

European Department

IRELAND

Lessons from Its Recovery
from the Bank-Sovereign Loop

*A conference sponsored by
the Central Bank of Ireland,
the Centre for Economic
Policy and Research, and the
International Monetary Fund*

European Department

Ireland

Lessons from Its Recovery from the Bank-Sovereign Loop

*A conference on January 19, 2015 held at Dublin Castle, Ireland and
sponsored by the Central Bank of Ireland, the Centre for Economic
Policy and Research, and the International Monetary Fund*

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Ireland

*Lessons from Its Recovery from
the Bank-Sovereign Loop*

European Department
I N T E R N A T I O N A L M O N E T A R Y F U N D

Acknowledgments

The conference “Ireland: Lessons from Its Recovery from the Bank-Sovereign Loop” was organized by the Central Bank of Ireland (CBI), the Centre for Economic Policy and Research (CEPR), and the International Monetary Fund (IMF) at Dublin Castle on January 19, 2015.

Craig Beaumont from the IMF, Stefan Gerlach from the CBI and the CEPR, and Philip Lane from Trinity College Dublin and the CEPR were the main organizers. They gratefully acknowledge the contributions of all the speakers and attendees to the success of the conference. Minister Brendan Howlin and Governor Patrick Honohan gave insightful speeches on Ireland’s experience in recovering from a severe crisis. Presentations and papers by Professors Barry Eichengreen, Antonio Fatas, and Dirk Schoenmaker framed and stimulated the discussions in the sessions on banking, fiscal, and European policies. The panelists John Fell, Jonathan McMahon, Ann Nolan, Gillian Edgeworth, Tom Healy, István Székely, Robert Watt, Alan Ahearne, Agnès Bénassy-Quéré, and Colm McCarthy engaged in thought-provoking and lively exchanges. The conference sessions were ably moderated by Laura Noonan, Dan O’Brien, Sean Whelan, and Wolfgang Münchau. In the fruitful panel discussion that concluded the conference, Minister Michael Noonan, Benoît Cœuré, Valdis Dombrovskis, and Christine Lagarde drew lessons from Ireland’s experience. Peter Breuer, former IMF Resident Representative in Dublin, returned in the role of master of ceremonies. The conference team comprised of Kate Flood, Nadine Clarke, Kate Langdon, Marjorie Henriquez, Ana Ilagan, and Paul Moley made the many preparations needed to ensure the event went smoothly on the day. Acknowledgments are also due to the Irish authorities who facilitated access to the historic Dublin Castle for the event.

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Introduction

Ireland's major property bubble burst at the same time as the global financial crisis erupted, plunging the country into a severe recession in 2008–10. Public debt climbed rapidly as revenues collapsed and as banks' rising loan losses increasingly required public support. Following the Greek crisis in spring 2010 and emerging tensions in the euro area, the last act in the process saw the operation of the "sovereign-bank loop"—a vicious cycle where uncertainty about banks' health fed into doubts around the sustainability of public debt, which only added to fears about the banks. The government lost access to market financing at manageable interest rates, and Ireland entered into a three-year program supported by €67.5 billion of financial assistance from the European Union (EU) and IMF in late 2010.

Ireland's program therefore had three main goals: restoring the viability of the banking system; putting the public finances on a sustainable path and returning to market funding; and restarting economic recovery including by improving growth potential. A large bank recapitalization in early 2011 helped stabilize deposits and other bank funding. The government's access to market financing was progressively regained from mid-2012, enabling Ireland to exit the program at the end of 2013 and rely fully on market financing at highly favorable terms. The first signs of recovery were seen in strong job creation starting in the second half of 2012, and Ireland's recent economic figures have surpassed even the most optimistic expectations, with growth of about 5 percent in 2014.

Seeking to draw lessons for Ireland, the EU, and the IMF, as well as other countries facing similar challenges, the Central Bank of Ireland (CBI), the Centre for Economic Policy and Research (CEPR), and the IMF organized a conference titled "Ireland—Lessons from Its Recovery from the Bank-Sovereign Loop." Held on January 19, 2015, at the historic Dublin Castle, it brought together Irish government representatives, European officials, academics, journalists, private sector representatives, and other stakeholders, as well as the IMF's Managing Director. The conference discussions were anchored by three papers by leading

international academics and moderated by journalists familiar with the issues. The event concluded with a high-level panel discussion by senior policymakers.

In addition to this volume, presentations by the speakers and discussants and videos of all the discussions are available at the conference website:

<http://www.imf.org/external/np/seminars/eng/2014/ireland/>

Conference Organizers:

Craig Beaumont, Assistant Director, European Department, IMF

Stefan Gerlach, Deputy Governor at Central Bank of Ireland and CEPR Research Fellow

Philip Lane, Trinity College Dublin and CEPR Research Fellow

Conference Program

IRELAND—LESSONS FROM ITS RECOVERY FROM THE BANK-SOVEREIGN LOOP

January 19, 2015

Dublin Castle

8:15 Registration and welcome coffee

9:00–9:15 Welcoming remarks

Brendan Howlin, Minister for Public Expenditure and Reform

9:15–10:45 Stabilizing and Healing the Banks

What were the macroeconomic implications of the banking crisis and of policies to address the crisis? What lessons can we draw from banking policies in Ireland's program in terms of stabilizing the crisis and bringing the banks to healthy operation? These policies include the recapitalization in the first half of 2011 together with deferral of later stress tests, the restructuring into pillar banks and banks under resolution, the deleveraging of the going-concern banks' balance sheets over 2011–13, and the efforts to address nonperforming loans. What challenges remain to having a well-functioning banking system?

Moderator: Laura Noonan (Reuters)

Paper: Dirk Schoenmaker (Duisenberg School of Finance)

Discussants: John Fell (European Central Bank)
Jonathan McMahon (St. James's Place)
Ann Nolan (Department of Finance)

10:45–11:00 Coffee and tea

11:00–12:30 Putting the Budget on a Sound Footing

What lessons can we draw from fiscal policies and their implementation in the program? Should the pace of fiscal consolidation have been faster or slower, taking into account growth, debt sustainability, and political feasibility? Was the composition of measures appropriate? Have fiscal institutions and transparency been adequately strengthened? How best to complete the fiscal consolidation process?

Moderator: Dan O'Brien (Independent Newspapers and Institute of International and European Affairs)

Paper: Antonio Fatás (INSEAD)

Discussants: Gillian Edgeworth (Wellington Management and St. Anthony's College)
Tom Healy (Nevin Economic Research Institute)
István Székely (European Commission)
Robert Watt (Department of Public Expenditure and Reform)

12:30–13:45 Lunch

13:45–14:15 Keynote speech

Patrick Honohan, Governor of the Central Bank of Ireland

14:15–15:45 Ireland's Market Access and Euro Area Policies

What lessons can we draw from the effect of European policies on Ireland, especially regarding the loss of market access and it being subsequently regained? Such policies include limits on burden-sharing with senior bank creditors, large-scale ECB funding, cuts in the interest rate and extensions of maturities on EU funding, the Promissory Notes deal, banking union, and OMT. What lessons to draw for protecting euro area stability?

Moderator: Seán Whelan (RTÉ)

Paper: Barry Eichengreen (University of California–Berkeley and Cambridge, UK)

Discussants: Alan Ahearne (National University of Ireland, Galway)
Agnès Bénassy-Quéré (University of Paris, Council of Economic Advisers)
Colm McCarthy (University College Dublin)

15:45–16:00 Coffee and tea

16:00–17:15 Panel Discussion

What were the lessons from Ireland's program for other countries and for Ireland going forward? Which policies were most successful, and why? What should have been done differently? How did Ireland maintain sufficient social cohesion and avoid industrial strife yet still achieve overall strong implementation of the program? What needs to be done to secure Ireland's full recovery from the crisis? How should these remaining challenges be addressed? What are the broader lessons for stability of the euro area?

Moderator: Wolfgang Münchau (Financial Times)

Participants: Michael Noonan (Minister for Finance)

Benoît Cœuré (Board Member, European Central Bank)

Valdis Dombrovskis (Vice President, European Commission)

Christine Lagarde (Managing Director, IMF)

Summary of the Discussions

In his welcoming remarks, Brendan Howlin, Minister for Public Expenditure and Reform, recognized the challenges in the banking system and public finances that Ireland faced in the wake of the banking crisis. He welcomed the appreciation by financial markets of the strong progress that Ireland had made in addressing those challenges, yet he emphasized that there is no complacency. He drew attention to the important role of comprehensive spending reviews to guide measures to reset public expenditure on a more sustainable path while meeting key priorities. In closing, he called on the conference to address the question of how to secure Ireland's full recovery and sustainable growth.

Patrick Honohan, Governor of the Central Bank of Ireland, discussed some lessons learned from the EU-IMF program in his keynote speech. His assessment was that the program had been "a significant success, without which the well-being of the people of Ireland would be much lower than it is today." He reminded conference participants that Ireland's program began with high risks—especially that public debt might rise too high to allow market access to be regained. In practice, it had ended much better than many had expected, and he set out the key factors contributing to that outcome. At the same time, he offered a range of areas where the program could have been better designed. "The rest is up to us, Irish policymakers and the Irish people, to complete the recovery of the economy," he concluded.

The conference covered key aspects of the Irish program, with sessions on stabilizing the banking sector, putting the budget on a sound footing, and the role of euro area policies in Ireland regaining market access and in broader terms. Each session was anchored by a paper prepared by a leading international academic. The following sections highlight key points that arose during the conference discussions. In addition to the papers included in this volume, presentations by both presenters and discussants, together with video of the discussions, are available at <http://www.imf.org/external/np/seminars/eng/2014/ireland/>

Session I: Stabilizing and Healing the Banks

Dirk Schoenmaker (Duisenberg School of Finance) focused his discussion on broader macro-financial aspects of Ireland's banking crisis, working within the Minsky framework of financial cycles. Ireland's financial cycle was in many ways typical, yet cross-border credit played a larger role here than elsewhere in Europe. The clear lesson is the importance of the macroprudential authority seeking to stabilize the credit and housing cycle, such as by containing loan-to-value ratios. He also favored having external members on a financial stability committee in order to reduce groupthink.

He noted that much had been done to restore the stability of the Irish banking system, which has been extremely successful. However, recapitalization had occurred over four rounds, signaling the need to take a comprehensive bottom-up approach earlier, as had been done in 2011. The National Asset Management Agency (NAMA) had worked very well, disposing of large property loans based on market conditions to reduce the overall cost. Having NAMA also manage smaller commercial property loans could have been useful. Schoenmaker considered that Europe should have shared the burden with Ireland of the additional costs arising from the lack of bail in of creditors holding banks' senior debt. This was how a banking union should work in his view, with a centralization of resolution and burden-sharing as well as supervision. Similarly, direct recapitalization should be the standard approach, not a last resort.

But Schoenmaker emphasized that the real goal is for the banking system to support economic recovery. The high level of nonperforming loans, at 25 percent, means that many firms and households still have larger debts than they can service. While the banks have taken large provisions, they are not writing down the loans, leaving a debt overhang that impedes new investment. It is important to solve this issue to get the return on the investment made in stabilizing the banks. Going forward, recapitalization of banks should be subject to conditions that ensure banks write down nonperforming loans.

Ann Nolan (Department of Finance) agreed that the goal of stabilizing the banking system is to support economic growth and job creation. The program has been successful, as seen in growth around 5 percent and unemployment down to below the EU average—although still

too high. The program contained major legislative changes, including revamping personal insolvency, while, at the same time, both the central bank and the banks worked through changes in their internal structures and staffing. Such changes included the banks establishing collection systems, which had not been needed before the crisis. In practice, not everything can be done at once, so there is a need to sequence reforms and allow processes time to work. As a result, the work on to address mortgage arrears started after other reforms, but so far 100,000 mortgages have been restructured, with an 80 percent success rate. There is also a time delay between restructuring a loan and it no longer being classified as nonperforming, which accounts for part of the still high level of nonperforming Small and Medium Enterprise (SME) loans. Overall, there has been more progress on loan resolution than is yet visible, but work still needs to be done.

Jonathan McMahon (St. James's Place) recalled the scale of the challenges faced at the end of 2010 and in early 2011. One of the most difficult issues was how quickly the banks should be deleveraged in order to have manageable balance sheets and to repay their Eurosystem credit. Importantly, a gradualist approach was adopted, avoiding a fire sale of assets. Much credit for this is due to the leadership of Ministers Noonan and Howlin, and of Governor Honohan and Deputy Governor Matthew Elderfield. The troika side (IMF, EU Commission, and ECB) also came to work together well and developed trust in the Irish authorities. As a result, the program partners reached timely agreement on a range of fundamental measures, and many reforms were implemented under the program. McMahon agreed with Nolan that internal restructuring within the banks had been critical, and added that strong leadership of the banks had made a major difference.

John Fell (European Central Bank, ECB) supported the analytical approach used by the paper and underscored the importance of the early 2011 capital review in stabilizing the banks. Right-sizing the disproportionately large banking system was also critical in his opinion, as banks' loans were double their deposits. In addition to the bank-sovereign loop, the banks had faced a liquidity-solvency loop as market funding runs threatened fire sales of assets. Fell illustrated how these two feedback loops strengthened and interacted over time, resulting in a growing funding gap for Irish banks that required central bank funding approaching almost 100 percent of Irish GDP, which implied alarming credit risk for the Eurosystem. The EU-IMF

program addressed banks' funding challenges through downsizing their noncore assets, guided by loan-to-deposit targets. At the same time, the ECB's Governing Council approved a waiver that allowed it to accept bank collateral regardless of the Irish sovereign rating. This step reduced funding uncertainties for the banks, allowing an orderly deleveraging over time. Fell highlighted the remarkable progress that had been made in just a few years within this framework, with the loan-to-deposit ratio down to 110 percent, the banking sector much reduced in size, and all the banks passing the ECB asset quality review.

Session II: Putting the Budget on a Sound Footing

Antonio Fatás (INSEAD) took a macroeconomic perspective on the fiscal consolidation implemented by the Irish authorities during the program—focusing, primarily, on the impact on growth—intentionally setting aside other aspects of fiscal policy, such as redistribution. He noted that Ireland began the crisis with a relatively low ratio of public debt to GDP, and it was often seen as an example to other European countries. However, over a few years Irish public debt had exploded back to levels not seen since the 1990s, representing a major “debt surprise.”

A key question is: how should fiscal policy respond to such a major surprise jump in debt? Fatás emphasized that while previous fiscal plans may no longer be sustainable, implying a need to adjust, it is not necessarily appropriate to aim for a large reduction in debt. In particular, the economic literature does not provide a clear answer on the right timing, now or later, for fiscal policy to reduce debt. It is a complex issue that depends on the cost of taxes, the benefits of spending, and the interest rate, among other factors. It is not easy to reach the conclusion that fiscal consolidation to reduce debt should be implemented over a short number of years.

In practice, Ireland had undertaken a large consolidation over the past five to six years, on a scale similar to that of Portugal and Spain, but smaller than that of Greece. Fatás noted that the adjustment in Ireland went according to the original plan, which speaks very highly of the plan and its implementation. But when making these consolidation calculations, he noticed that changes over time in the estimated level of the structural balance were significantly below

measures of consolidation given by cumulating budgetary measures. He saw three possible explanations for this result, including that fiscal consolidation had impacted potential GDP.

Indeed, his analysis of the data, drawing on the Blanchard and Leigh cross-country methodology, gave multiplier results supportive of the latter hypothesis, suggesting that fiscal consolidation in Europe had been self-defeating during recent years. This would be consistent with the view that consolidation had been too fast. Nonetheless, the case of Ireland was somewhat special, and he was confident that Irish fiscal policy would be sound going forward.

István Székely (European Commission) noted that the speed of fiscal adjustment was a critical issue. The EU-IMF program financing had enabled Ireland to have a much more phased adjustment than would otherwise have been possible, yet even official financing that was much larger than in previous crises was subject to limits, and this constrained the phasing of adjustment in practice. Turning to the relationship between fiscal policy and potential GDP, he agreed it was important to explore the nature of the relationship, yet this was difficult because both potential growth and structural deficit variables are unobservable. These difficulties were evident in the sensitivity of the results to the exclusion of Greece; Ireland was also an outlier from the rest of the sample. He suggested that the analysis could be strengthened by incorporating the range of other factors affecting potential GDP, including the implementation of structural reforms, to have a better guide for program design.

Tom Healy (Nevin Economic Research Institute) noted that the composition of fiscal adjustment leaned heavily on expenditure. Based on an analysis of multipliers for different revenue and spending areas, he highlighted a severe impact from cutting back public investment. In his view the Irish government should have sought a more growth-friendly composition for the adjustment program. This lesson also needs to be considered going forward, given the present debate about cutting income taxes. He endorsed the conclusion of the paper that “looking at the evidence, it seems that we are, at best, guessing potential GDP growth rates, revising its history as new developments happen, and relying too much on short-term forecasts of GDP growth. This makes for a very difficult environment for a sensible long-term budgetary planning.”

Robert Watt (Department of Public Expenditure and Reform) noted that Ireland had taken seven years to bring the deficit to below 3 percent of GDP in 2015. He considered that this pace doesn't seem overly fast. At the same time, the adjustment prior to the program had been rapid and highly procyclical, which was largely driven by the priority of seeking to protect market access. Circumstances could have been quite different if the subsequent strengthening of European policy frameworks—including the ECB's "doing whatever it takes"—had occurred earlier, such as in 2009 or 2010. Turning to the program period from 2011 on, there had been some moderation in the pace of adjustment by extending from 2014 to 2015 the period allowed to reach a 3 percent deficit, but this did not reflect a strong bias to a slower adjustment on the Irish authorities' side. While consolidation affects growth, Watt considered it unlikely to be self-defeating, as some of the puzzles raised in the paper arose from measurement issues. In a small open economy such as Ireland's, fiscal multipliers were lower. Looking back to the projections made in the 2010 National Recovery Plan, which were based on such multipliers, they have proven to be surprisingly accurate overall.

Turning to the lessons from Ireland's highly successful fiscal consolidation, Watt noted the importance of the Irish authorities having a plan—the National Recovery Plan, which had included specific measures and their phasing—that the troika had reviewed and accepted. The program had, in effect, funded the plan of the Irish authorities. The new government elected in 2011 bought into the plan, but there was important flexibility for it to adapt the implementation of some measures based on collaborative discussions with the troika. There was a deliberate strategy to set realistic targets, with adequate buffers and contingencies, so that Ireland met every single quarterly target. Under-promise and overachieve was a deliberate strategy to build confidence. Going forward, Ireland needs to try to run countercyclical fiscal policies more effectively, even though this is very difficult in practice.

Gillian Edgeworth (Wellington Asset Management and St. Anthony's College) highlighted that fiscal policy before the crisis had treated the rapid growth in revenues as durable, with current spending rising by 77 percent in real terms between 2000 and 2008, or six times the euro area average. In the process, fiscal policy added to the unsustainable boom, including the fact that Ireland had the fastest real exchange rate appreciation in that period. Although it may have been preferable for the subsequent fiscal consolidation to have been slower, the fact that prior

policy had been so procyclical had reduced the degrees of freedom. Looking forward, Ireland has more fiscal rules and the Fiscal Council, which produces very strong reports. Yet Ireland's difficult experience argues for even greater efforts to lean against boom-bust cycles.

In the floor discussion, Fatás accepted the comment that his analysis had not ruled out the possibility that difficulties with measuring potential GDP accounted for his findings, yet the estimated multiplier was so high that even allowing for some measurement issue, the possibility for self-defeating consolidation remained. Regarding the option to seek official financing earlier than late 2010, perhaps on a precautionary basis, Edgeworth thought this could have been beneficial, assuming it would have bought forward the March 2011 stress tests, which could have helped contain the loss of confidence and funding in 2010.

Session III: Ireland's Market Access and Euro Area Policies

Barry Eichengreen (University of California-Berkeley and University of Cambridge, UK) set out a perspective on the Irish crisis and the EU from a distance. He considered that the most expensive mistakes had been made in Ireland prior to the bank guarantee, in terms of inadequate controls on banks, in both governance and supervision, together with inadequate external oversight from the EU institutions and the IMF. The market misperception of the absence of sovereign risk in the euro area, and the absence of a banking union, contributed to the ease with which banks raised wholesale funding.

When Ireland faced its banking crisis soon after the bankruptcy of Lehman Brothers, the Irish authorities extended a broad guarantee on the liabilities of all banks to stabilize their funding. Eichengreen attributed this decision to the Irish authorities, who appeared to lack adequate information on banks' health, and noted the guarantee could have been better designed. But the European context also played a role, as options were shaped by the fact that the EU had no framework for orderly bank resolution in place and there was no coordinated European approach to addressing financial sector problems hitting many countries. Moreover, there was uncertainty about the availability of liquidity support from the ECB, including the opacity of policies on Emergency Liquidity Assistance (ELA). A more proactive ECB would have clarified the availability of liquidity support, which would have created options besides the blanket guarantee, such as selective nationalization.

Turning to 2010, by which time the banks had become highly dependent on liquidity support, Eichengreen noted that the ECB was clearly uncomfortable about the scale and extended use of ELA. While seeking the entry of Ireland into a program to contain those risks, the ECB appeared to have opposed the imposition of losses on senior bank creditors for fear of contagion concerns. In his view, a better way of dealing with potential contagion would have been for the ECB to signal its commitment to support the liquidity of other banks, including solvent Irish banks. He thought the IMF had been unwise to ultimately accede to the ECB on this point.

Wider mismanagement of the euro area crisis had been part of the problem for Ireland. These factors included uncertainty surrounding Greece and its debt restructuring, the Deauville Declaration, talks of possible exit from the euro, and inadequate EU stress tests in 2010. Nonetheless, some learning had occurred, with the creation of a banking union with a single supervisor and dedicated resolution fund, although the latter needed proper funding.

Agnès Bénassy-Quéré (University of Paris, Council of Economic Advisers) agreed with the weaknesses of EU oversight before the crisis, noting the high focus on fiscal imbalances when external imbalances proved a better warning signal. So, the introduction of the Macroeconomic Imbalance Procedure is welcome, although past warnings from the EU in 2001 had been ignored by the Irish authorities.

Drawing a comparison with Denmark rather than with Iceland, Colm McCarthy (University College Dublin) agreed that Ireland would have faced a property boom-bust even it had not been part of the euro. But there are grounds for thinking the bubble would have been smaller and that the Irish authorities would have had more options in dealing with it, and that these two factors would have reduced the cost. He emphasized that the ECB's insistence on full repayment of unguaranteed and unsecured senior bonds, by banks that had lost many times their capital, was unfair, and he doubted its legality. He also questioned the inclusion of long-term microeconomic reforms in short-term adjustment programs, especially the privatization of state-owned industries, given the need to focus on macroeconomic and financial stability.

