructurings spread to other euro area sovereigns.

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