Alan Ahearne (National University of Ireland, Galway) saw the role of Europe and European policies in the Irish crisis as having two phases. Initially, while Ireland was losing market access, they were part of the problem, but later they become part of the solution. He noted the

inadequacy of external surveillance in the first phase, such as the inability to recognize the weakness of the underlying fiscal position in 2006–07. He agreed that the lack of EU rules on bank resolution played an important role. Doubts around debt sustainability were also affected by concerns about Irish growth prospects, given Europe’s double recession. The fact that the ECB let markets know that they were very uncomfortable with their growing lending to Irish banks was inviting a panic. Although the bailout of senior bondholders could have provided only modest savings in Ahearne’s view, it was a major source of public resentment that undermined the program. Nonetheless, Europe began to change course, reducing lending interest rates in mid-2011, initiating work on the banking union in mid-2012, soon after which the ECB committed to do whatever it takes, and in early 2013 the deal on the promissory notes helped stabilize low-cost financing. All these steps toward more European support had put Irish yields on a downward path and enabled Ireland to gradually return to market financing.

Discussions covered such issues as debt relief for Ireland, the potential for greater fiscal union in Europe, and the implications of diverging economic performance among euro area countries. A banking union was now understood to be critical for the monetary union to work, and the failure to make progress on this earlier may have reflected member states seeking a competitive advantage. Yet doubts were raised about the adequacy of the progress on the banking union, as effective common supervision required strong resolution powers and implementation capacity; their absence was likely key to the inadequacy of earlier European stress tests.

Session IV: Panel Discussion

A high-level panel—Ireland’s Finance Minister Michael Noonan, IMF Managing Director Christine Lagarde, Benoît Cœuré from the Board of the European Central Bank, European Commission Vice-President Valdis Dombrovskis, and moderator Wolfgang Münchau of the *Financial Times*—drew broad lessons from the Irish experience.

Noonan highlighted that the problems of the Irish banks became the problems of the sovereign. Although efforts to contain the cost to taxpayers were made, there remained a legacy cost, especially from Anglo Irish Bank. He had favored bail-ins rather than bailouts, and regretted that the ECB had directly refused any burden-sharing with holders of senior bank

bonds. Although the subsequent development of bank resolution policy had provided for such bail-in, it was disappointing that this lesson had been drawn too late for Ireland.

On this issue, Cœuré noted that the decision not to have bail-in of holders of senior bank bonds was taken at a time when the framework was different, where the dominant view in Europe and globally was to do bailouts to avert financial stability concerns. Regarding the amount of bonds potentially subject to bail-in, he considered them not significant relative to the large-scale financial support provided under the program and also by the ECB. Nonetheless, the ECB supports the progress made on adopting bail-in rules for Europe that will reduce uncertainties going forward.

Noonan also recalled the very difficult fiscal position at the outset of the program, in large part reflecting revenue losses from a tax base too reliant on construction and property. Some 269 actions to cut spending and increase taxes had been taken to reduce the deficit, which was on track to be below 3 percent of GDP in 2015. He emphasized the difficult task of sustaining political support during such a long fiscal consolidation effort, and he highlighted that this was a broader challenge threatening political stability across Europe.

In drawing lessons from the program, he urged that program design should focus on ultimate objectives and allow flexibility. Actions and deficit targets should be a means to an end, not goals in themselves. "Success can only be measured by the impact that is made in the lives of the people," Noonan said. "There must be more potential to modify a program if some aspect is not working."

"The Irish economy has been a resounding success over the last years and months," said the ECB's Cœuré. He underlined flexibility as a key element in Ireland's success, from which other countries in the euro area could learn. Other lessons were the importance of resolve in policy implementation, as the benefits of policy efforts take time. He highlighted the need for proper rules of the game for crisis resolution and noted that Europe as well as Ireland had faced serious costs from entering the crisis without such rules, especially in relation to bank supervision and regulation. Europe had started creating the right framework, including the European Stability Mechanism direct recapitalization instrument, although it remained untested at this time.

With Ireland expected to return to precrisis output peak levels a year ahead of the euro area average, the EC's Valdis Dombrovskis certainly saw Ireland's program as successful. He hailed the Irish authorities' ownership of the program, which in practice was built largely on Irish reform initiatives, as a key factor contributing to that success. He noted that such ownership was critical for effective social dialogue in order to ensure a degree of understanding and acceptance of the program. He also highlighted the benefits from front-loading fiscal adjustment as a means to restore financial stability and growth, although in Ireland's case there had also been some phasing of adjustment.

IMF Managing Director Christine Lagarde saw many positive lessons, yet also some areas where the program could have done better. She highlighted the clarity of purpose of the program, with a focus on banking stability, regaining market access, and fostering recovery; this was, in part, a benefit of the smaller need for structural reforms in Ireland than in other European countries. She agreed that ownership was critical, benefiting from the fact that the authorities had already started to address challenges before the program. Outstanding communication by the Irish authorities, the strong capacity to design and implement policies of Irish officials, and the building of trust between the authorities and the troika teams were critical human factors for success. Among areas where the program could be improved, she noted that recapitalization of banks is necessary but not sufficient to restore their health, where more progress on reducing distressed loans would have been desirable.

Responding to questions from the floor, Dombrovskis acknowledged that the social impact of policies needs stronger consideration and that this priority was guiding the work of the EC, for example, with social indicators being included in the European Semester. Lagarde noted she had pressed IMF teams to take into account the social dimension, yet the primary responsibility rests with the authorities of the various countries to reallocate and better utilize budgetary resources. Cœuré regretted that there was not a European instrument to provide grants for social purposes in order to help maintain a minimum targeted level of social support that would have made adjustment more politically acceptable. He also suggested that the design of structural reforms can support fairness, such as improving tax collection, although this example was more relevant for countries besides Ireland.

Speeches and Remarks

Welcoming Remarks

Brendan Howlin TD, Minister for Public Expenditure and Reform

Distinguished guests,

I would like to welcome you here today to participate in this conference, which has been organized by the Central Bank of Ireland, the Centre for Economic Policy and Research, and the International Monetary Fund. I hope you find the experience a valuable one.

In particular, I would like to welcome back some old friends to Dublin. While the issues we dealt with were serious and we didn't always see eye to eye, I would like to think our business was conducted with a large deal of civility, mutual respect, and even the occasional smile. I hope you enjoy your stay in Dublin once again.

The conference, as you are aware, provides the opportunity to combine a retrospective on Ireland's EU-IMF program with discussions, which will be future-focused. The objective of our gathering here today is to draw lessons not just for Ireland, the European Union, and the IMF, but also for other countries that are facing similar challenges. While maintaining our focus on the future, we can learn from the past.

The challenges confronting the Irish authorities in the wake of the banking crisis, which emerged in 2007, have been fairly well identified and discussed. In particular, the twin challenges of the restoration of the stability of the public finances and the restoration of the stability of the banking system had to be addressed and have been addressed.

It is not for me to put words into the mouths of our European friends, but I doubt even the most optimistic envisaged the level of progress Ireland has made in these few short years. We exited from the program without a funding backdrop, and that decision has been vindicated by the high level of growth we enjoyed last year and expect to record this year, barring unforeseen developments.

The progress made in terms of our banking system and our public finances is there for all to see. These are widely acknowledged. Less attention is paid to the considerable progress Ireland has also made, with the assistance of our partners, in terms of debt sustainability. Thankfully, the markets are monitoring these developments, and they are reflected in our bond yields. But there is no complacency. Challenges continue, whether in the financial services sector or the wider economy. We must ensure that the progress we have achieved to date and the momentum behind this progress continues in future years.

The Irish crisis, of course, did not occur in a vacuum. European policymakers, too, have had to grapple with other crises and sub-optimum growth within the European Union. While firmly anchored within the union, Ireland has undoubtedly benefited from the strong return to growth in both the United Kingdom and the United States, countries with which Ireland enjoys strong cultural and trading links.

It became clear to Irish policymakers during the crisis that as an open economy, our capacity to deal with our challenges was hampered by a lack of economic growth in the euro area. That problem remains with us.

As Minister for Public Expenditure and Reform, I would like to speak, in particular, about our approach to the management of public finances. The government's approach has been to ensure that public finances remain on a sound footing and that, against this background of public financial stability, structures are in place to facilitate the provision of public services, as well as growth within our economy and continued job creation.

Under the budgetary reform measures first introduced by the government in 2011, current expenditure by the state on the provision of public services—which are funded primarily by the taxpayer through the Exchequer—is now subject to periodic comprehensive review.

Comprehensive spending reviews are a growing feature of modern international good practice in managing public finances.

They provide the government with an opportunity to examine public expenditure in a way that enables it to meet overall budgetary objectives and to realign allocations with its priorities over the medium term.

Over the last number of years, as part of its response to the fiscal crisis, the government introduced a variety of expenditure measures—informed by the first Comprehensive Review of Expenditure 2012–14. These measures helped to reset public expenditure on a more sustainable path and also mean that we now do more with less. This has resulted in more effective expenditure programs. These expenditure measures, together with taxation and other measures, were key to the progress that has been made in terms of Ireland’s successful exit from of the EU-IMF program and the year-to-year reduction in the General Government Deficit.

The impact of these decisions and the economic recovery that they helped to foster means that our progress toward achieving a balanced budget in the next few years can be achieved without recourse to further annual reductions in the aggregate level of government spending.

Nevertheless, there are constraints on future public expenditure. In particular, the application of the new fiscal rules that were introduced across the euro area in response to the crisis, the open nature of our economy, and the high level of government debt all demand continued strict and carefully balanced management of the public finances. There will be some room for additional spending to address demographic pressures and policy priorities.

Essentially, the fiscal framework is designed to ensure a fiscal discipline, which will help to protect us against future shocks by ensuring that the changes to government spending remain in line with growth in the economy, that the levels of public expenditure are sustainable, and that they can be funded from government taxes and revenues.

In tandem, it is critically important that EU member states are facilitated in making the investment necessary for future prosperity.

We have focused on improving the framework conditions that underpin economic growth, and we are now reaping the rewards of our efforts. Only last week we published our 2015 Action Plan for Jobs, with the determination to build on the progress of its predecessors. Total unemployment has reduced by 87,100 since early 2012, while employment has increased by 80,000 in the same period. We have also seen strong export performance, with indigenous exports estimated at €18 billion in 2014, the highest level ever recorded. Overall growth in exports of goods and services is likely to be in the region of 8 percent.

During the financial and economic crisis, the response of the European institutions and the International Monetary Fund had a key role in determining how to deal with the financial and economic crisis. The crisis was unprecedented since the very beginning of the European project, and the full implications of the response could not be foreseen.

It is important that the consequences of the response be examined with a view to learning lessons that would be useful in dealing with any possible difficulties that could arise in the future.

The high-level panel discussion will attempt to draw lessons from Ireland's program for other countries and for Ireland going forward. It will consider very pertinent questions, such as how Ireland managed to maintain sufficient social cohesion while implementing an ambitious program of reform. More importantly, from my perspective, is the question of what needs to be done to secure Ireland's full recovery and lay the foundations for sustainable growth in the future.

The topics under consideration at this conference are highly relevant to the European and global economy, and the participants are eminently qualified to address them.

What lessons have been or can be learned: good, bad, or indifferent?

Ladies and gentlemen, I look forward, with interest, to the outcome of today's proceedings.

Thank you.

Keynote Speech

Governor Patrick Honohan, Central Bank of Ireland

“Some Lessons Learnt from the EU-IMF Program”

This occasion is, of course, an opportunity to mark the successful conclusion of the EU-IMF program of assistance to Ireland. I share the assessment that the program has been a significant success, without which the well-being of the people of Ireland would be very much lower than it is today.

Reading social media and other populist commentary might suggest otherwise, but (without in any way suggesting that economic policy could not have been improved over the past four years) I want to begin by insisting that such commentary is poorly informed. The program helped Ireland a lot.

Indeed, I would go further to say that, partly due to some good fortune as well as to the sustained adherence to an effective fiscal adjustment program, Ireland has done much better than it might have—and much better than I and others expected—in turning around a situation, the gravity of which became increasingly evident during 2009 and 2010.

Still, it would be incorrect to insist on unqualified positivity about the program in the context of an overall economic situation in Ireland that has been fraught, looked unpromising, and still leaves a long-lasting residue of high unemployment and financial distress related to the over-indebtedness of households and firms.

So, I would like us to take a few minutes to recall that this started out as a high-risk program, why that was so, and how things evolved so that it ended up being a success.

A High-Risk Program

As designed in November 2010, the EU-IMF program of assistance was acknowledged to be one that lacked a strong probability of success (in the limited sense of the country's return to a sustainable fiscal position, recognized as such by private investors). This was the view of the IMF staff¹ and it was also the view of the Irish staff negotiating the program.

Three elements in particular were lacking. First, the interest rate was too high, considering the starting debt-to-GNP ratio. Second, the high tail risks associated with the loan portfolio of the banking system were not being addressed with an efficient instrument: an additional debt burden was placed on the Irish state, whereas a tail risk insurance or direct capital injection from external sources would have been appropriate. Third, the speed of the required bank deleveraging risked imposing substantial fire sales of assets, which would add to the losses of the Irish government.

Accordingly, the risk was high that at the end of the three years of the program, the indebtedness of the government—taking account also of the servicing costs of that indebtedness—would be too high for the government to have access to the market at any reasonable terms, and would give rise to the need for a second program and a prolonged period of uncertainty.

So why, then, did Ireland agree to enter the program? First, because despite these shortcomings, it nevertheless offered the least painful path for fiscal adjustment—that is, the most gradual path relative to anything else that could reasonably have been expected at that time.²

Essentially, no one was willing to lend to Ireland any more money to allow a more gradual adjustment. Indeed, a comparison of the Irish program with what was called for in other program countries reveals that the Irish fiscal adjustment, though effective, was more gradual than most others. That the troika were prepared to go along with a more gradual path may be

¹ Who placed on record that it was “difficult to state categorically” that government debt would, “with a high probability,” “be reduced to sustainable levels in the medium-run.”

² This is especially true, given the prevailing reluctance in official Europe to rely to a greater extent on Keynesian reasoning, which, in the interests of maintaining higher levels of economic activity and employment, might have tolerated a more gradual fiscal correction path in the postcrisis adjustment phase.

attributable to the fact that Ireland entered the program with still sizable cash balances, which could be employed alongside the available official funds to smooth the adjustment path. In this way Ireland's prompt entry into the program (not waiting for months until all cash had been exhausted) provided valuable room for maneuver.

From the lenders' point of view, it was thought appropriate to proceed with the loan despite the unpromising calculations, in the light of the likely spillover effects on other member states of an Irish sovereign default.

In short, from the Irish point of view, proceeding with the official borrowing was the best thing to do, even though what was on offer was disappointing. Given the large primary deficit that then prevailed, any alternative would have been much more painful for the Irish people in terms of drastic cuts in services and increases in taxation. What this involved was not merely substituting official for privately held debt, but also a substantial part of what was being provided was going to pay for further primary (that is, non-interest) deficits for the full period of the program.

If the program did fail to restore market confidence, then it would have to be dealt with when the time came; holding out for better terms at the outset would have been self-defeating.

As the program proceeded, the severity of the three risk factors that I mentioned dissipated. The interest rate was sharply reduced; the tail risk on bank losses did not materialize as much as many feared, and the additional cost of rapid deleveraging turned out to be less severe than it might have been. The two successive Irish governments' firm adherence to the program's fiscal adjustment was a key element; without it, external official and market confidence in the policy path would not have been restored. (It is worth recalling that fiscal adjustment was already well under way for more than a couple of years when the program began.) Close attention to the details of implementation and a solid record of working closely with troika officials to tweak program conditionality in order to avoid self-defeating actions also helped in delivering this outcome. (Examples relating to the banking sector included small but important operational adjustments to the deleveraging path and the timing of stress tests.)

While the program’s aggregate story thus ends well, it is instructive to consider in some detail how it might have been better designed. I will focus on some of the financial aspects, which, after the fiscal component, were indeed the program’s centerpiece.

The Bank Bond Issue

Much has been made of the issue of “burning bondholders”—and rightly so. Just as the scope of the two-year blanket guarantee of September 2008 had been criticized, the idea that the newly unguaranteed remaining bondholders in the failed banks Anglo and INBS might now receive government largesse was rightly repugnant to many observers at home and abroad. The Irish government was very interested in seeking some form of bail-in to undo some of the damage caused by the original guarantee, especially if done as part of an international assistance program. It was unclear how much burden sharing could in practice be achieved for the going-concern banks (discussions in the corridors during the negotiations included suggestions that some form of debt-equity swap might have been achievable). But, for the gone-concern banks being wound down, the question of whether repayment at maturity of these bonds could be avoided, while legally complex,³ was already being closely examined by the Irish authorities quite independently of the troika.

Preemptively, though, the troika made it clear that no bail-in of senior bondholders could form part of the program.⁴ This must be considered a significant flaw in the program design. If the reason was potential spillover effects onto international banking markets from a bail-in, then it would only have been fair, and very much feasible, for the troika to arrange the difference being made available from other sources. (True, there would probably have been some adverse reputation effect for Ireland from a bail-in, but very limited if it had been part of the program design as was envisaged by some troika officials.)

However, this matter must be kept in perspective. Most of the bonds outstanding from the Irish banks at that time were not in practice bailable because they were either government-guaranteed or asset-covered bonds. The corridor discussions related to a figure of about

³ This is because of the *pari passu* nature of bond and deposit liabilities of Irish banks at the time (unlike in the United States), and because the two banks involved had had to be recapitalized to maintain their access to central bank refinancing.

⁴ This despite much discussion in the corridors of the negotiations—and, I understand, prenegotiation discussion of this point between the members of the troika team of experts.

€16 billion of unguaranteed bonds, of which the two gone-concern banks accounted at that stage for less than a third. This is still a lot of money, of course, but would not have resulted in any relatively large or noticeable alleviation of the belt-tightening, bearing in mind that each year from 2008 saw an additional fiscal consolidation effort to reach an annual figure of around €30 billion by 2014. I leave it to others to choose how exactly to add up the cumulative total of “austerity” measures since 2009, but it’s a large multiple of what might have been saved by any technically feasible bank creditor bail-in in 2010 or 2011.⁵

It is worth noting that the new European Bank Recovery and Resolution Directive (BRRD) legislation, which was negotiated in 2012, completely reverses the earlier presumption and explicitly calls for bail-in of unsecured wholesale funding of this type in banks with losses of the scale of Anglo and INBS, in order to reduce the subsequent burden put on taxpayers. This indeed has been a remarkable and welcome turnaround in European policy attitudes, but it came too late for Ireland.⁶

In the end, of course, the sums injected by the government into these two banks have been financed at very low interest cost following the liquidation of IBRC and the exchange of the promissory notes for long-term bonds. Nevertheless, the pressure that was brought to bear on the government in this episode continues to rankle in Ireland.

Capital Injection into the Banks

Not helped by the decision not to include a bondholder bail-in in the program, the amount of new government borrowing that the troika team penciled in as being required to put the banks on a more solid capital basis was high.

This was one of the major reasons for doubts as to the likely success of the program at the outset. The new and more onerous capital requirements that were set for the banks gave rise to a government cash injection as high as the €35 billion projected by the troika staff. It was striking how little some of the troika staff seemed to appreciate that over-indebting the government in

⁵ I am speaking here of the situation at November 2010. The overall fiscal and economic costs imposed by the bank failures, by the September 2008 guarantee, and above all by the collapse of the distorted productive and fiscal structures, which had been generated by the bank credit excesses, are a different matter.

⁶ Although in some important respects not well implemented, a version of this principle was applied in Cyprus in 2013.

order to recapitalize the banks could be counterproductive. A national banking system will not long be healthy if the sovereign's finances are shaky: this has been known for centuries!

In the event, taking account of the March 2011 stress test, and the burden-sharing with—or bail-in of—holders of bank-subordinated debt, the ultimate cash injection requirement came out at about a half of the €35 billion. This was the first piece of good news in the working through of the program and gave indications of a lower-than-feared tail risk.⁷

Interest Rate and Maturity

The IMF interest rates are set in relation to the scale of borrowing (by reference to each country's quota). Where very high borrowing is employed in IMF programs, its early repayment is encouraged by means of interest rate surcharges, and similar pricing was at first built into this wave of official European lending to distressed euro area member states when the Greek program was designed in May 2010. But these “disciplining” surcharges result in interest rates that are dangerously destabilizing when applied to high percentages of a country's GDP. In practice, the least problematic way of dealing with government over-indebtedness on the scale that has been observed in the present crisis is to pass on funds borrowed by official agencies at close to cost—still, of course, as part of a strict fiscal adjustment program. This was eventually recognized and implemented from the middle of 2011, with Ireland benefiting significantly from this and from successive extensions of the maturities involved. Examination of the market yields on Irish government bonds shows clearly that this alleviation of the financial terms of the assistance was a turning point in achieving the restoration of market confidence.

Combined with the fact that tail risk on banking losses did not materialize on the feared scale, and the successful liquidation of IBRC, this meant that, provided the government stuck to its

⁷ It may be asked why it was necessary to get the consultants BlackRock Solutions to design the models used in the 2011 stress test and why the needed capital had not already been identified. This story has been dealt with in detail in my 2012 lecture on bank recapitalization (reprinted as Patrick Honohan, “Recapitalization of Failed Banks: Some Lessons from the Irish Experience,” *Manchester School* 81, no. S1 [2013]: 1–15). One aspect not addressed in that paper is why external consultants, such as BlackRock, had not been used in the 2010 capital adequacy exercise. The answer to that is that several high-profile international firms had indeed been engaged by the Irish authorities during 2008 and 2009 with a view to finding out how big the capital hole was. Each of these firms had proposed what soon proved to be absurdly low numbers, an experience that encouraged the more home-grown approach of March 2010. Actually, much of the additional capital called for in the March 2011 exercise relates to the higher capital ratios and projected added costs of the faster deleveraging required by the program. In the event, the deleveraging was achieved with lower costs than projected at March 2011.

promised fiscal adjustment path⁸—which it did—what had been a high-risk program turned out a success in the end. Thus, the fear that the program would have to be extended or renegotiated receded sharply in the course of 2013, so that plans for a possible follow-on precautionary program could be shelved—a decision welcomed in many quarters as showing that adjustment was possible, at least in the conditions faced by Ireland.

Private Sector Indebtedness

One aspect that has not been fixed as quickly as had been envisaged, and indeed worsened during the course of the program, is the extent of nonperforming bank loans, reflecting the over-indebtedness of many households and firms. Troika and Irish officials shared the view that this debt overhang was holding back the recovery and needed to be dealt with quickly. Why did that not happen?

There is room for different views as to why this situation has persisted. I think that both the troika and the Irish officials began with the presumption that—once sufficiently capitalized, and when appropriate amendments had been made to the legislation on insolvency and on repossession of the security on defaulted mortgages—the lenders would proceed speedily to deal with the arrears, efficiently making the triage between those loans that should be restructured (potentially with a sizable NPV concession) and those that needed to be foreclosed on. The program thus relied mainly on capitalization and these pieces of legislation. The fact that there were delays in finalizing the legislative changes allowed this belief to persist.

By late 2011, however, the Central Bank realized that most of the banks had not developed sufficiently effective policies or operational capacity to deal with the arrears situation, given the still growing number of cases involved. It took more than a year for this challenge to be adequately met. Even then, and with the legislation fixed by early 2013, progress has remained slow—and not just because court proceedings entail substantial delays.

To be sure, although on the official side there has been consistency in wanting the problem to be addressed quickly, there has also been a wide divergence between those who see the

⁸ As it had already been doing for over two years before the program.

problem as chiefly one to be resolved through repossessions and improved payments discipline, and those who argue for greater use of concessionary restructuring of loans.

In my own view, a major factor behind the slow progress has been the banks' persistent optimism about their ability to recover on the loans (especially the mortgage loans) if they wait long enough. While they have been restructuring loans in a way designed to ensure sustainability as we have defined it, as well as proceeding to legal recovery action as part of their response to the central bank's Mortgage Arrears Resolution Target process, the banks have certainly not been inclined to err on the side of pessimism in calibrating restructures. Matters are indeed improving for the mortgage arrears situation, with house prices recuperating from the undershooting that followed the collapse of the bubble, but it is arguable that future redefaults on mortgages would be lower with a more liberal approach to restructures. The vigor of the economic recovery would be enhanced by such an approach. However, given the large sums and the large numbers of individual loans involved, it is not clear what additional policy tools could cost-effectively be brought to bear on this problem by the authorities.

Could a Program Have Been Avoided?

Let me conclude with a few words on the interesting question of whether, given the fallout from the boom and bust, and the guarantee of September 2008, a program could have been avoided. The drip-feed of bad bank-loss news in August and September of 2010 was the main trigger of the loss of financial market confidence. But if the full extent of the losses had been known and made public all in one go (say, in March of 2010 when the first NAMA purchases happened), it is likely that this would have immediately triggered the same loss of confidence. In theory, the ECB might have done more to reassure bank creditors that, come what may, Irish banks would continue to be provided with sufficient liquidity. But that would have generated a sizable moral hazard. Indeed, the ECB can hardly be faulted as far as actual provision of liquidity is concerned. By the time the program began, Eurosystem lending to Irish banks far exceeded Irish annual GDP—an astonishingly large figure; no wonder there was concern in Frankfurt. No, by August 2010, with the markets already jumpy because of Greece, and the fiscal prospects deteriorating, the mounting loan losses removed the small but distinct prospect of avoiding a bail-out that had still remained in the spring.

Thanks to robust interaction and good cooperation, despite the various missteps that inevitably accompanied the initial design of the assistance program, it worked out to deliver,

as I have said on a previous occasion, what it said on the tin: restoring market confidence and stabilizing not only the public finances but also the economy.

The rest is up to us, the Irish policymakers and the Irish people, to complete the recovery of the economy—which has been on a persistent growth path, both in terms of output and employment for the past three years—and to rebuild the economic aspects of Irish society in a way that fully resonates with our shared vision and goals.

It is often observed these days that key among the characteristics needed to prosper in what seems to be a rapidly changing and increasingly unpredictable global economic environment are resilience and the adaptability to take advantage of new opportunities and trends. I believe that Irish resilience has been fully demonstrated in how the economy has been recovering from the disaster that struck in 2008. Ireland's adaptability and openness to the opportunities that emerge in the world have been well demonstrated in the rapid and firmly founded growth of the mid-to late-1990s—the true “Celtic Tiger” period. That is why I believe there are solid reasons for optimism about the future, building on the platform of restored financial stability that the EU-IMF program helped us to rebuild.

Remarks at High-Level Panel Discussion

Michael Noonan TD, Minister for Finance

Mr. Chairman, Ladies and Gentlemen,

I'm sure at this hour of the afternoon, with such a distinguished audience, there's nothing new left to say about anything in the area but to go back over the themes that we have been talking about for several years now. And in the Irish program, there were two themes really. There were the banks and how to deal with them, and the public finances in the economy.

And the banks came first. Once the guarantee was introduced, the problems with the banks became the problems of the sovereign; whether it was a good idea or a bad idea, I'll allow others to judge. I have my own views. But without contradiction, they were no longer separate problems, once the guarantee was introduced, and the banking problem became the problem of the sovereign.

On the night the guarantee was introduced in the Dáil [Irish Parliament] to address liquidity inadequacies in the Irish banking system, it was perceived to be a problem for Europe. But it was quite clear in the course of the debate, that there were other considerations around solvency, and while they weren't put on the table, they were there. And if you examine the legislation which delivered the guarantee, many of the sections were to cure solvency problems in financial institutions, rather than to improve their liquidity.

So we were left with the situation that the problems of the banks became the problems of the sovereign, and even though we worked out the banking problems in Allied Irish Banks and Bank of Ireland to great cost to the taxpayer; the problems of Anglo Irish Bank were not worked out satisfactorily. And that bank is now in the last stages of liquidation, and the cost to the taxpayer is the legacy that future taxpayers will have to pay even though the arrangements on the promissory notes have reduced the liabilities, and have improved the situation somewhat. So we still have the legacy of the crisis.

I strongly argued both in opposition and in government, that we should have bail-ins rather than bailouts, and that senior bondholders should accept some of the liabilities of insolvent banks. Well, won the war, but we lost the battle. No decision was taken to allow us to include senior bondholders in the resolution of our banking system, even though we tried very hard, we were refused directly by the authorities in Frankfurt.

But we carried the argument forward, at ECOFIN and at the Euro Group, and of course it's the policy now, in Europe, that there will be no more bailouts by taxpayers of European financial institutions, and under the rules of the Banking Union, if there's resolution in the future, there's a hierarchy of assets in banks that will be bailed-in, in a kind of waterfall. And these will include not only senior bonds, but also other assets such as corporate deposits, and some personal deposits in excess of EUR 100,000.

So, we were pleased with the overall policy result, but we were disappointed that the solution came too late to be applied to Ireland. And I think that we would maintain the position all the time that risks should be centralized, and all major initiatives of the ECB, including their approach to quantitative easing, should have a strong element of mutualization, otherwise we risk reversing the progress that has been made towards risk sharing and mutualization.

As I said, the banks were tied to the sovereign. Once the guarantee was brought in the knot was made very tight indeed, and so there were major consequences for the sovereign. If your banking system goes down, then your industrial base and your business base follows very quickly. But there was a more direct relationship with our fiscal position, because once the construction and development industry collapsed, all the transactional taxes that ran from that—from which we had such a big contribution to our Irish budgets—went out of the system as well.

And so VAT on house-building; stamp duty which was a very high rate; personal taxation for the almost 200,000 building workers—all of that evaporated very quickly. And so what was a banking problem became a very serious sovereign fiscal problem, because a lot of the tax base simply disappeared and no corrective action was taken for about 18 months afterward.

So, under the program, we had to address that issue as well. This is why we had such a concentration on correcting the deficit, getting it down to below 3 percent. I think 269 separate actions were taken, between expenditure cuts and tax increases, to get the deficit

down. And of course, at the end of this year now, the deficit will be below 3 percent. The budget is built on a deficit of 2.7 percent and here we have very little concerns at present that we won't reach that particular target.

We were also very conscious of the fact that that's the first staging post, and that we must move beyond that again towards a balanced budget, particularly in structural terms. In our medium-term plans we have penciled that in as well; we think with our present growth rates that goal is achievable. So, we've done quite a number of things that have improved the fiscal position, so our deficit will be sustainable at the end of this year. We've always been ahead of target; we've done quite well on that.

On the debt side, the debt is coming down now as well. It peaked at 123 percent of GDP. At the end of 2014 it was around 110, and it's going down rapidly now, so we are in a very strong position.

When we bring in our next budget - we'll be projecting a debt of under 100 percent of GDP for the end of 2016, and that's gross debt. If you take net debt it's already around 90 percent, if you allow for the assets in the hands of the government.

If you were looking for a comparator, the average debt across the Euro Zone is now 94.5 or 94.6, so it's just a shade under 95. So, if in a year's time or so, we are headed towards a debt GDP ratio of slightly less than 100, you can see we are not far off the European average. But again, the trajectory has to be downward, and there's no feeling that, having arrived at these critical staging points, well it's a staging point for their effort, and to improve the situation, again, as the budgetary process continues.

Now, of course we have to bring the people with us, and that's very difficult. This is year seven, heading for year eight of the European crisis, and people get weary, people get tired, people just—there's only one life to live, and if a decade is taken out of it because of bad economic management, well then it's no wonder that people lose heart and governments lose support.

The normal model is that governments in Europe have been around the center, so you have the European People's Party, Christian Democrats, center-right, as one bloc forming an awful lot of European governments. The alternative is Social Democracy, center-left; and when,

traditionally, electors got tired of the center-right, they vote at center-left. When they got tired of the center-left, they voted center-right.

But if both models fail - and the recession goes on for more than the duration of two governments - well, where do the electorate go? Well, they go to the extremes, and that's why you have so many extreme right-wing and extreme left-wing parties across Europe right now. And don't be so naïve as to think that people won't vote for them—of course they'll vote for them, because if you are weary of what's happening, you can always put your money on the horse you think might deliver something better.

Everybody won't vote, but there is a movement towards the extremes in Europe. Now, from those that design European policies across the union, all the fringe parties, if we call them that, all the parties on the margin, they have one thing in common, they are all against the European Project in one way or another. That's where the extreme left and the extreme right come together in Europe. It's in their common opposition to the European Project as we have got to know it, and they are common in their opposition to the fiscal correction that we have practiced and that we talked about, and they generally fly under the flag of being anti-austerity. But anti-austerity means anti-Europe, it means anti most of the things that Europe has succeeded in doing over the last number of years.

So, there are a number of things I think we can learn from the program. First of all, at the point of initiation, there should be a decision of what success looks like. And ticking 269 boxes, and saying we did all those things, that's not success. Getting down a deficit below 3 percent and making your debt manageable, that's not the destination point either for measuring success.

Success can only be measured in terms of the impact that has been made on the lives of the people, and I would suggest not enough attention was given to that when the programs were originally designed by the troika, and by the authorities that the troika reports to.

So, I think more attention to the design is necessary, if there are future programs, or in the play out of programs for countries like Greece, and indeed for any other countries that might be involved in the program. I think the programs have to be flexible as well, so there must be more attention to the potential to modify a program if some aspect isn't working.

We were able to renegotiate parts of our program, though there were parts of our program which were self-evidently not working, but people dug their heels in and refused to move. So there must be a willingness to deal with modifications in the program; and political management and implementation are absolutely essential. I think that's where the most recent economic policies of Europe are beginning to disintegrate because the center is no longer holding.

Do you remember the W. B. Yeats, line? "The center cannot hold, mere anarchy is loose upon the world,"? Well we haven't reached the point of mere anarchy being loose upon the world of Europe just yet, but if the center doesn't hold, we are heading for the extremes. And my kind of last message for today is that when political instability comes, it is always followed by economic instability.

So we should make sure that Europe doesn't become politically unstable, because if it does, it will be economically unstable, and we'll have a very long recessionary period, a very difficult period, with all the other pressures that are facing Europe.

Thank you very much, indeed.

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Stabilizing and Healing the Irish Banking System: Policy Lessons

Dirk Schoenmaker¹

Duisenberg School of Finance

Ireland has recovered from a historic banking crisis. This paper reviews the policies to restore order to the Irish banking system. The overall assessment is that the Irish authorities have been successful in the management of the Irish banking crisis.

On balance, there was a strong focus on stabilizing banks (restoring solvency, replacing management, and closing bad banks), but less emphasis on restructuring loans. The Irish banks are not yet healed, with 25 percent of non-performing loans. A small but important group of highly indebted households and firms cannot resume consumption and investment due to debt overhang. Intensifying write-offs of bad loans would broaden the economy recovery.

The Irish taxpayers have been brave in shouldering the full costs of recapitalizing the Irish banking system while part of the resulting stability benefits accrued to the wider European banking system. In the new Banking Union setting with ECB supervision for the large euro area banks, we recommend that the European Stability Mechanism (ESM) should directly recapitalize troubled banks after resolution measures are taken. The ESM would then become an effective vehicle for risk-sharing and would cut the bank-sovereign loop.

¹ I am grateful to CBI and IMF staff for the provision of data and useful factual comments. Any opinions are those of the author.

1. Introduction

In the wake of the Global Financial Crisis, Ireland faced its own banking crisis after the bursting of the property bubble. The property boom, fueled by domestic and cross-border banking credit, led not only to unsustainable residential and commercial real estate prices but also to massive new construction. This resulted in losses on large commercial real estate loans of over 50 percent. To restore the capital base of the Irish banking system, the Irish government provided up to €64 billion to the banks (amounting to about 40 percent of GDP). As taxpayers had to fund this new capital, several questions arise: Has the Irish government been successful in stabilizing the banking system? Are the bank balance sheets cleaned up? And, ultimately, what is the social return on this massive government investment? As the Irish economy is turning the corner, it is timely to answer these questions.

This paper provides a high-level overview of the crisis management by the Irish authorities. For this post-mortem analysis, we adopt the classical drama structure of three acts: the setup, the confrontation, and the resolution. The first act concerns the run-up to the crisis. The Minsky theory of the credit boom-bust cycle is applied to the Irish setting (Minsky 1986). The second act covers the stabilization of the Irish banking system. This confrontation involved “high” drama, with the closure of two of the six Irish banks, the takeover of a smaller bank, and the establishment of a bad asset agency. Four consecutive rounds of recapitalization were needed to bring the remaining banks back to solvency. The Irish authorities have finished this act largely successful, as confirmed by the ECB Comprehensive Assessment in October 2014. The two broad banks, Bank of Ireland and Allied Irish Banks, have passed the test, while the smaller building society, Permanent TSB, is in need of some further capital. The third and final act is about the healing of the Irish banks. While much has been achieved, our assessment suggests that the climax is not yet reached. Bank balance sheets still carry up to 25 percent of nonperforming loans. This legacy is not only holding back banks in new business, but also indebted households and firms. Firms and households faced with debt overhang suppress new investment and consumption (Myers, 1977; Mian and Sufi, 2014).

The paper draws several policy lessons from the Irish crisis management. First, the establishment of the bad-asset agency, NAMA, serves as an international example of successful management of bad assets. Second, the assessment of capital shortfalls should be comprehensive and bottom-up. In that way, the full scale of problems becomes clear. Third, when providing taxpayers money to banks, the government should set policy targets for writing off bad loans. In that way, the health of banks as well as their customers (firms and households)

can be restored. On the latter, there is some outstanding work for banks. Only when bad loans are appropriately restructured (including partially written off) can the social return on the bank recapitalizations be fully captured.

More broadly, the Central Bank of Ireland has put in place a macroprudential policy framework to mitigate future credit boom-busts. The decision making can be further strengthened by the inclusion of external members. Finally, the ECB supervises the large euro area banks in the new Banking Union. This centralized ECB supervision should be complemented with direct recapitalization by the European Stability Mechanism, when needed and justified (Allard and others 2013; Schoenmaker 2013a). In that way, the bank-sovereign loop would be cut. Such burden-sharing would also have been appropriate in the rescue of the Irish banking system, as this rescue prevented further instability of the wider European banking system.

The paper takes a macro-finance approach, an emerging new field in academia (Brunnermeier and others 2009; Schoenmaker 2014). Such an approach is warranted, as the ultimate objective of financial stability policies is to promote sustainable economic growth. We refrain therefore from micro-supervisory issues (see the Investigation Committee 2011 for a review of the Financial Regulator). The paper is organized as follows: Sections 2 to 4 contain the analysis of the run-up, the stabilization, and the restructuring of the Irish banks; Section 5 makes an assessment of the Irish banking policies and draws policy lessons; and Section 6 concludes.

2. Run-up to Crisis

2.1. Theory

The review starts with the macro picture of the financial system. The global financial crisis has revived interest in Minsky's "financial-instability" hypothesis (Minsky 1986). In the Minsky model the events leading up to the crisis start with a "displacement"—some exogenous, outside shock to the macroeconomic system—an invention or an abrupt change of economic policy about which investors get excited. Subsequently, there are five stages to the boom and eventual bust:

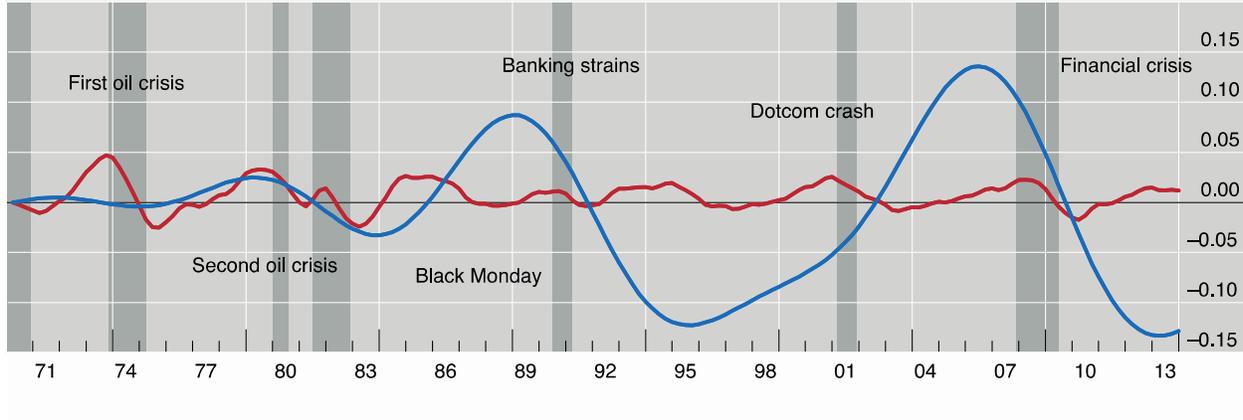
1. credit expansion, characterized by rising assets prices;
2. euphoria, characterized by overtrading;
3. distress, characterized by unexpected failures;
4. discredit, characterized by liquidation; and
5. panic, characterized by the desire for cash.

The displacement sets in a boom fueled by credit. As a boom leads to euphoria, banks extend credit to ever more dubious borrowers, often creating new financial instruments to do the job. Then, at the top of the market, some smart traders start to cash in their profits. The onset of panic is usually heralded by a dramatic event, such as a bank not being able to meet its obligations. Losses on loans begin to mount, and the value of the loans falls relative to liabilities, driving down the capital of financial institutions. With less capital, financial institutions cut back on their lending (deleveraging).

Minsky's financial instability hypothesis highlights the procyclicality of the financial system. Several factors contribute to this procyclicality. First, the role of risk assessment is important. While risk tends to be underestimated in good times (euphoria with "low risk"), it is overestimated in bad times (distress with "high risk"). Moreover, risk can be endogenous. For example, when financial institutions sell a particular asset to reduce risk, the price of that asset may fall further. Second, the amount of debt (leverage) is a key factor in explaining the depth of the financial crisis. The more debt is built up in the upswing, the more severe is the deleveraging in the downswing. This is an argument not only for more equity financing in general but also for more equity capital for banks. Adrian and Shin (2010) show that banks have contributed to the upswing prior to the crisis, by increasing their leverage (more debt, less equity). This resulted in a declining leverage ratio, defined here as equity divided by total assets. Third, Gorton and Ordoñez (2014) stress the procyclical role of collateral. Investors are willing to lend over the short term (for example, via repos) against collateral, without producing costly information about the collateral backing the debt. When the economy relies on such informationally insensitive debt, firms or households with low-quality collateral can borrow, generating a credit boom. Financial fragility builds up over time as information about counterparties decays. A crisis occurs when a (possibly small) shock causes investors to suddenly have incentives to produce information. Fourth and last, capital requirements play a role. Banks have to keep minimum capital against new loans. In good times, retained earnings boost capital, which enables banks to increase lending. In bad times, capital shrinks through losses, which may hamper the granting of new credit.

Expanding on Minsky, Borio (2014) argues that not only credit but also house prices are important macro-drivers of financial cycles (see also Claessens, Kose, and Terrones 2014). Figure 1 illustrates how the financial cycle (measured by credit and house prices) can amplify the business cycle (measured by GDP). The amplitude of the financial cycle over the 1970–2013 period is five times that of the business cycle in the United States. Moreover, the duration of the financial cycle tends to be longer than that of the business cycle.

Figure 1. The Financial and Business Cycles in the United States



Source: Updated from Borio (2014).

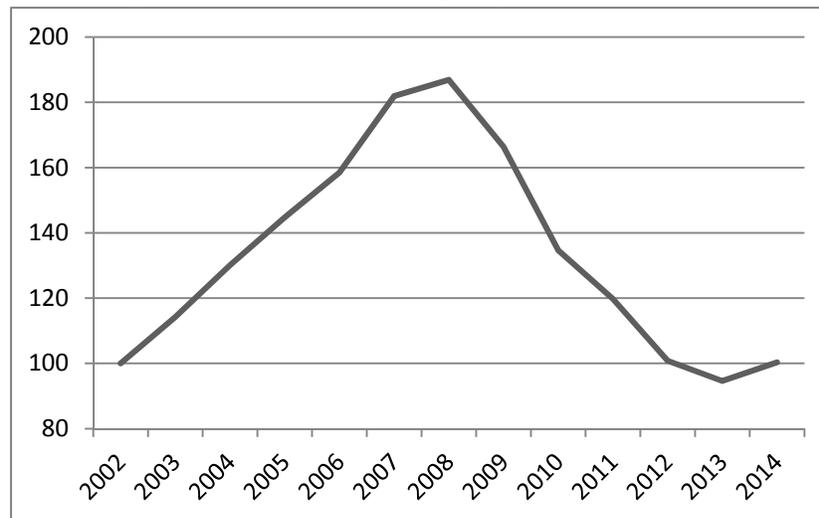
Note: The blue line traces the financial cycle measured by the combined behaviour of the component series (credit, the credit to GDP ratio and house prices). The red line traces the GDP cycle.

2.2. The Macro-finance Side of the Irish Crisis

For a full review of the run-up to the Irish banking crisis, we refer to Regling and Watson (2010), Honohan (2010), and Nyberg (2011). These papers show that not only macro-factors but also a weak supervisory approach played an important role. On the macro-finance side, we examine house prices and credit growth as important components of the financial cycle in Ireland. Figure 2 shows that house prices (that is, residential property) almost doubled from 2002 to 2008; commercial real estate prices were also rising fast. The Nyberg (2011) report indicates that “groupthink” among bankers, supervisors, and central bankers may explain that the dangers of the strong buildup of house prices were not appreciated. This is a characteristic feature of the euphoria stage in the Minsky model. The strong rise in property prices led to massive new construction in Ireland.² With hindsight the construction bubble caused a misallocation of resources, aggravating the problems (Gros and Alcidi, 2013).

² France and the Netherlands, for example, also experienced a housing price bubble, but without a construction bubble.

Figure 2. Residential Property Prices in Ireland



Source: BIS Residential Property Price database

Note: Index of residential property prices, 2002=100.

Moving to the second component of the financial cycle, Ireland experienced strong credit growth, with total banking assets almost tripling from 2002 to 2008 (see Table 1). This credit growth was fueled predominantly by credit flows from other EU countries. Figure 3 indicates that domestic banking assets and third-country banking assets (though a very minor component of 10 percent, as Table 1 shows) grew with an overall rate of 250 percent over the full period from 2002 to 2008. By contrast, EU country banking assets increased, by almost 400 percent over this period. The relative share of banking assets from other EU countries rose from 30 percent in 2002 to 40 percent in 2007/2008, and is now back at 30 percent (see Table 1). Foreign credit (from EU and third countries) was 50 percent of overall credit in Ireland at the height of the financial crisis.

It may be interesting to compare credit growth in Ireland with other crisis-stricken countries, like Spain and Portugal. Figure 4 illustrates that both domestic credit and credit from other EU countries were growing at a more or less even pace in Spain. Moving to Portugal, Figure 5 shows that credit growth was mainly domestic and more subdued than in Ireland or Spain. Moreover, credit from other EU countries went up to 300 in Spain (with the index at 100 in 2002), while this went up to close to 400 in Ireland. So, Ireland had both higher and more foreign-fueled credit growth preceding the global financial crisis than did Spain and Portugal.

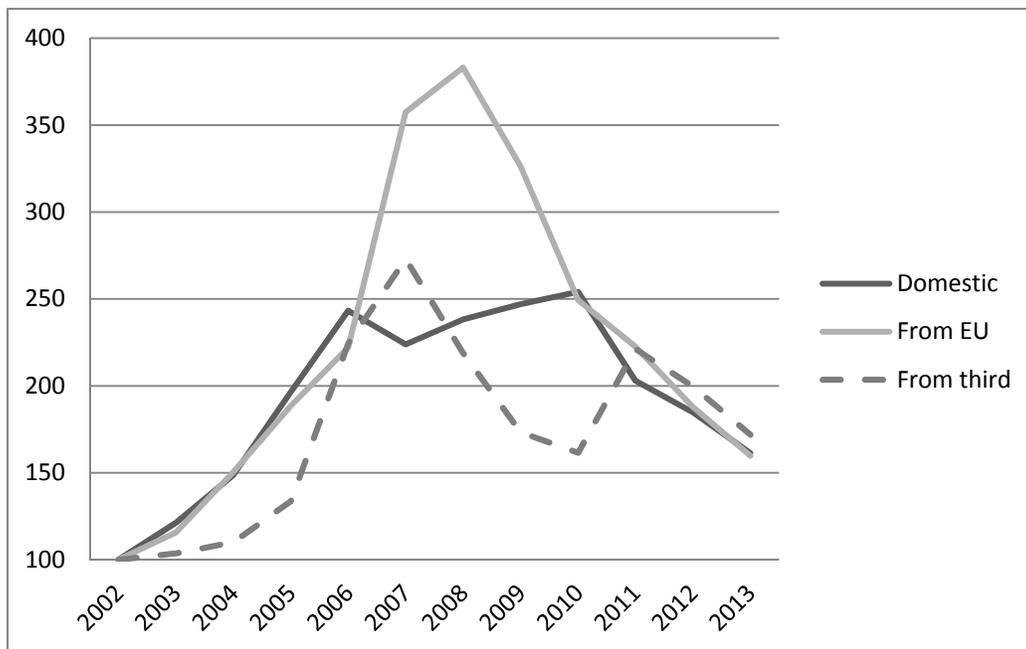
Table 1. Irish Banking System, 2002–13

In € billion	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total assets	600	708	873	1,128	1,412	1,607	1,672	1,577	1,462	1,264	1,124	972
Domestic	366	444	544	719	890	819	872	904	930	743	676	590
From EU	175	202	263	330	388	625	670	570	436	389	328	279
From third	60	62	66	80	134	163	130	103	96	132	119	103
In percent												
Domestic	61%	63%	62%	64%	63%	51%	52%	57%	64%	59%	60%	61%
From EU	29%	29%	30%	29%	27%	39%	40%	36%	30%	31%	29%	29%
From third	10%	9%	8%	7%	9%	10%	8%	7%	7%	10%	11%	11%

Source: Author calculations based on ECB Structural Financial Indicators.

Note: Total assets of the Irish banking system are split in domestic, from the rest of the EU and from third countries.

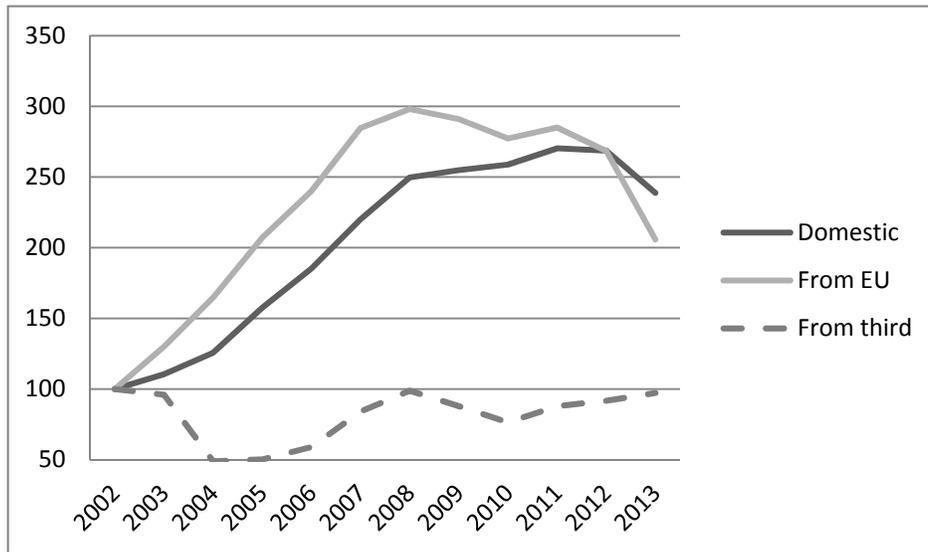
Figure 3. Banking Assets, Ireland (Foreign vs. domestic)



Source: Author calculations based on ECB Structural Financial Indicators.

Note: Growth in total assets of the Irish banking system is split into domestic, from the rest of the EU, and from third countries; figure represents an index with 2002=100.

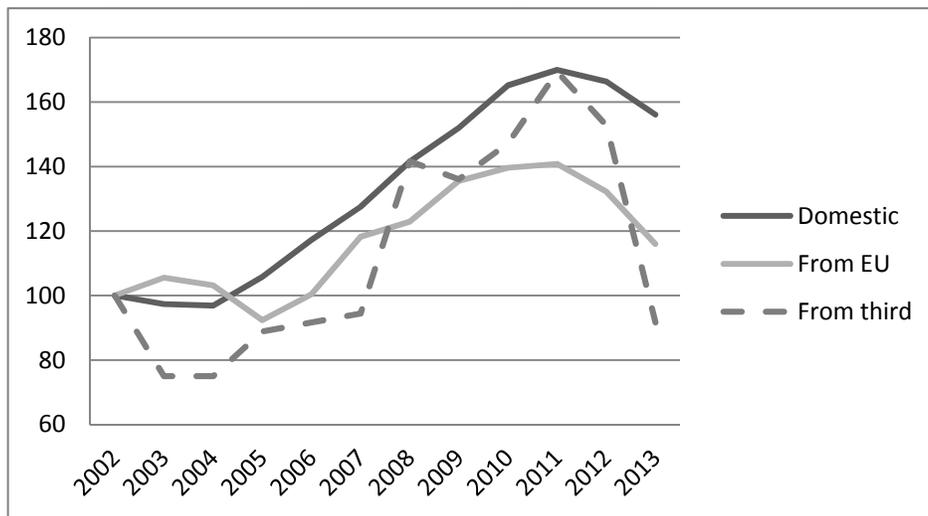
Figure 4. Banking Assets, Spain (Foreign vs. domestic)



Source: Author calculations based on ECB Structural Financial Indicators.

Note: Growth in total assets of the Spanish banking system is split into domestic, from the rest of the EU, and from third countries; figure represents an index with 2002=100.

Figure 5. Banking Assets, Portugal (Foreign vs. domestic)



Source: Author calculations based on ECB Structural Financial Indicators.

Note: Growth in total assets of the Portuguese banking system is split into domestic, from the rest of the EU, and from third countries; figure represents an index with 2002=100.

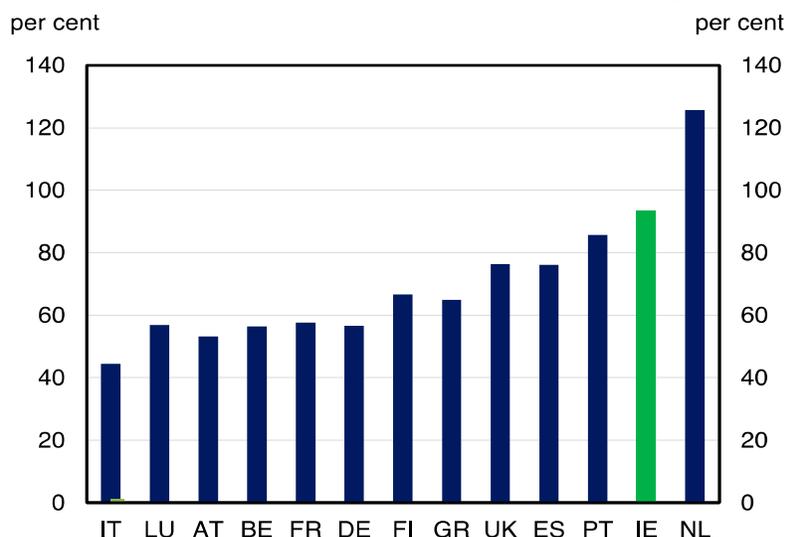
It should be noted that the financial cycle components—house prices and credit growth—are correlated, as 80 percent of the new credit in Ireland went to housing and commercial real estate (Gerlach 2014). A salient feature of the increase in house lending is that banks lowered credit standards. High loan-to-value (LTV) ratios indicate loose credit standards. While in 2005,

only half of first-time buyers had LTV rates above 90 percent, with very few above 100 percent; these numbers went up in 2005 and 2006. By then, two-thirds of mortgages to first-time buyers had LTV rates over 90 percent and one-third over 100 percent (Honohan 2009).

Jorda, Schularick, and Taylor (2014) show in a historical overview spanning 140 years that the link between loose monetary conditions and booms in mortgage lending and house prices has become stronger after World War II. Loose monetary conditions are, in particular, a problem when monetary policy is largely set elsewhere—for example, in a monetary union, like the EMU, or in a currency board, like Hong Kong. Applying the Taylor rule, Jorda and others (2014) estimate that the policy interest rate was 5 to 10 percent too low for Ireland and Spain during the 1999–2008 period. The level of mortgage debt to GDP in each country subsequently doubled in the space of about eight years. Next, the house-price-to-income ratios in Ireland and Spain rose by 65 percent to 75 percent over the same time frame.

More generally, Jorda and others (2014) show that the 20th century has been an era of increasing “bets on the house.” The strong rise in aggregate private debt over GDP in many Western economies in the second half of the 20th century has been mainly driven by a sharp increase in mortgage debt (see Figure 6). Mortgage credit has risen dramatically as a share of banks’ balance sheets, from about one-third at the beginning of the 20th century to about two-thirds today. The next sections indicate that the restructuring of mortgage loans appears to be one of the most intricate challenges in the crisis management of the Irish banking sector.

Figure 6. Household Debt-to-GDP Ratio in Europe, 2014



Source: Central Bank of Ireland, Macro-Financial Review, 2014-II.

3. Crisis Management — Stabilizing Banks

Managing the Irish banking crisis took place in several stages. In the first stage, the emphasis was on public policies to stabilize the banking system. In the second stage, the restructuring of loans to firms and households (mainly mortgages) became central. Although the two stages are interrelated, we make this split for analytical purposes. Figure 7 illustrates the banking system and public policies; the first arrow reflects the first stage and the second arrow the second stage. This section discusses public policies to stabilize the banking system and the next section analyzes the restructuring of bank loans (“healing the banks”).

Figure 7. Public Policies and the Banking System



It is important to note that stabilizing and restructuring the banking system is only an intermediate objective in the overall policy framework for the monetary and financial system (Schoenmaker 2013b). The ultimate objective of the government and the central bank is stable economic growth. Nevertheless, the credit channel theory stresses that an efficient working banking system is crucial for economic growth (Bernanke and Gertler 1995). So, to determine Irish policies’ effectiveness to stabilize and restructure the banking system, such policies should be judged on their contribution to resuming stable economic growth in Ireland.

3.1. Blanket Guarantee and Early Recapitalization

The global financial crisis started with the fall of Lehman Brothers on September 15, 2008. This panic stage of the Minsky model put pressure on wholesale funding of banks, including Irish banks. In response, the Irish government introduced a blanket guarantee scheme covering virtually all Irish bank liabilities on September 30, 2008 (Gerlach 2014). The original assumption was that the guarantee scheme had to cover liquidity problems at banks (Nyberg 2011). But, as almost always, liquidity problems forebode underlying solvency problems at the troubled banks. In contrast, most other European countries as well as the United States provided only government guarantees for new borrowings or injections of preference or ordinary shares.

The underlying solvency problems—and subsequent capital injections—were revealed over an extended period of about three years, from late 2008 to 2011 (see Table 2). Whereas the groupthink prior to the crisis led to a massively overheated property market building up over several years (the euphoria stage), it also took some time to grasp the full scale of the unfolding banking crisis (the distress and panic stages). Several factors contributed to the slow recognition of bank loan-loss estimates (Honohan 2012): (1) the slowness of bank management to face up to the scale of the losses; (2) inadequacy of management information; (3) declining property prices; and, importantly, (4) the inherent uncertainty about the ability of debtors to service loans where collateral fell well below loan amounts (negative equity).

Table 2 provides an overview of the recapitalization efforts (Honohan 2012). The initial capital injection in phase 1 was €3.5 billion for Bank of Ireland (BOI) and Allied Irish Banks (AIB). In the face of continuing outflows, Anglo Irish Bank (Anglo) was nationalized in early 2009 and received a capital injection of €4 billion. Phase 2 started with the creation of the National Asset Management Agency (NAMA) to take care of the large loans to property developers. By purchasing the large property loans at “long-term economic value,” banks had to recognize prospective losses. The first tranche of larger property developer exposures was valued first (phase 2A) and the full NAMA sample later (phase 2B). A similar exercise was done for the smaller loans to SMEs and mortgages to households, which stayed on the balance sheet of the banks.

Table 2. Recapitalization of Irish Banks, 2009–2011 (In € billion)

	BOI	AIB	Anglo	INBS	EBS	ILP	Total
Phase 1: Early 2009	3.5	3.5	4.0				11.0 (14%)
Phase 2A: March 2010 (PCAR)	2.7	7.4	18.0	2.6	0.9		31.6 (40%)
Phase 2B: September 2010	0.0	3.0	7.3	2.8		0.1	13.2 (16%)
Phase 3: March 2011 (PCAR)	5.2	13.3			1.5	4.0	24.0 (30%)
Total	11.4	27.2	29.3	5.4	2.4	4.1	79.8 (100%)

Source: Honohan 2012.

Note: the amounts are gross capital needs, which exceed the capital injections by the state.

In a top-down stress-test exercise, the Central Bank of Ireland estimated loan losses for the NAMA and non-NAMA loans of the Irish banks. The subsequent calculation of the capital shortfall is known as the Prudential Capital Adequacy Review (PCAR). The March 2010 PCAR amounted to €32 billion.

3.2. Expiration of Guarantee and Further Recapitalization

The blanket government guarantee was for two years, expiring on September 30, 2010. Due to maturing bank paper and nonrenewal of deposits, Emergency Liquidity Assistance (ELA) was needed from the Central Bank of Ireland. The backing-up of the banking system moved thus from the government to the central bank (which is de facto also government guaranteed). The growing ELA as well as reliance of the Irish banks on Eurosystem funding were not sustainable, as central banks should not use liquidity assistance to prop up ailing banks for a long time.

Due to the government's lack of market access, the EU-IMF program of financial support was meant to provide the Irish government with sufficient funding to adequately recapitalize the Irish banks. Importantly, the European Financial Stability Facility did not recapitalize the Irish banks directly but provided funds to the Irish government for bank recapitalization.

A contentious issue was, and still is, the burden-sharing of bondholders in the recapitalization. While subordinated bondholders had borne losses of €15.5 billion (Honohan 2012), senior bondholders were exempted. The IMF negotiation mission and the Irish authorities were preparing a proposal to involve senior bondholders. But to prevent contagion effects to Irish and other European banks, the ECB pressured the Irish government to bail out senior bondholders. The U.S. Treasury Secretary also urged the Irish authorities to exempt senior bondholders because of fears of the potential negative effects on the Credit Default Swap (CDS) markets (Pisani-Ferry and others 2013).

As part of the EU-IMF program, Ireland had to do another PCAR exercise. But this time a more granular bottom-up approach, involving external consultants, was required. More stringent conditions were applied: (1) higher percentage capital ratios; (2) higher projected three-year loan losses; (3) buffer for post-three-year loan losses; and (4) projected losses from selling noncore assets (deleveraging). The PCAR 2011 exercise led to an additional capital injection of €24 billion.

Table 2 summarizes the overall capital injections amounting to €80 billion into the Irish banks, whereby €64 billion was provided by the government and €15.5 billion from exchanges on subordinated debt and some private equity.³ The first conclusion is that the capital injections were done in several rounds. Next, it is clear that the comprehensive assessments (PCAR) lead

³ It should be noted that the €80 billion estimate of Table 2 deals with only the six Irish banks covered by the blanket guarantee of the Irish government. A further €40 billion can be added for losses by the non-Irish banks (McArdle 2012).

to larger estimates than did ad hoc calculations. Finally, a bottom-up approach with loan-by-loan estimates, by an independent third party, has been instrumental in getting the full picture. A parallel may be drawn with the more recent ECB Comprehensive Assessment, which also employed a very detailed estimation of loan provisions as well as external consultants.

3.3. Nationalization / Mergers

While all Irish banks were involved in residential and commercial property lending, Anglo and Irish Nationwide Building Society (INBS) were the most aggressive, both in growth and riskiness of the property portfolio (Nyberg 2011). Anglo was active in commercial property, while INBS was involved in speculative site finance. Moreover, these two banks were found to have severe shortfalls in corporate governance. To prevent throwing good money after bad, the government decided to nationalize Anglo in January 2009 and INBS in August 2010. Anglo deposits were moved to AIB, and INBS deposits to Irish Life and Permanent (ILP). The two banks were subsequently merged into the Irish Bank Resolution Corporation (IBRC), which was put in special liquidation in February 2013.

Next, the bank-insurance conglomerate ILP was split. The profitable insurance part, Irish Life, was sold on by the government, and the banking part received state aid and was renamed permanent tsb (PTSB). Finally, the smallish Educational Building Society (EBS) needed substantial capital injections and had to restructure, just like the other Irish banks with state aid, under plans approved by the European Commission. Its restructuring was to merge into AIB in July 2011.

The result of these liquidations and mergers is a domestic banking system with six banks turning into a consolidated (and concentrated) system with two broad banks, BOI and AIB, and one small bank, PTSB. The surviving banks had to rebuild profitability through cutting operational costs and some widening of interest margins. Moreover, the foreign-owned resident banks have stopped or substantially downscaled their banking operations in Ireland.

4. Restructuring—Healing Banks

After stabilization, the next stage in crisis management is to restructure banks in order to return their business to viability. First, the restructuring, or healing, of banks involves the splitting of good and bad assets. Only when its bad assets are written down and/or hived off, can a bank start to plan for the future. Next, banks may need to downscale their operations (deleveraging), living up to the new reality of a smaller banking system, as the banking system had outgrown itself prior

to the crisis. Finally, restructured banks may then resume their core function of providing credit to firms with positive NPV investment projects and to households wanting to buy a house on the basis of reasonable LTV rates.

4.1. NAMA

In 2009, NAMA was set up as an agency of the Department of Finance to deal with the bad assets of the banks. The Irish banks were allowed to transfer large property-related loans to NAMA at a discount. Table 3 shows that banks transferred loans of €74 billion at a discount of 57 percent. Only loans in excess of €20 million were transferred. There was a plan (NAMA II) for the transfer of smaller commercial real estate loans out of the banks, but the government elected in early 2011 decided not to proceed. The latter was not appropriate. The great advantage of transferring bad assets is that banks had to recognize losses on these loans early on. The sale of loans to NAMA at November 2009 values protected the banks from any further deterioration of the Irish property market (NAMA Review 2014).

Table 3. Transfers by the Covered Irish Banks to NAMA (In € billion)

Transfers to end-2011	BOI	AIB	IBRC	Total
Nominal loan value	9.9	21.3	43.0	74.2
Discount	43%	56%	61%	57%
Transfer value	5.6	9.4	16.8	31.8
Realized loss by banks	4.3	11.9	26.2	42.4

Source: NAMA Review 2014.

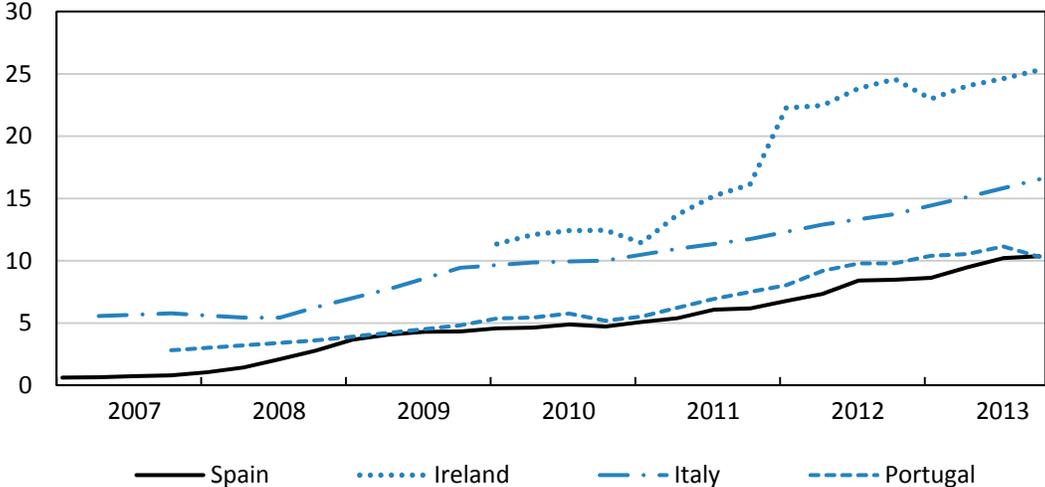
Note: Only five of the six Irish banks (see Table 2) participated in the NAMA process. Anglo and INBS merged into IBRC; EBS was acquired by AIB.

Within some overall targets, NAMA had the freedom to time the selling of its assets. As the London property market recovered first, these assets were initially disposed. Irish properties were disposed at a later stage, when the Irish market recovered. This freedom to run down the portfolio, depending on market circumstances, has worked very well so far (NAMA Review 2014). Almost 60 percent of the bad assets were taken over from the most troubled banks, Anglo and INBS, which also had the largest and riskiest commercial real estate portfolios. This is reflected in the higher discount rate of 61 percent for IBRC (the merged entity of Anglo and INBS). Unfortunately, NAMA could not help with smaller commercial residential loans (below €20 million) and mortgages.

4.2. Small Loans

But what happened to the remaining loans in the banks? Figure 8 illustrates that nonperforming loans (NPLs) as a percentage of total loans are very high for Ireland, at 25 percent in 2013. NPLs are usually well below 10 percent. The other crisis-stricken countries have NPLs at 15 percent (Italy) and 10 percent (Spain and Portugal). Irish banks have taken large provisions for NPLs at 53 percent in June 2014. But write-offs as a percentage of provisions are extremely low, at 5.2 percent in June 2014 (data obtained from the Central Bank of Ireland). The emerging picture is that banks have made provisions for losses in their accounts but are still holding out to write down bad loans. Households (as takers of mortgages) and firms (in particular, SMEs) are thus burdened with a large debt overhang. This debt overhang is a drag on consumption and investment (Mian and Sufi 2014; Myers 1977).

Figure 8. Nonperforming Loans in Selected Countries, 2007–13 (Percent of total loans)



Source: OECD Economic Surveys: Spain 2014.

Note: The data cover gross value of loans on which payments of principal and interest are past due by 90 days or more, as a percentage of the total value of the loan portfolio (including nonperforming loans, and before the deduction of specific loan loss provisions). Data are not strictly comparable across countries.

Looking to property loans in more detail, the small commercial property loans (below €20 million) and mortgages stayed on the balance sheet of the Irish banks. Table 4 indicates that commercial real estate (CRE) loans and mortgages amounted to almost €160 billion at end 2013, while Table 3 shows that about €74 billion of large CRE loans were transferred by end-2011 to NAMA. About two-thirds of property loans thus stayed on the balance sheets of the surviving banks.

With an impairment rate of 18 percent for mortgages and 57 percent for CRE, more than €40 billion of impaired property loans are still in the banks. While they have substantial loan provisions for impaired loans (53 percent at June 2014; data from Central Bank of Ireland), banks have not yet taken write-offs. If they would take write-offs, the losses would crystallize.

Table 4. Outstanding Loans and Impairments of Irish Banks, End-2013 (In € billion)

	Outstanding loans				Impaired loans	
	BOI	AIB	PTSB	Total	Impairment rate	Impaired loans
Mortgages	51.6	40.7	29.0	121.3	17.7%	21.5
CRE	16.8	19.7		36.5	56.9%	20.8
SME	13.6	13.7		27.3	25.1%	6.9
Corporate	7.8	4.3		12.1	25.1%	3.0
Consumer	2.8	4.3	0.3	7.4	6.1%	0.4
Total	92.6	82.7	29.3	204.6	25.7%	52.6

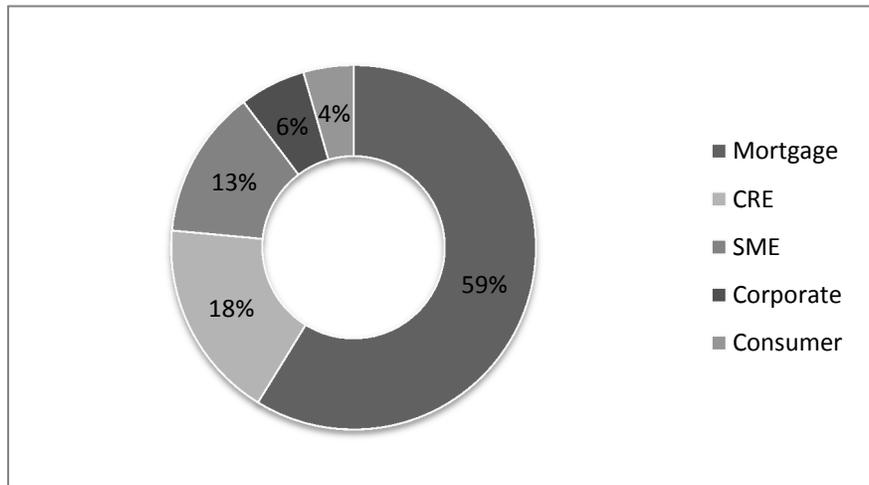
Source: Annual reports 2013 of banks for outstanding loans; Central Bank of Ireland for impairment rates; there is only a joint impairment rate for SME and corporate available.

Note: Only five of the six Irish banks (see Table 2) participated in the NAMA process. Anglo and INBS merged into IBRC; EBS was acquired by AIB.

Table 4 and Figure 9 also provide details of outstanding loans for the other sectors. SMEs count for 13 percent and corporates for 6 percent of total loans. The NPLs are also broken down by sector. Figure 10 shows that NPLs have increased to about 25 percent for SME, corporate, and consumer loans. While Irish SME and corporate debt has been declining in recent years, the sector is still highly indebted (Macro-Financial Review 2014 II). It should be noted that SMEs, which are not active in the property sector, could also have property loans on their books. McCann and McIndoe-Calder (2014) show that about 20 percent of non-real estate SMEs have property exposures, aggravating the debt overhang problem. These SMEs have a 5 percent higher probability of default than do SMEs with debt only related to their core enterprise activity.

Banking data cover only SMEs and corporates with a loan. Survey data indicate that 34 percent of SMEs have no debt, while a further 50 percent have debt of less than one-third of turnover (McCann 2014). Table 5 shows that the remaining 16 percent have higher debts (a debt-to-turnover ratio of more than one-third). In particular, the medium-sized firms are at risk, with higher debts of 23 percent. More than half of this latter group has a debt-to-turnover ratio of greater than 1. Combining Table 4 (25 percent of loans are impaired) and Table 5 (66 percent of SMEs have a loan) indicates that 16.5 percent of SMEs have arrears on their loans.

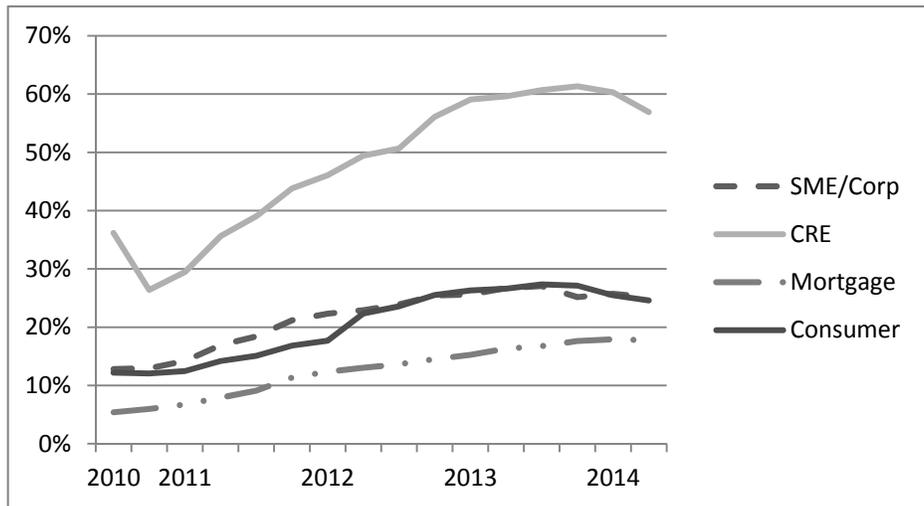
Figure 9. Outstanding Loans by Sector, End-2013 (Percent of total)



Source: Annual reports 2013 of banks for outstanding loans; Central Bank of Ireland for impairment rates; there is only a joint impairment rate for SME and corporate available.

Note: The data cover outstanding loans of the Irish banks.

Figure 10. Nonperforming Loans by Sector, 2010–14 (Percent of total loans)



Source: Central Bank of Ireland.

Note: The data cover gross value of loans on which payments of principal and interest are past due by 90 days or more, as a percentage of the total value of the loan portfolio (including nonperforming loans, and before the deduction of specific loan loss provisions). The weighted average of NPLs for the total banking sector is 25 percent for 2013, as shown in Figure 8.

Table 5. Debt to Turnover Ratio by Firm Size (Percent)

Size	Zero debt	0 to 1/3	1/3 to 1	>1
Micro	36.1	49.8	8.3	5.9
Small	32.2	52.9	9.4	5.4
Medium	32.4	45.0	11.0	11.7
Total	33.8	49.9	9.3	7.0

Source: McCann 2014.

Note: Rows sum to 100.

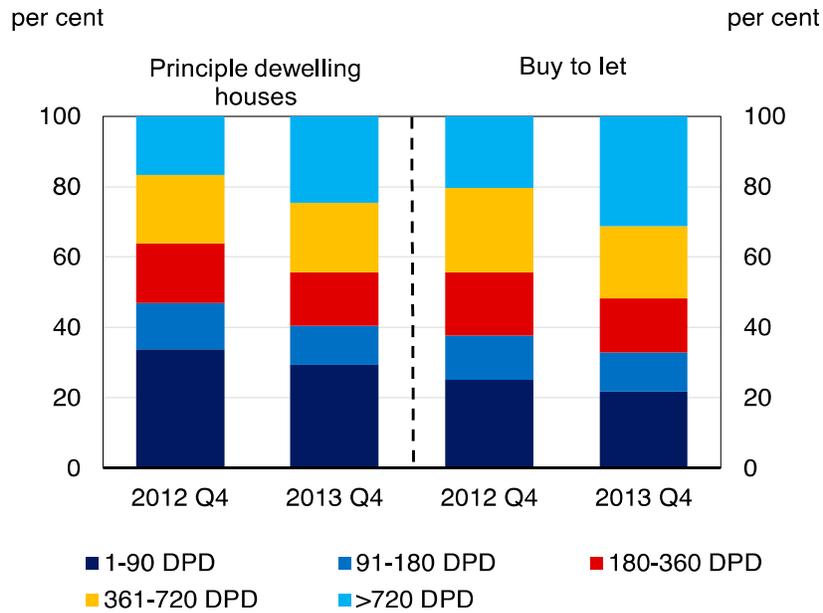
4.3. Mortgages

Mortgages are the most important component of bank balance sheets at 59 percent of outstanding loans (see Figure 9), as also indicated in Section 2. We therefore examine mortgage in arrears in more detail. Mortgages in arrears as a percentage of total outstanding mortgages balances are very high, at 20 percent for principle dwelling houses (PDH) and 36 percent for buy to let houses (BLT) at end-September 2014 (CBI 2014b). These figures for mortgage arrears are given for all arrears, including arrears up to 90 days. NPLs contain only arrears at 90 days or more. The NPL figure is 16.5 percent for PDH and 30.5 percent for BTL. The weighted average NPL for mortgages is 19.5 percent. External asset management, like NAMA for commercial property loans, should have been considered for distressed mortgages. That may have accelerated their resolution. But the ECB made such schemes financially unattractive, as it limited ECB funding to banks only and excluded resolution vehicles.

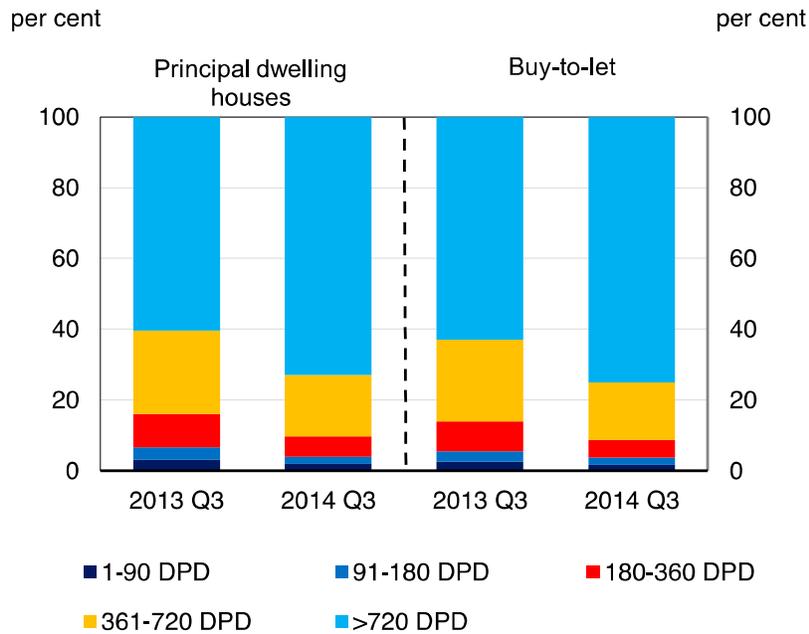
The composition of the arrears is also important. Panel A of Figure 11 indicates that the proportion of mortgages with arrears over two years (720 days past due) is growing and well above 20 percent for both categories. Panel B shows that this category is very large, with about 75 percent of arrears in value terms for both categories.

Figure 11. Mortgage Accounts in Arrears by Duration

Panel A: Mortgages in arrears as a percentage of total mortgages in arrears (number)



Panel B: Mortgages in arrears as a percentage of total arrears (value)

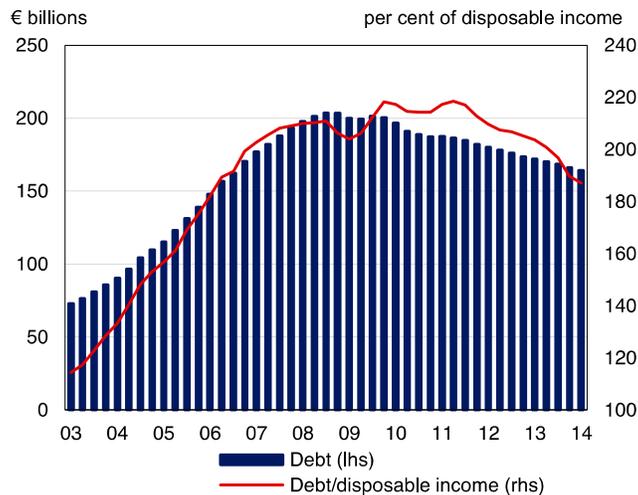


Source: Central Bank of Ireland, Macro-Financial Review, 2014-I and 2014-II.

Note: DPD means "days past due."

While household debt had increased at a fast pace in the run-up to the bursting of the bubble in 2008, the decline in household debt is slow. Figure 12 shows that household debt levels remain high at 190 percent of disposable income. The level of Irish household debt to GDP is second to only the Netherlands⁴ in the European context (see Figure 6).

Figure 12. Household Debt



Source: Central Bank of Ireland, Macro-Financial Review, 2014-II.

Again, banking data cover only households with a mortgage. There are some 1,650,000 private households in Ireland, according to the Irish Central Statistics Office. The number of outstanding PDH mortgages is about 760,000, with 118,000 of them in arrears (CBI 2014b). So, up to 7.2 percent of Irish households have a mortgage in arrears (as some distressed households have more than one mortgage outstanding).

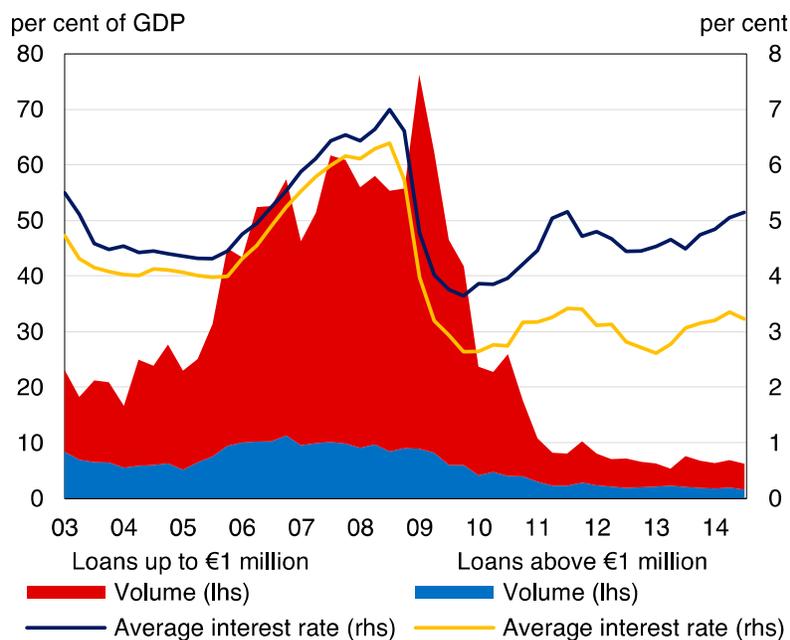
4.4. New Lending

New lending to domestic nonfinancial corporations remains extremely weak, with interest rates at slightly above 5 percent for loans up to €1 million (see Figure 13). Thus, SMEs, which have limited access to other sources of finance, face a high lending rate. Section 3.3 explains that the Irish banking sector has become very consolidated, with two broad banks and one small bank remaining. In response, the public authorities have taken several initiatives to support inter alia

⁴ The high mortgage debt in the Netherlands can be explained by the generous interest rate deductibility for income tax. As the effective interest payments are only half of the nominal amounts (with a marginal income tax rate of about 50 percent), the Dutch mortgage debt at 120 percent of GDP is about twice the European average of 60 percent (see Figure 6).

SME financing (Macro-Financial Review, 2014-II). The recently launched Strategic Banking Corporation of Ireland will lend to SMEs via the banks on longer and more favorable terms than those currently available. The Strategic Banking Corporation of Ireland will have €800 million to lend and will be initially financed by the German Promotional Bank (KfW), the European Investment Bank (EIB), and the Ireland Strategic Investment Fund. Next, the National Pension Reserve Fund (valued at €6.8 billion) is being reoriented from a long-term pension fund to a domestically focused investment fund, the Ireland Strategic Investment Fund (ISIF), to support economic activity and employment.

Figure 13. New Lending by Banks to NFCs



Source: Central Bank of Ireland, Macro-Financial Review, 2014-II.

Note: This chart shows lending by credit institutions resident in Ireland to euro area NFCs (nonfinancial corporates, which consists of SMEs and corporates). Irish NFCs represent about 87 percent of the sample.

5. Assessment and Policy Lessons

The previous sections contain a high-level overview of the run-up to the Irish crisis and the subsequent crisis management. This section provides an outsider’s assessment of Irish banking policies from a macro-finance perspective. Figure 7 highlights that the effectiveness of Irish policies to stabilize and restructure the banking system should be judged on their contribution to resuming stable economic growth in Ireland. Are firms and households ready to resume investment and consumption? We will also draw policy lessons from an international

perspective. This section follows the structure of the earlier sections: (1) preventive macroprudential policy; (2) stabilizing policies; and (3) restructuring policies.

5.1. Macroprudential Policy

The dangers of the building up of the strong housing bubble—fueled by abundant credit—were appreciated neither by the banks nor by the authorities. Ireland was not unique in this respect. A similar assessment can, for example, be made for the United States and Spain. Three features stand out in the Irish case, as described in Section 2. The first is the “groupthink” among high-ranking policymakers and bankers. The second is the loosening of credit standards on mortgages, with LTVs well above 90 percent. The third is the strong contribution of cross-border banking flows from other European countries.

External views can be helpful to counter groupthink. External reviews, such as the regular IMF Article IV Mission, are useful but can still be ignored by the authorities. Ireland participates in the European Systemic Risk Board, which can provide warnings and recommendations, and in the ECB’s Financial Stability Committee. The ECB can tighten macroprudential tools, if it believes that a country sets them too low. The ECB has only this power for CRR/CRD IV-related measures, like the countercyclical capital buffer, but not for important tools such as the LTV and Loan to Income (LTI) ratios. The most powerful mechanism to counter groupthink is to incorporate external views in the decision-making process of macroprudential policy. The U.K. Financial Policy Committee provides an interesting example, with four external members, including one who is foreign based.

With a one-size-fits-all monetary policy for the EMU, country-specific macroprudential policy is very important. This also applies to Ireland, whose contribution to the euro area is less than 2 percent. So, monetary policy is thus not set to Irish conditions but de facto exogenous. This is similar to Hong Kong, where the Hong Kong dollar is linked to the U.S. dollar and the Hong Kong Monetary Authority (HKMA) runs a currency board. To contain housing and real estate prices, the HKMA follows a time-varying LTV policy (HKMA 2011). When house prices rise too fast, the HKMA reduces the LTV ratio to constrain credit availability and vice versa.

LTV ratios were at the high end in Ireland, just as in the Netherlands, resulting in a high mortgage-debt-to-GDP ratio. LTV ratios at 95 or higher were not uncommon, as documented in Section 2. But more recent evidence suggests that such high LTV ratios have become less common (see Table 6). International experience suggests maximum LTV ratios of 80 percent. In

a consultation paper, the Central Bank of Ireland (2014a) proposes to restrict lending by banks for primary dwelling purchase above 80 percent LTV to no more than 15 percent of the aggregate value of the flow of all housing loans for PDH purposes. Furthermore, a lower threshold is proposed for BTL mortgages, requiring banks to limit BTL loans above 70 percent LTV to 10 percent of all BTL loans, as purchasing properties for investment purposes is riskier. These proposals are sensible to limit the risk from overborrowing. We assume that the LTV caps will be applied to all mortgage providers (not only banks) and further suggest applying dynamic (time-varying) application of the LTV ratios (see below).

Lower LTVs (and, thus, less debt) are possible only when households have sufficient savings for the necessary equity component. Germany has an interesting system of *bausparen*, which encourages German households to accumulate savings for buying their house. Other examples are Canada and Switzerland, where individuals can draw on their own pension fund assets for equity financing of their first homes.

More broadly, the macroprudential authority is at minimum responsible to increase the resilience of the financial system against financial shocks (see also CBI 2014a). Gersbach and Rochet (2014) go further, preferring countercyclical policies to constrain financial booms, which are largely related to housing and property markets. They recommend “stabilization of the credit cycle” as the aim of macroprudential policy. The countercyclical capital buffer (which is implemented as part of the CRD4 package) and the LTV ratio are based on the residence of the borrower. So, domestic banks and foreign-owned banks operating in Ireland face the same capital buffer and LTV ratio for Irish borrowers. In that way, the Central Bank of Ireland can contain domestic as well as cross-border banking credit simultaneously.

Table 6. LTV and LTI Ratio Breakdown on New PDH Mortgage Lending, 2013

LTV ratio	% of the euro amount of new lending	% of the number of new loans	LTI ratio (times)	% of the euro amount of new lending	% of the number of new loans
Over 90%	12	11	Over 4.5	7	6
Between 85% and 90%	23	21	Between 4 and 4.5	6	5
Between 80% and 85%	9	8	Between 3.5 and 4	10	9
80% and below	56	60	3.5 and below	77	80

Source: Central Bank of Ireland 2014a.

Policy Lessons

1. The Central Bank of Ireland, as macroprudential authority, should aim to stabilize the credit and housing cycle. It should adopt among other things time-varying LTV ratios, which in the long run should not exceed 80 percent.
2. The Central Bank of Ireland may consider establishing a formal Financial Stability Committee with external members. A separate committee with published minutes also increases accountability.

5.2. Crisis Management—Stabilizing Banks

From the start of the global financial crisis, the Department of Finance and the Central Bank of Ireland have been proactive to stabilize the Irish banks. The outcome of the ECB Comprehensive Assessment shows the success of the Irish authorities. The two broad Irish banks, BOI and AIB, passed the test, and only the small bank, PTSB, experienced a capital shortfall.

In this high-level review, we cannot assess whether the blanket guarantee of Irish bank liabilities to address wholesale funding pressures was appropriate (see Nyberg 2011). It may have served its purpose initially, but it forestalled timely resolution with burden-sharing by creditors. With hindsight, the expiration of the two-year government guarantee was a watershed in the Irish banking crisis. While an expiration of a guarantee is generally a “tipping point,” there was no clear exit strategy of the guarantee.

A contentious issue in the early days of the crisis management was the handling of senior debt holders: writing down to absorb losses or rescuing because of contagion. At the time, the contagion concerns were real. Be that as it may, if the ECB (and others, like Brussels and the U.S. Treasury Secretary) argues for protecting senior debt holders because of potential contagion to the wider European banking system, then the costs should be borne at the European level (see Goodhart and Schoenmaker 2009 on burden-sharing).⁵ But European and IMF support was channeled to the Irish government, which subsequently rescued the Irish banks on its own risk

⁵ A distinction can be made between general and specific burden-sharing. General burden-sharing is based on some fixed key, such as the ECB capital key used by the ESM, while specific burden-sharing is based on the location of the banking assets (in this case, Ireland for the six Irish banks). To the extent that EU-wide financial stability is affected, general sharing is preferable. When only stability in the countries where the bank is located is affected, specific sharing is the preferred solution. Goodhart and Schoenmaker (2009) argue to apply a division of general and specific sharing, depending on the relative stability concerns.

and account. That is clearly a policy mistake. The IMF staff (Allard and others 2013) recommend that the ESM should recapitalize banks directly and not through the books of the government. Similarly, Goodhart and Schoenmaker (2014) argue that the ECB instead of the national central banks should provide ELA to banks under ECB supervision in the new Banking Union.

More generally, the financial trilemma suggests that authorities have to choose two out of the three objectives of financial stability, cross-border banking, and national financial policies (Schoenmaker 2013a). With the advance to Banking Union, a choice is made for supranational financial policies, which should be applied to not only banking supervision (micro-component) but also financial stability (macro-component).

Next, the Irish authorities set up NAMA to deal with bad property loans in excess of €20 million. The establishment of NAMA was instrumental in the successful management of the Irish banking crisis. It allowed the banks to recognize fully the losses on these loans and thus removed an important source of uncertainty for the banks. Next, the government set only overall targets for NAMA in its resolution of the bad assets. The relative freedom in running down the bad loan portfolio allowed NAMA to realize a relatively good price for its assets.

The recapitalization of Irish banks happened in several rounds. Early top-down calculations appeared to be imprecise and insufficient, which is of course partly due to the fact that the full depth of the crisis was not yet known. Acharya and others (2011) advise, therefore, to slightly overdo recapitalizations and overcapitalize banks, as a no-regret policy. Any excess funds can later be returned to the government, while the probability of further capital shortfalls is reduced. Next, a bottom-up approach, preferably aided by independent consultants, is needed to assess the full scale of the capital needs. The second PCAR in Ireland was bottom-up. The Dutch government followed a similar bottom-up approach when it provided a 90 percent guarantee of ING's Alt A portfolio. To ensure an appropriate price for the guarantee, the government had (in secret) hired a consulting agency for a valuation of the U.S. houses underlying the Alt A mortgages.

Policy Lessons

3. In the new setting of the Banking Union with ECB supervision of the large euro area banks, the ECB and the ESM should provide directly the liquidity and capital backstop to these large banks when needed.

4. Ireland followed international best practice by setting up NAMA, an asset management agency to run down the bad assets of the Irish banks. Releasing bad assets from bank balance sheets is instrumental in the path to recovery.
5. Assessment of capital needs for troubled banks should be comprehensive, aided by external consultants, and, ideally, bottom-up. Ad hoc assessments may lead to repeated rounds of recapitalization.

5.3. Crisis Management—Restructuring Banks

The next step after stabilization is the restructuring of the Irish banks. The restructuring involved rearranging the banking system and cleaning the balance sheet (“healing”). On the banking system, the authorities took several decisions on closures and mergers. As Anglo and the smaller INBS appeared to be beyond salvage, it was a good decision to put these banks into liquidation. Another decision was to find a safe haven for EBS, a small building society. EBS became a subsidiary of AIB. The result is a two-pillar banking system, with two broad banks, BOI and AIB, with €80 to 90 billion in total loans (see Table 4) and a smallish bank, PTSB, with only €30 billion in total loans. While a reduction of the oversized banking system of six Irish banks was clearly needed, the two-pillar system may lead to too little competition in Irish banking. This may result in high interest rate margins with high borrowing costs and low saving rates for business and retail customers.

An alternative would have been to merge EBS and PTSB, creating a third bank. In that setting, there would be two broad banks with €70–90 billion in assets and one medium-sized bank with about €45 billion in assets. Although PTSB is still loss making, a properly restructured combined bank can turn into an effective challenger of the two larger banks. To compare, the troubled SNS bank in the Netherlands was nationalized as a stand-alone bank and not taken over by one of the three large banks (ING, Rabobank, ABN AMRO). The SNS has adopted a challenger strategy in the pricing of its mortgages, savings, and payment services.

Competition from foreign banks will be very limited in the near future, due to disaster myopia (Guttentag and Herring 1984). As the recent Irish banking disaster is still fresh in everybody’s memory, foreign bank managers will not enter the Irish market. The foreign banks Lloyds, Rabobank, and Danske Bank are running off their Irish operations. Only Ulster Bank, which is part of the RBS Group, is on record to remain active in Ireland.

Turning to cleaning bank balance sheets, progress is still slow. With NPLs at 25 percent, there is a lot of work to do for banks. But banks are holding out to achieve write backs when the economy turns around (thus generating returns for shareholders and distressed debt investors), instead of writing off bad loans. After several years of strong provisioning, banks have built sizable provisions (up to 53 percent, which is coming close to the discount of 57 percent on the property loans transferred to NAMA), which would allow them to take write-offs.

This “wait and see” approach (forbearance) comes with a cost, for both the banks and their borrowers. For banks, the outstanding NPLs are a continuing source of uncertainty, which may cause them to refrain from new lending. The Department of Finance has recently created a national development bank, the Strategic Banking Corporation of Ireland (SCBI), to support lending to SMEs at a time when they have difficulties accessing finance and face financing costs that are higher than the European average. These challenging credit conditions primarily reflect legacy issues in the banking sector. The SBCI will lend to SMEs via the banks on longer and more favorable terms than currently available at the private banks.

For borrowers, the debt overhang causes subdued investment and consumption (Myers, 1977; Main and Sufi, 2014). Our calculations in Section 4 suggest that 16.5 percent of SMEs and 7.2 percent of households face payment arrears. But that is a conservative estimate of firms and households confronted with debt overhang, as some firms and households struggling with high debts still fulfill their payment obligations to their banks. So, up to 20 percent of SMEs and 10 percent of households are suppressing new investment and consumption. While the Irish economy is, fortunately, recovering, there is a two-track economy, with the majority of firms and households contributing to economic growth but a significant minority standing on the sidelines.

Ireland appears to be stuck between the Anglo Saxon system of easy credit provision and the Roman system of strong creditor’s rights. In the United States, mortgages were (too) easily provided in the run-up to the subprime crisis, but indebted households could walk away from their house without further debt because of the so-called nonrecourse mortgages. In the European tradition of strong creditors’ rights, Ireland had recourse mortgages and antiquated personal bankruptcy procedures. In the wake of its banking crisis, Ireland has already modernized personal bankruptcy procedures. But it is still difficult for borrowers (firms and households) to free themselves from old debts. Moreover, it is not in the mindset of bankers to write off loans in an equitable way, as they are afraid of moral hazard by setting a precedent of debt forgiveness.

Nevertheless, the Irish banking crisis can be seen as a one-off, justifying a unique program of (partial) debt forgiveness.⁶ A government-enforced program of debt forgiveness would free both the banking sector and its borrowers from lingering legacy issues, broadening the base for economic recovery. As banks were recapitalized with taxpayers' funds, the argument could be made that banks in turn have the responsibility to write off legacy loans in order to support new lending to firms and households—and thus increase the social return on the recapitalizations. The taxpayer-funded recapitalizations are now sitting partly idle in the banks. Writing off loans should have been set as a condition for the EU-IMF support package.

Policy Lessons

6. The Irish authorities made some bold restructuring decisions, such as replacing management and closing two troubled, property-lending banks. While banking consolidation is a key tool of crisis management, it is important to ensure that the banking system remains competitive postcrisis.
7. Taking sufficient provisions for NPLs is a first step to heal banks. A necessary second step is to write off bad loans in order to clean up bank balance sheets. On the first step, Ireland has been proactive; on the second, progress is very slow.
8. Recapitalization of ailing banks may be needed for economic growth. When providing financial support to banks, the government should set targets for banks to partially write off bad loans to corporates and households.

6. Conclusions

Ireland faced a very severe banking crisis when the credit-fueled property bubble burst. Our overall assessment is that the Irish authorities have been successful in the management of the Irish banking crisis. This success has been instrumental in the economic recovery. Ireland has turned the corner.

On balance, there was a strong focus on stabilizing banks (restoring solvency, replacing management, and closing bad banks), but less emphasis on restructuring loans. The Irish banks

⁶ It could be said that this argument was used for the recapitalization of the Irish banks. Under normal conditions, the government would not recapitalize the banking sector, but due to the severity of the crisis the government did recapitalize.

are not yet healed, with 25 percent of NPLs. A small but important group of highly indebted households and firms cannot resume consumption and investment because of debt overhang. Intensifying write-offs of bad loans would broaden the economic recovery and increase the social return on the publicly funded bank recapitalizations.

The Irish taxpayers have been brave in shouldering the full costs of recapitalizing the Irish banking system. While European authorities argued strongly against loss-sharing by senior debt holders because of contagion fears for the wider European banking system, they did not cover part of the burden—that amounts to enjoying the stability benefits but not paying for them. In the new Banking Union setting with ECB supervision for the large euro area banks, we recommend that the ESM should directly recapitalize troubled banks after resolution measures are taken (Allard and others 2013; Schoenmaker 2013a). The ESM would then become an effective vehicle for risk-sharing and would cut the bank-sovereign loop (the theme of the conference).

Finally and importantly, a repeat of the “irrational housing exuberance” should be avoided. We recommend using the new macroprudential tools of countercyclical capital buffers and LTV ratios in a proactive way to stabilize the credit cycle. Establishing a financial stability committee at the Central Bank of Ireland with external members may be helpful to avoid groupthink.

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2

Putting the Budget on a Sound Footing

Antonio Fatás, INSEAD ¹

This paper analyzes fiscal policy developments in Ireland during the past six years. Despite the large fiscal progress during the 1985–2007 period, the large increase in government debt after 2008 led to a full-blown sovereign debt crisis and the need for a large fiscal consolidation. The adjustment that followed, while necessary, led to a debate between those who argued that it was too fast and others who believed that it was not aggressive enough. This paper presents the arguments as well as empirical evidence to assess the costs and benefits of different speeds of fiscal consolidation. We conclude with some insights on the fiscal path ahead.

1. Introduction

By 2007 Ireland was the poster child of fiscal discipline because of its performance during the early years of the euro. Together with other economies in the periphery (for example, Spain), its government debt had fallen faster than in any of the core euro countries and had reached levels unthinkable a couple of decades before. There was very little doubt about the commitment of the Irish government to fiscal sustainability and the potential risks seemed manageable.²

By 2010 the Irish government found its commitment to fiscal sustainability questioned to the point that private capital suddenly stopped being a source of funding. The combination of a large crisis and the support to the banking sector increased debt by a factor of four. This

¹ I would like to thank Phil Lane as well as reviewers for the conference for their comments.

² In its 2007 Article IV consultation with Ireland, the IMF Executive Board praised “Ireland’s sustained strong fiscal performance, and the authorities’ firm commitment to fiscal discipline” and “welcomed the indicators confirming the soundness of the Irish banking system, including the stress tests suggesting that cushions are adequate to cover a range of shocks even in the face of large exposures to the property market” (International Monetary Fund 2007).

combined with increasing pessimism regarding future growth rates left a very large fiscal consolidation as the only policy option.

This paper analyzes the speed of consolidation during the past six years. There are clearly many areas where the adjustment should be considered a success. The Irish government has regained access to capital markets and is able to borrow at low interest rates. Growth is returning faster than anticipated and the debt-to-GDP ratio has stabilized or started to fall. In addition, the government has delivered on its promises regarding the size of the adjustment, despite difficult economic conditions both in Ireland and abroad.

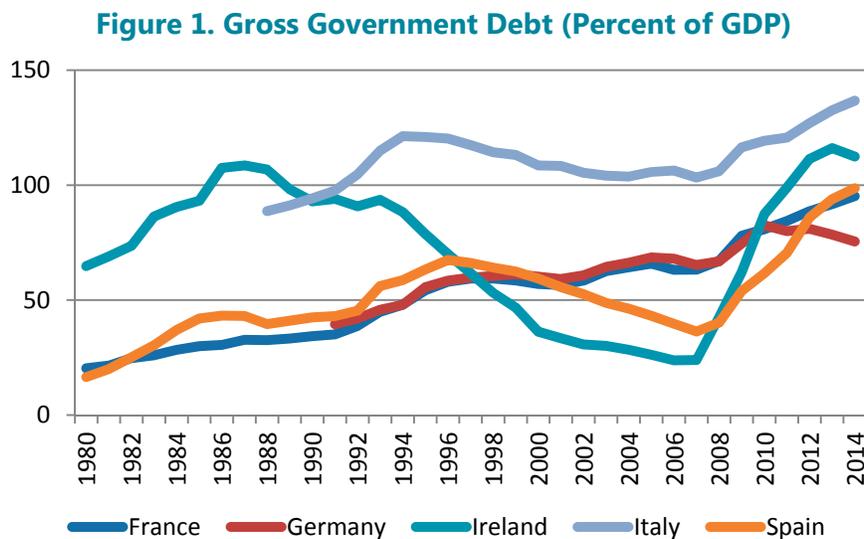
But there are also areas where there are questions about whether alternative policies could have produced a better outcome. Despite the agreement that a consolidation was needed, there has been an ongoing debate, which is likely to continue over the coming years or decades, about the optimal speed of consolidation. While there are many interesting dimensions about the timing and magnitude of the adjustment (fairness, credibility, support to the financial sector), this paper focuses on the macroeconomic debate around the consolidation that took place during the crisis and the potential negative effects that the fiscal contraction had on GDP growth.

We present evidence that the negative growth effects of fiscal consolidation have been very persistent and that they have had an effect on potential output. The value we estimate for these effects suggests that, from a macroeconomic point of view, the fiscal consolidation was too fast because it probably became self-defeating through its effects on potential output. It is very likely that the persistent negative effects on growth more than compensated for the reductions in spending and tax increases.

The structure of the paper is as follows: In Section 2 we provide an overview of the debt evolution of Ireland before and after the crisis. We follow in Section 3 with a theoretical analysis of the costs of government debt and a discussion of when debt reduction should happen and its optimal speed. In Section 4 we analyze in detail the data for the Irish fiscal consolidation and see how it compares to that of other euro area countries. Section 5 discusses the policy options ahead and concludes.

2. The Debt Surprise

In 1987 the Irish government had one of the highest debt-to-GDP ratios of all future euro members. At a level of 110 percent of GDP, it was similar to that of Italy and just below that of Belgium. In the 20 years that followed, the Irish government managed to reduce its debt at a pace that was unmatched by any of the other countries. The debt ratio reached a level of 24.6 percent in 2007, representing a reduction in more than 80 percentage points over two decades. In contrast, during those years Germany and France increased their debt-to-GDP ratio by more than 30 percentage points and reached levels as high as 65 percent, not far from the experience of many other core euro countries (see Figure 1).³



Source: IMF World Economic Outlook online database, October 2014.

During the six years that followed, from 2007 to 2013, the Irish government debt climbed back to 116 percent of GDP and reached one of the highest levels among euro countries, together with Cyprus, Greece, Italy, and Portugal. While in the case of Italy the debt level had remained very high throughout most of these two decades, in the other peripheral countries, the 2008

³ The data presented in all figures and tables of the paper (unless a different source is specified) comes from the IMF World Economic Outlook online database from October 2014. Because of recent changes to national and fiscal accounts, there are some significant differences to earlier releases of the same database. It also differs from the data available in the AMECO database of the European Commission. An appendix to the paper compares the three sources of data and explains the origin of differences for the debt-to-GDP ratio values.

crisis caused a very sharp increase in the indebtedness of the government, after years of fast reduction. And Ireland was the country where this U-shape pattern was the most dramatic.⁴

The large increase in government debt was the outcome of several factors that are not independent from each other. First, a very large recession with a fall in real GDP of more than 9 percent and as high as 16 percent in nominal terms during 2007 to 2010 not only raised automatically the debt-to-GDP ratio but also led to a large fall in tax revenues and an increase in the budget deficit. In the case of Ireland, the fall in revenues was especially large because of the strong reliance of the government budget on taxes associated with the booming real estate market.⁵ In addition, the recession became persistent, and a cyclical phenomenon turned into a large downward revision of potential output. In practice this meant that despite the early fiscal consolidation efforts, the debt-to-GDP ratio continued to increase.

Second, the direct involvement of the government in the necessary adjustment of the banking sector, with significant capital injections as well as broad guarantees, was responsible for a large share of the increase in government debt.

Third, this shock to public finances in Ireland as well as in other euro countries led to a sharp fall in confidence that resulted in higher interest rates that increased government spending and fed into a spiral of higher deficits and further debt accumulation.⁶

The sharp increase in government debt came as a surprise. The crisis was deeper and more persistent than what anyone would have imagined, the fragility of the financial system and the scale of the support provided by the government were unimaginable, and all that combined with the reduction in potential GDP left the government with very few options except a series of fiscal consolidation plans.

The first plan of the Irish government during the years 2008–10 represented an adjustment in the range of 6 to 10 percent of GDP. This plan was followed by a new adjustment of similar

⁴ Figure 1 plots gross government debt. While the evolution of net debt was similar, its increase during the crisis was larger because of the reduction in the financial assets held by the Irish government. A data appendix at the end of the paper discusses the difference between gross and net debt for Ireland and the role of government assets.

⁵ See Kanda (2010) or Lane (2011).

⁶ The interest rate change had a direct effect on countries that still had access to capital markets and faced increasing rates. For those that did not, it still affected the terms on which loans were negotiated with the EU and, in addition, it changed the sustainability of budgetary plans, as future debt was likely to be issued at a higher rate.

magnitude over the coming four years that became the blueprint for the plan imposed by the troika (IMF, EU, and ECB) after November 2010 (Lane 2011).

The combination of this succession of fiscal adjustment plans had as a goal to stabilize the debt-to-GDP ratio by 2014 and bring budget deficits under the 3-percent limit around the same time. Despite some setbacks, the Irish government has broadly managed to deliver on the planned fiscal consolidation. But given the final level around which the debt has stabilized, around 116 percent of GDP, the Irish government faces a situation where efforts to ensure fiscal sustainability will be required in the years or decades to come.

While there is no question about the need for a fiscal adjustment in response to the crisis and a continuation of the fiscal efforts going forward, there has been and still is an open debate about the size and speed of consolidation. Was it too fast or too slow? What were the consequences of the size and composition of the fiscal adjustment? Were there any alternatives? We first present the theoretical arguments in favor of debt reduction and discuss the optimal speed of adjustment before we look in detail at the data.

3. Need for Fiscal Consolidation and Optimal Debt

The debt surprise described in the previous section made obvious the need to modify government spending and revenue plans relative to those before the crisis. The need for an adjustment can be justified in two different ways. First, a higher level of debt and the precrisis budgetary plans are no longer consistent with a sustainable fiscal policy. The higher debt burden requires an adjustment toward lower spending or higher taxes—more so if the crisis has changed our forecast of future growth rates. Second, the higher level of debt might be seen as costly in itself, and, in order to reduce the debt, there is also the need to implement spending cuts or tax increases.

In some circumstances, both of these two arguments could become indistinguishable—for example, when the government faces a crisis of confidence. Its budgetary plans are seen as unsustainable and the resulting crisis of confidence leads to high interest rates and a full-blown debt crisis. In this case, the sustainability argument appears to be directly linked to the argument about the level of debt being too high, and both require an adjustment.

But it is important to understand that a need for fiscal adjustment in the form of lower spending and higher taxes (today or in the future) does not always require a reduction in debt levels. It all depends on whether the current level of debt is seen as costly in itself.

How High Is Too High? Optimal Government Debt

What constitutes an appropriate level of government debt? The academic literature does not provide many concrete insights on this question. The starting point is to recognize that debt is not, per se, a tool but an instrument to adjust differences between taxes and government spending over time. In other words, it is not the level of debt that fundamentally matters but the level of spending and taxes, and how they are spread over time. This is not always well understood. As an example, the argument that high debt imposes a large cost through the necessary taxes to pay for interest payments does not immediately call for a reduction in debt. The cost of debt has to be covered with either current or future taxes. What really matters is how the timing of those taxes affects the overall level of distortion. Raising taxes to pay for the debt today (instead of waiting for future taxes) could potentially be suboptimal by imposing more distortions in the economy.

It is in this context that the seminal work of Barro (1979) suggests that spreading the negative effects of distortionary taxes across many years is optimal. This does not mean that adjustment is not necessary after a shock, but it means that the adjustment needs to be thought of in terms of optimal levels of spending and taxation rather than in terms of specific levels of debt. Barro's main result is that under scenarios where government spending and income grow at similar rates, tax rates should be constant over time to minimize their potential distortionary effects. In this environment, a sudden change in the initial level of debt, such as the one we described above for the case of euro countries and Ireland in particular, does not require any reduction in debt. Debt should be allowed to remain at the new level. In other words, government debt should be a random walk. This result is also present in models with price rigidities, such as Schmitt-Grohé and Uribe (2004).

There are several key assumptions that drive this extreme result; in particular, it requires Ricardian equivalence, which is normally associated with a representative-agent model. When

we deviate from this model, as in Leith, Moldovan, and Wren-Lewis (2011), reducing debt levels today could potentially reduce distortionary taxation in the future, and it is optimal.⁷

But beyond the distortionary effects of taxes, isn't debt costly because it crowds out private spending and results in a lower level of the capital stock? Although fiscal policy can be a source of crowding out, this argument mixes the effects of debt and the effects of government spending. Government spending and not debt is a measure of the resources that the government appropriates. In that sense, the possibility of crowding out by governments might be calling for a reduction in government spending but not in government debt.

But the interest payments on debt are part of government spending—isn't this an argument to reduce debt? Not always. As we just argued, for a given level of debt, the burden that it imposes on the economy cannot be eliminated. Yes, interest payments on debt need to be financed, but this is also true for a quick reduction in the level of debt. The resources required to pay back the debt are unavoidable, and, under some assumptions, they do not depend on the timing of debt repayment.

This argument could be valid if the interest rate paid on the debt is higher than the rate at which the government and citizens use to discount the future. Given the circumstances in 2010 and 2011, this is likely to be a reasonable assumption, as the government could not raise any funding in capital markets. But the assumption needs to be made explicit and dependent on the access to capital rather than as a general argument of interest payments displacing other forms of spending.⁸

Costly Debt? Empirical Evidence

In the absence of any clear consensus from theoretical models regarding the optimal level of debt, it is natural to look at the empirical evidence. The empirical literature does not attempt to measure all possible costs of debt but focuses on the potential growth effects of high debt. This literature has recently become a source of dispute among academics and policy makers. While Reinhart and Rogoff (2010) present evidence that levels of debt above a certain threshold can be detrimental to growth, the evidence has been disputed, and some believe that the effects are much smaller or inexistent (Herndon, Ash, and Pollin, 2013).

⁷ An alternative model where the level of debt matters is one where governments cannot commit to a certain fiscal policy as in Leith and Wren-Lewis (2013).

⁸ Leith, Moldovan, and Wren-Lewis (2011) present a more general case for why the interest rate faced by governments could be different than the discount rate and therefore justify a reduction of debt.

Despite the inconclusive nature of both the theoretical and empirical literature on the need to keep government debt low, policymakers and international organizations (such as the OECD or the IMF) take a cautious approach to the issue of optimal debt, and they use the concept of a “prudent” debt target. The notion of a “prudent” debt target can be related either to the idea that high levels of debt might be costly from a macroeconomic point of view or simply to the notion that for high levels of debt, governments are unable to generate the necessary primary surpluses to ensure debt sustainability. And given that there will be future crises, debt levels should remain within a “prudent” range to allow for potential future adjustments.⁹ While there is not always an explicit discussion on what this number should be, typically the OECD or the IMF tend to set values around 50 to 60 percent as a target for medium-term debt in their simulations. In addition, 60 percent happens to be the level set by the Maastricht Treaty in the euro context. It is also the case that the 60-percent level is sustainable under reasonable assumptions of interest rates, growth, and historical levels of primary balances.

Compared to these benchmarks, the current level of Irish gross debt is too high. At about 110 percent of GDP (and even higher as a percent of GNP), it is one of the highest levels among advanced economies. Both because of the EU norms as well as the own rules set by the Irish government, this debt will have to be on a downward trajectory over the coming years.

The Effort to Reduce and Stabilize Government Debt

What does it take to stabilize and reduce the level of government debt? The answer depends first on the level of debt that is being targeted. If we represent by d^* this level, the primary balance (as a percent of GDP) that is consistent with this level of debt in the steady state is equal to

$$pb^* = \frac{r - g}{1 + g} d^*$$

where r is the interest rate paid on government debt and g is the growth of GDP.

If we start at an initial level (d_t) that is higher than d^* , we will be moving toward our goal as long as our current primary balance satisfies¹⁰

⁹ See Merola, Hoeller, and Sutherland (2012) as an example of the OECD approach to this issue or International Monetary Fund (2014a) for an analysis from the IMF.

¹⁰ For a complete set of equations that characterize the dynamics of debt and budget balances, see Escolano (2010).

$$pb_t > \frac{r - g}{1 + g} d_t$$

Given current projections for interest rates and growth rates, it is expected that the difference between the two will be small for most advanced economies, including Ireland. As an example, the OECD projects for Ireland effective nominal interest rates of 4.7 percent and nominal growth rate of 4.3 percent over a medium term.¹¹ Under this scenario, the required primary balance to keep the debt at current levels (around 110 percent) is very close to zero. Any increase in interest rates by a percentage point will require an increase in this balance of about 1.1 percentage points of GDP.

The goal of the Irish government is not to maintain the debt level but to reduce it steadily over the coming years. Under the EU debt rules, and given that Ireland is above the 60-percent framework, it is required that the excess is reduced by at least 1/20 per year on average.¹² This is likely to be met when Ireland meets its medium-term objective (MTO; a structural balanced budget). And during the transition toward the MTO, given that EU rules require an improvement in the structural balance of at least 0.5 percent of GDP, the debt-to-GDP ratio will also be declining (under reasonable assumptions about growth and interest rates).

The government has not established a concrete target and date for the debt-to-GDP ratio, but its current projections of primary surpluses do point in the direction of a continuous reduction over the coming decades. As an example of potential paths going forward, using the growth rates and interest rates from the OECD projections, if the Irish government were to maintain 3 percent primary surplus going forward, the debt-to-GDP ratio will fall to about 68 percent by 2030 and to about 11 percent by 2050. With a less ambitious but still difficult level of 2 percent for the primary balance, the ratio will reach 85 percent by 2030 and 50 percent by 2050.

4. The Speed of Adjustment during the Crisis

Fiscal consolidation in Ireland started in the early days of the crisis. During 2008–10 the government implemented adjustments between 6 and 10 percent of GDP, followed in the years 2011–14 by a second fiscal consolidation of similar magnitude.¹³ The motivations for such a

¹¹ See Merola, Hoeller, and Sutherland (2012).

¹² Because there is a transition period, this rule applies only three years after the correction of the excessive deficit. Given that this is likely to happen in 2015, the debt reduction rule is effective only from 2019.

¹³ The Irish government and the Fiscal Policy Council estimate the total fiscal effort over the two periods to be very close to 20 percent, while the IMF suggests that the efforts were closer to 14 percent. The IMF uses a lower estimate for the years when the consolidation started.

large fiscal contraction were the ones discussed in the previous section. First, there was the need to reestablish sustainability under a new economic scenario, and, second, it was the result of the need to bring debt levels down and reestablish credibility. As the crisis deepened, the loss of credibility became central to the consolidation efforts as it led to a complete stop of private capital flows and the need to access institutional sources (EU, IMF, ECB) for Ireland but also for other euro periphery countries.¹⁴

Was fiscal consolidation too fast or too slow? In this paper we take a very specific approach to this question, by focusing on the macroeconomic debate and ignoring some of the other issues that are also relevant. For example, it could be argued that the speed of fiscal adjustment arose from the sudden loss of credibility and, to some extent, it was imposed by market conditions. In other words, there was no choice. While there is no doubt that the sudden stop of private flows forced a faster adjustment in some of these countries, ultimately the speed of adjustment was the outcome of the negotiations with those who were providing the necessary funds until the government could access private funding again. It is in that context that we can still ask here the question of whether the speed of adjustment that we witnessed was the right one.

An issue that we will not analyze is whether there were alternatives to the large support to the financial sector. The path of consolidation and the need to consolidate were clearly a function of this support. Was there an alternative feasible policy? Given the weakness of the European financial sector, there was the fear that any imposition of losses to bank debt holders would represent a risk to the rest of the European banks. We could imagine solutions that did not go as far in terms of the support provided to Irish banks, but they could only have happened with the strong support of the other EU members.

Also, by tackling the question of speed mainly from a macroeconomic point of view, we are ignoring redistributive or efficiency arguments as well as interactions between the speed of adjustment and its composition. Being away from an optimal level of debt does not simply involve a decision on the timing of debt reduction. Typically, the shock that leads to a realization that there is a need for adjustment also has implications on the size of the government or the spending side and taxation. Although we will mostly focus on the overall size of the adjustment, we will provide some data on the choices in terms of composition.

¹⁴ See International Monetary Fund (2013) or European Commission (2013a) for details on the fiscal adjustment.

Too Slow or Too Fast? The Macroeconomic Debate

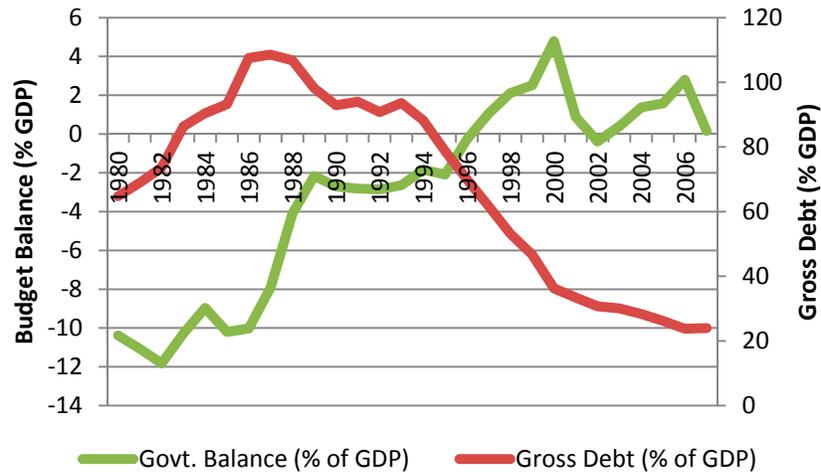
What is the basis for the argument that consolidation was too slow? The speed of consolidation might be too slow when the government is unable to put the budget on a sustainable path and one that allows room for potential negative surprises in the future (another crisis).

What is the basis for the argument that consolidation was too fast? The main argument is the possibility that the adjustment in fiscal policy has a negative effect on economic growth. There are two sides to this argument. First, the impact that fiscal consolidation has on economic growth has welfare implications that might not be spread evenly over different years or generations or that simply do not minimize the welfare costs because of the abrupt nature of the crisis. Second, the output consequences of fiscal consolidation can affect its effectiveness. If fiscal consolidation results in a lower level of output, this will have an impact on tax revenues as well as on any ratio that is measured relative to GDP (such as debt). Theoretically, fiscal adjustment could be even self-defeating if the GDP effects are large enough to make the debt-to-GDP ratio move away from its target level. DeLong and Summers (2012) make this argument in the context of what they call a depressed economy, where interest rates are close to or at the zero lower bound. Eyraud and Weber (2013) present similar arguments, and Berti, de Castro, and Salto (2013) produce estimates of the potential effects of fiscal consolidation on output and debt for the European context.

The Irish Fiscal Adjustment

Let's start with some basic analysis of the magnitude of the Irish fiscal policy adjustment. In 2007 the Irish government had a balanced budget, which followed more than a decade of surpluses. The gross debt as a ratio to GDP was on a consistent downward trajectory and had gone below 25 percent by the end of that year (see Figure 2).

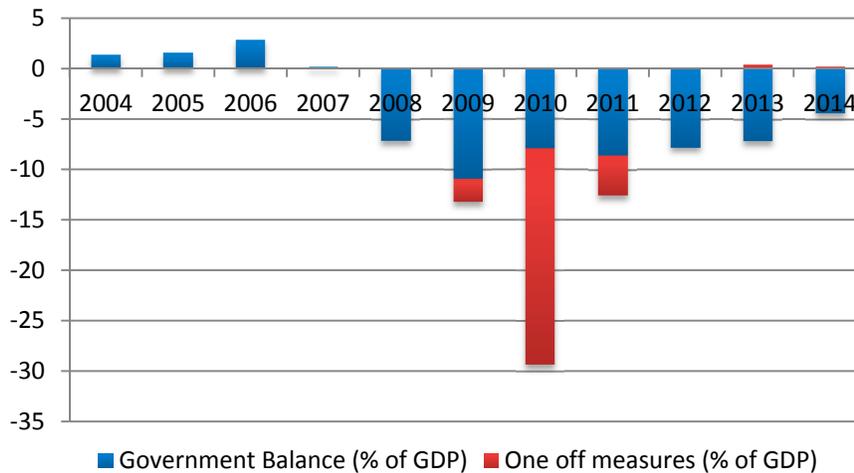
Figure 2. Government Balance and Gross Debt before the Crisis



Source: IMF World Economic Outlook online database, October 2014.

By 2008, real GDP growth collapsed by more than 7 percentage points, and the balance moved to a deficit of 7.1 percent. In 2009 real GDP declined by more than 6 percent, and it further increased the deficit to 13.3 percent, of which 2.3 percent was related to banking assistance.

Figure 3. Budget Balance during the Crisis



Source: IMF World Economic Outlook online database, October 2014.

The large budget deficit was the result of a deep recession with real growth rates of -2.2 and -6.6 percent. But it was also the outcome of deflation in those years: nominal GDP growth rates were much lower at -5.1 percent and -10.5 percent during 2008 and 2009.

Deflation is likely to generate a larger budget deficit and, in addition, it automatically raises the debt-to-GDP ratio.

In the case of Ireland another relevant factor was the collapse of revenues that were associated with the real estate boom that dominated the early years. The nature of these revenues meant that the elasticity of tax rates relative to the cyclical conditions was unusually high.

The government responded with a series of budgetary measures during 2008 and 2009. While the Irish government or the Irish Fiscal Policy Council estimate the adjustment on the order of €12–15 billion (about 10 percent of GDP), IMF calculations offer a smaller figure for the budgetary measures of around 6.2 percent of GDP.¹⁵

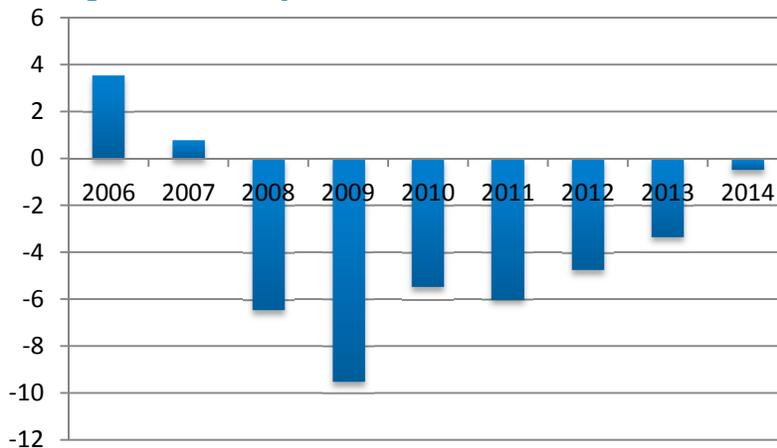
In April 2009 the European Commission put the Irish government under the Excessive Deficit Procedure (EDP), requiring additional consolidation measures for the next years in order to bring the deficit under the 3 percent limit by 2013, later postponed to 2014. Additional consolidation measures were originally presented in the National Recovery Plan, which was unveiled by the Irish government in November 2010. This plan was reflected in the EU-IMF program approved three weeks later on December 16, 2010. The 3 percent deficit objective was postponed to 2015 as part of this agreement with the troika. During the years that followed the adjustment was of similar scale to the one of 2008–09, on the order of 8 to 10 percent of GDP.

From Plans to Outcomes: The Size of Fiscal Consolidation

Calculating the size of the fiscal consolidation during a crisis is not an easy task because all fiscal variables react to the cycle. If we exclude the one-off measures that took place in the years 2009–11, we see that the primary deficit grew from 6 percent in 2008 to close to 10 percent in 2009 before starting a steep decrease toward 0 percent by 2014 (see Figure 4).

¹⁵ See International Monetary Fund (2012, 2013). The difference is due to the use of a different baseline over which the fiscal changes are calculated.

Figure 4. Primary Balance, Ireland (Percent of GDP)

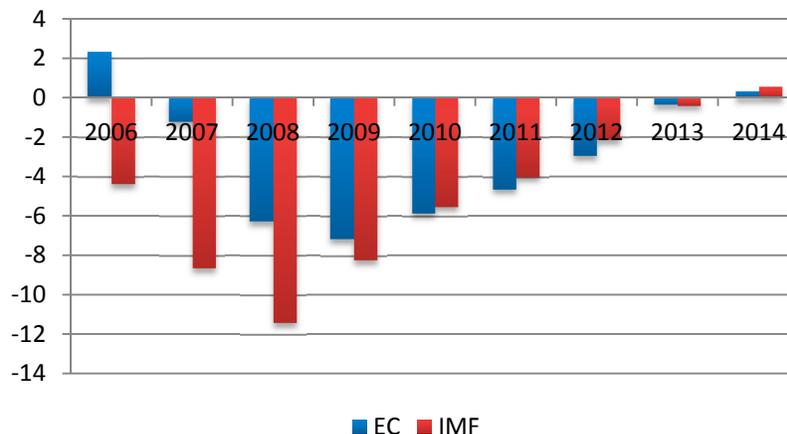


Source: IMF World Economic Outlook online database, October 2014.

But because the evolution of the primary balance is influenced by cyclical factors, in order to assess the true discretionary changes in fiscal policy—those unrelated to the business cycle—we want to look at a structural measure of the budget balance. In the case of Ireland, and because of the unusually high levels of taxes related to real estate transactions in the precrisis years, this is a difficult task.

Figure 5 shows the cyclically adjusted balance as produced by the IMF and the European Commission (EC). The IMF measure of the structural balance counts as cyclical most of the revenues associated with the 2007-08 real estate boom, estimating the structural deficit those years at a much higher level. As a result, consolidation from 2008 to 2014 is more than 10 percentage points of GDP using the IMF indicator but less than 7 points using the EC indicator.

Figure 5. Cyclically Adjusted Primary Balance (Percent of GDP)

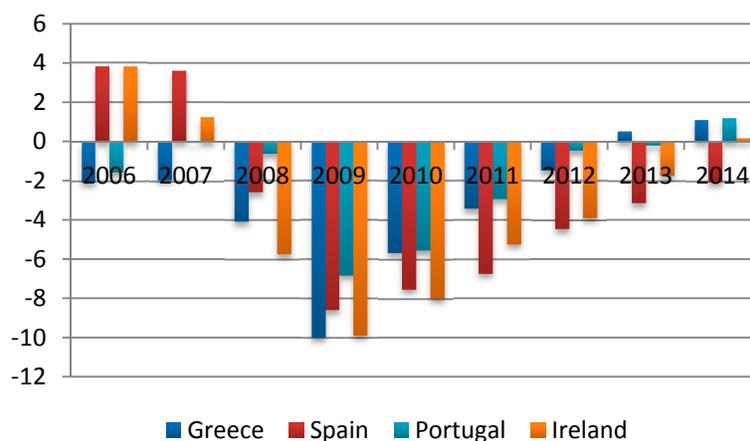


Sources: IMF World Economic Outlook online database, October 2014. AMECO database.

The Irish Adjustment Compared to the Euro Periphery

How does this fiscal adjustment compare with some of the other euro countries that were subject to a similar process of fiscal consolidation? We will compare the Irish experience with that of Portugal, Spain, and Greece.

Figure 6. Primary Balance (Percent of GDP)



Source: IMF World Economic Outlook online database, October 2014.

Figure 6 shows the evolution of the primary balance for the four countries. Spain is the country that is the closest to Ireland, starting with surpluses in 2006–07, followed by a jump to a deficit of about 10 percent by 2009, and then a reduction toward zero by 2014. In contrast, both Portugal and, even more so, Greece start with small deficits in 2006–07, later see their balance deteriorate to 7–10 percent, and then see a faster reduction in the early years.

How much of this increase is structural versus cyclical? Using both the measure of the European Commission (Figure 7) and the IMF (Figure 8), Ireland seems to be adjusting at a pace similar to or slower than that of the other countries. Once again, Spain is the country with the most similar profile and both Greece and Portugal display much larger adjustment during the crisis years. According to the calculations produced by the European Commission, by 2012 Portugal and Greece had managed to turn their structural primary deficits into surpluses. Once again, the adjustment in Greece is by far the largest, given that the initial deficit level back in 2009 was by far the worst.

Figure 7. Cyclically Adjusted Primary Balance (EC Estimates)

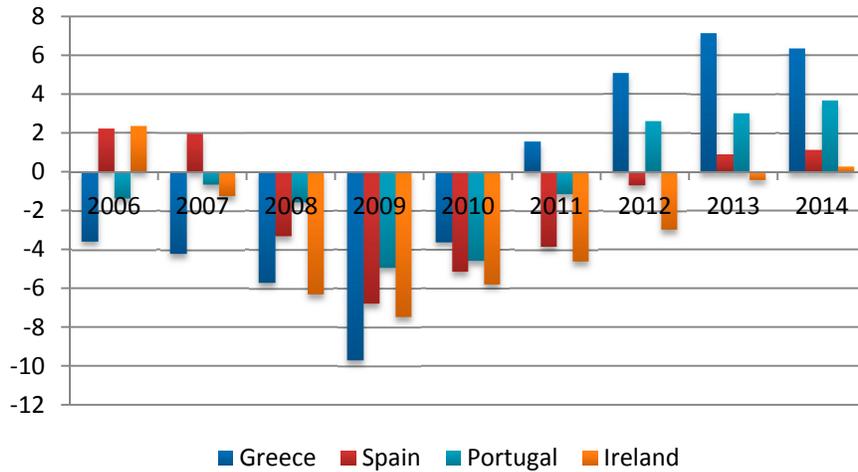
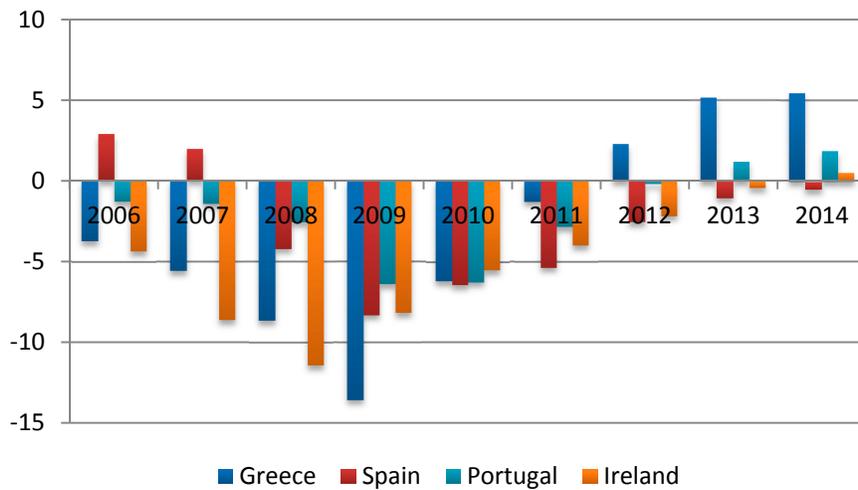
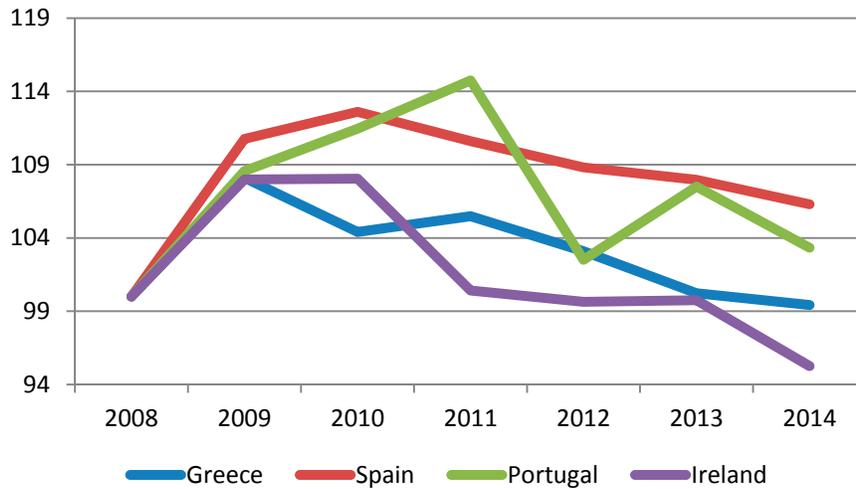


Figure 8. Cyclically Adjusted Primary Balance (IMF Estimates)



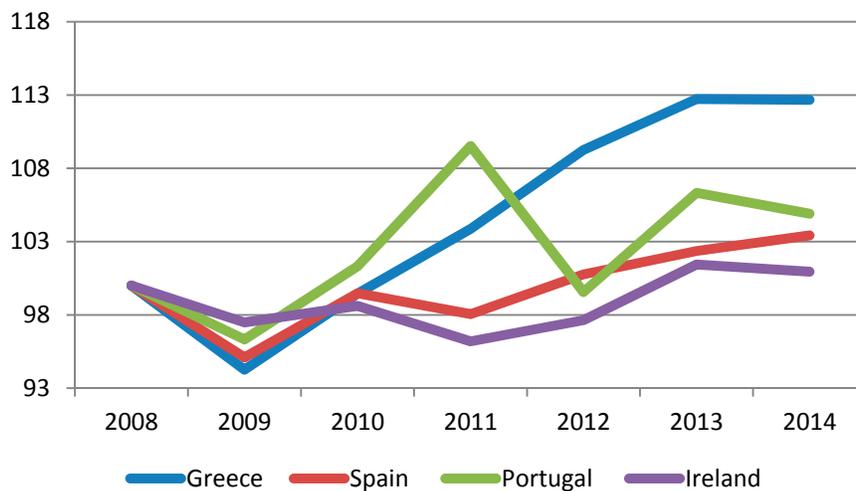
What about the composition of the adjustment? Did it take place via expenditures reduction or increases in taxes? We provide a quick analysis by simply plotting the ratios of expenditures (including interest payments) and taxes to GDP.

Figure 9. Government Expenditures (Percent of GDP; index 2009=100)



While this analysis is partial and does not take into account the different evolution of GDP growth in each country, by comparing the relative change in taxes and spending across the two figures we can see that Ireland was the country that most relied on spending reductions versus tax increases. In comparison with the other countries in the periphery, Ireland is the one where the ratio of government spending to GDP fell the most, as Figure shows. And it is the country that has least relied on increases on taxes, measured as a ratio to GDP (see Figure 10).

Figure 10. Government Revenues (Percent of GDP; index 2009=100)



The Divergence between the Narrative of Fiscal Adjustment and the Outcome

After the crisis, we have seen consolidation efforts via a large reduction in both the primary and structural deficits in all these countries. While automatic stabilizers were working during those years, there was an adjustment to structural balances in a magnitude that is around 10 percentage points of potential GDP for Ireland, Spain, or Portugal and substantially higher (between 15 and 20 percentage points) in the case of Greece.

But while these numbers might look large, when compared with the narrative of the discretionary measures undertaken during these years, they are small. The apparent effort to reduce the budget deficit seems much larger than the resulting change in the structural balance.

According to the Irish government, the efforts to reduce the deficit were in the order of €12–15 billion (about 10 percent of GDP) during the first two years and a similar magnitude under the EU-IMF program that extended over the period 2011–14.¹⁶ Other sources, such as the IMF, estimate the fiscal measures to be smaller, about 14–15 percent of GDP across the two consolidation plans.¹⁷ Both figures are significantly larger than the documented change in the structural balance (between 7 and 12 percent, depending on the adjustment used to adjust the budget balance for the cycle). Where is the gap coming from?

The first reason why consolidation plans might not lead to a reduction in the deficit of the magnitude expected is that fiscal consolidations are likely to have an impact on GDP itself. While some of this effect could be taken care by the use of cyclically adjusted measures of the balance, under certain circumstances this will not be the case. To understand when cyclical adjustment might fail to capture this change in GDP, we go back to the equations that represent the dynamics of deficits.

Some notation, which follows closely the analysis of DeLong and Summers (2012): Let B_t be the balance of the government budget, G_t spending, T_t taxes, and Y_t the level of GDP in year t . Imagine a government that introduces a fiscal consolidation plan that involves a decrease in spending.

¹⁶ Irish Fiscal Advisory Council (2014) also estimates the adjustment to be about 20 percent of GDP. See also Lane (2011), International Monetary Fund (2013), or Weymes (2012).

¹⁷ The main reason is the use of different baseline budgets for the year when the adjustment is started.

$$\Delta G_t = G_{t+1} - G_t$$

where G_{t+1} refers to the level of government spending planned for next year, which we will assume matches its execution. Typically, this is expressed as a ratio to GDP or potential output. To avoid mechanical effects coming from GDP (this year's level or future's level), we will express it as a ratio to potential GDP (Y^p):

$$\frac{\Delta G_t}{Y^p} = \frac{G_{t+1} - G_t}{Y^p}$$

But the change in spending is likely to affect negatively GDP next year. The change in GDP will depend on the fiscal policy multiplier (μ):

$$\Delta Y_t = \mu \Delta G_t$$

Because of this change in output, the budget balance next year will be affected. For simplicity, assume that taxes are the only component of the budget that is affected by the cycle and let τ be the (marginal) tax rate. If we now calculate the change in the budget balance, we get

$$\Delta B_t = \Delta G_t - \Delta T_t = \Delta G_t - \mu\tau\Delta G_t = (1 - \mu\tau) \Delta G_t$$

And we can always measure this change as a percent of potential output:

$$\frac{\Delta B_t}{Y^p} = (1 - \mu\tau) \frac{\Delta G_t}{Y^p}$$

So, the actual change in the budget balance will be reduced relative to the announced plan by a factor that relates to the fiscal multiplier as well as the cyclicity of taxes.

Two important things to notice in the expression above: First, we are including potential output in the denominator. If we were to include actual GDP, and measure the budget balance each year relative to the GDP of that year, there would be a change in the ratio because of the fall in GDP, but this magnitude is likely to be small in practice. Second, as long as the impact that fiscal consolidation has on GDP is cyclical in nature, the second term on our equation should be captured by the cyclical adjustment of structural measures of the budget balance. So if we were

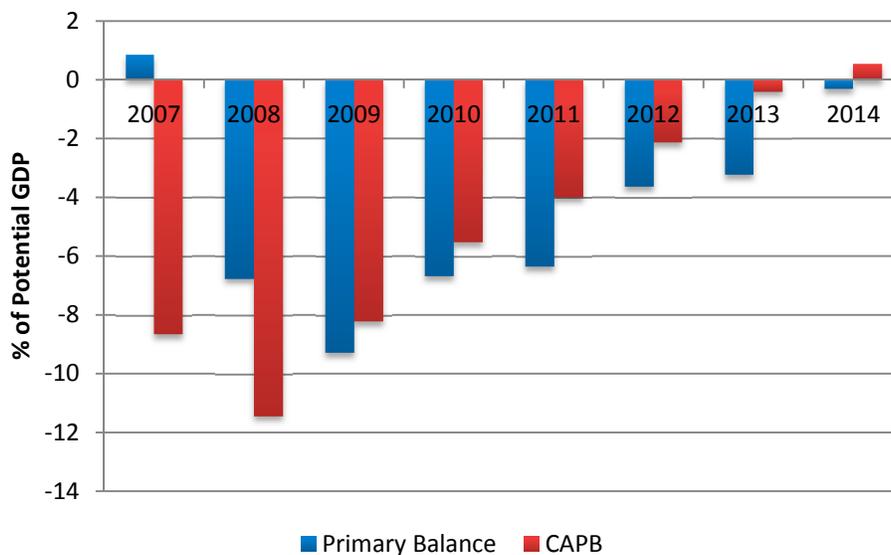
to look at the cyclically adjusted balance, we would fully see the consolidation plans as captured by ΔG_t :

$$\frac{\Delta CAB_t}{Y^p} = \frac{\Delta G_t}{Y^p}$$

But this is not happening in Ireland or the other euro periphery countries. We find the structural balance to change by an amount that is smaller than the announced plans.

To get an insight on how much the cyclical adjustment of the balance takes care of these effects, Figure 11 plots the evolution of both the primary balance as well as the cyclically adjusted primary balance in Ireland since 2007, measured as a percent of potential output (and excluding one-off measures, such as the support to the banking sector). If we focus on the post-2009 period, we start with a 10-percent primary unadjusted deficit. From 2009 to 2014 the deficit is being reduced almost to zero percent. When we look at the cyclically-adjusted primary balance (CAPB), we see that from 2009 until 2014, there has been a reduction of about 9 percentage points, a drop very similar in magnitude to the change in the primary balance.¹⁸

Figure 11. Primary Balance, Ireland (Percent of potential GDP)



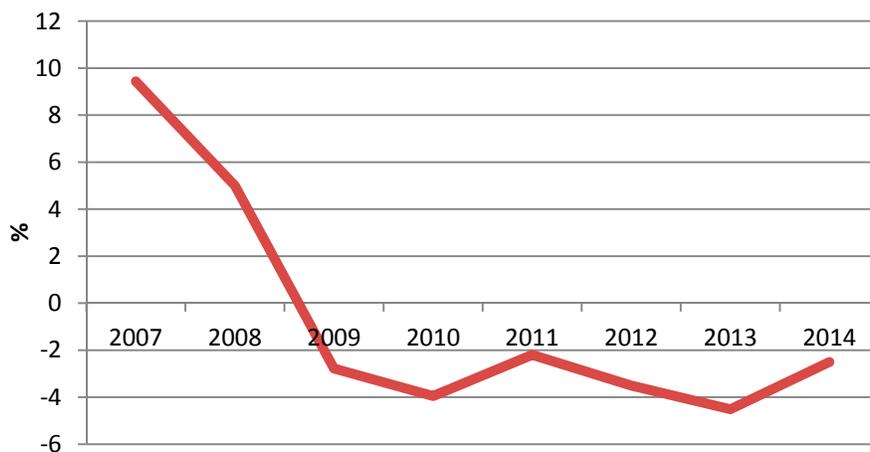
Source: IMF World Economic Outlook online database, October 2014.

¹⁸ The reason to start the comparison in 2009 and not 2008 is that the cyclically adjusted balance produced by the IMF for 2007 and 2008 is very dependent on certain assumptions about potential GDP and the output gap those years. As we have seen from the alternative measure produced by the EC, the change in the structural deficit between 2008 and 2009 is seen as increasing, as opposed to the large reduction observed using IMF data.

There are two potential puzzles in this chart. First, why is it that both measures show a similar change over these years? Second, why are the two measures much smaller than what the narrative of fiscal consolidation tells us?

The fact that the change in the structural deficit matches that of the unadjusted balance is a surprise, as we expected the fiscal consolidation to have negative effects on output and therefore an impact on the primary balance via automatic stabilizers. One way to reconcile these two statements is to argue that while there are negative effects of fiscal policy consolidation on GDP and the budget, these effects are being compensated by improvements in the cyclical position of the economy (independent of the fiscal policy consolidation). This seems to be the case, at least after 2009, if one looks at the evolution of the output gap as estimated by the IMF (Figure). While there is a clear deterioration of cyclical conditions from 2007 to 2009, in the years that follow we see a stable or even improving output gap that results in no additional cyclical adjustment to the budget balance.

Figure 12. Output Gap, Ireland (IMF Estimates)

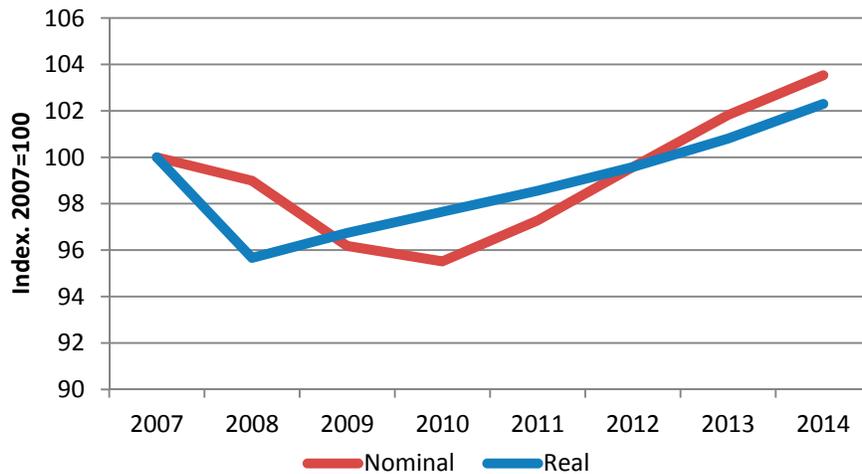


Source: IMF World Economic Outlook online database, October 2014.

But there is a second puzzle that is more interesting: Why is it that after correcting the budget balance for the cycle we still see a large divergence with the consolidation efforts? The answer has to be that either we are getting the cyclical adjustment wrong or potential GDP keeps changing over time. If potential GDP goes down, this means that the necessary adjustment keeps getting larger—the target keeps moving.

We know that potential output fell during the crisis. Some partial evidence in favor of this hypothesis is captured in Figure . Potential output in 2014 is just 2 percent higher than in 2007 in real terms and significantly lower than its pre-crisis trend. In addition, because of deflation, potential output grew at almost the same rate (3 percent) in nominal terms during these seven years. In terms of its shape, potential output was clearly falling during the first three years in nominal terms, and while it increased slowly in the years that followed, it is still growing at a very low rate.

Figure 13. Potential Output, Ireland



Source: IMF World Economic Outlook online database, October 2014.

But the fall of potential output as captured in Figure underestimates the true shock to potential output during the crisis. The figure is built using data from the latest IMF *World Economic Outlook* (WEO; October 2014). But the data on potential output for 2007 have been revised downward significantly ex post. This means that the fall in potential output in the figure is much smaller than what was witnessed with real-time data. If we were to make use of real-time data for potential output, potential output in 2014 would be lower than what we thought potential output was in 2007 (for that same year, 2007). And, of course, the 2014 level is a lot lower than any forecast made at that time for the year 2014. How much of the revision of potential output in 2007 reflects a better estimate of the supply side of the Irish economy, and how much is an ex post validation of the devastating effects of the crisis remains an open question.

The possibility that the structural balance does not properly capture the amount of fiscal effort has been acknowledged by the EC in its 2013 report on public finances in the euro area (European Commission 2013b). As a result, it proposes an alternative indicator (DFE, or

discretionary fiscal effort) that “combines the top-down and bottom-up approaches.” By those two approaches, the EC means the structural balance and the narrative one. This indicator is supposed to be useful in periods of uncertainty around cyclical adjustment and also when there are changes in potential output.

Uncertainty in changes in potential output and errors in cyclical adjustment are clearly related. If our estimates of potential output are too pessimistic, then the evolution of the output gap is overestimating the improvement in cyclical conditions. If we used the more optimistic numbers for potential output, we would be getting a much larger cyclical correction and the structural balance would be improving faster.

The discretionary fiscal effort indicator proposed by the EC combines a narrative approach for the treatment of taxes and unemployment benefits with a standard cyclical adjustment for other forms of spending. So the tax effort is measured using the bottom-up approach (all announced and implemented revenue measures), while expenditures are not changed relative to the standard cyclical adjustment. This new indicator gets closer to the narrative of the fiscal adjustment. For example, in the case of Ireland and for the year 2012, structural revenues declined by about -0.15 percent of GDP, signaling a fiscal expansion (not a consolidation). But the discretionary indicator suggests that taxes increased by about 1 percent, capturing the actual consolidation.

But the analysis of the DFE indicator is partial, as it leaves expenditures out. It also does not fully capture the effects that changes in potential output might have on measures of the fiscal policy stance. The fundamental question is how changes in potential output affect the budget balance. And we are not simply talking about the mechanical effect that happens when we measure the balance relative to the level of potential output, but about the responses of taxes and spending that are triggered by changes in potential.

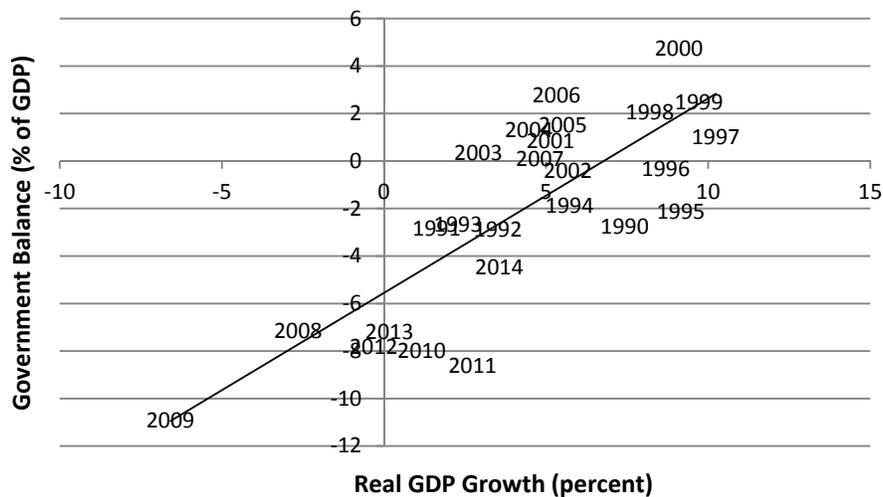
Cyclical Adjustment in the Presence of Permanent Shocks

The cyclical sensitivity of the budget to GDP is always calculated in terms of the output gap, so we do not adjust for changes in taxes and spending in the presence of permanent shocks. Imagine a change in GDP that is matched by a change in potential output: it should have no cyclical effect on the budget balance (output gap does not change). But in reality, taxes and to some extent spending depend on GDP (not on cyclical changes to GDP). A 1 percent fall in GDP

that is permanent in nature is likely to generate a similar change in the budget balance as does a change that is transitory (at least in the first years). This means that the change in fiscal balance in the presence of a permanent shock is entirely seen as a decrease in the structural balance (that is, expansionary policy). There is also the complication that potential output tends to trend upward, so this logic applies not only when potential output decreases but also when it increases at a rate lower than before. Is it the level that matters or the growth relative to trend?

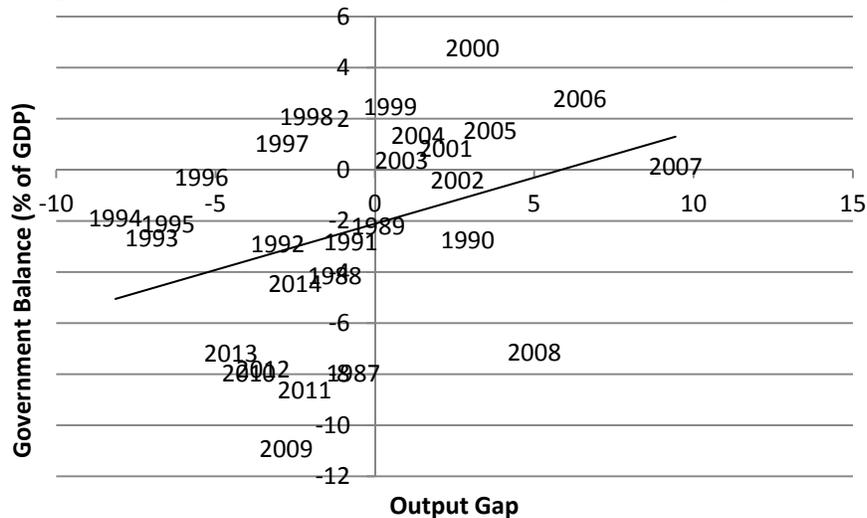
The data for Ireland validates our logic. We plot in Figure the relationship between real GDP growth and the overall budget balance (as a percentage of GDP). The relationship is, as expected, quite tight and what is interesting is that the years 2007–14 do not look too different from the other ones. In the figure, what is key is that changes in GDP have a large effect on the balance regardless of the cyclical nature of those changes.

Figure 14. Reaction of Budget Balance to GDP Growth



If instead of GDP growth we use the output gap, the relationship is still there but it is not as tight and linear. And the years from 2007 to 2014 are all clearly below the line. In other words, the deficit is “too large” in relationship to the output gap; it seems as if fiscal policy is expansionary in those years. And this is true despite the fact that fiscal consolidation has taken place (we expected these years to be above the line).

Figure 15. Reaction of Government Balance to Output Gap



It is interesting that if one runs a regression in Figure 15 for the years prior to 2007, the slope is 0.6, which is not far from what the literature has assumed as the cyclicity of the budget balance relative to the output gap (although typically for Ireland the estimates are lower than that). For the years after 2007, the slope is as high as one. So the measured cyclicity of the budget balance has increased dramatically after 2007.¹⁹

There are several ways to interpret the patterns of the previous two figures with respect to the 2008–14 years. One is that Ireland has indeed gone through a significant fall in potential output. As a result, while growth decreased dramatically, the output gap remained small. The budget balance reacted to growth, not the output gap, at least in the short run because revenues depend on actual output and because spending trends are likely to have some inertia. This means that to prevent the structural budget from deteriorating, the government needed to adjust revenues and spending by a significant amount. This justifies why actual consolidation measures are not reflected in changes in the structural balance; the fall in potential output is compensating for the consolidation efforts. From a policy point of view, there is nothing wrong with the policies adopted—it just happens to be the case that the environment is changing and it requires additional efforts to reach the same target.

¹⁹ The slope of Figures 14 and 15 can be seen as estimates of the cyclical elasticity of the budget balance to either growth or the output gap. Although a proper estimation of that elasticity would require controlling for other issues, such as the level of debt and the interest rate paid on that debt.

There are, however, two other interpretations that support a more critical view of policy. The first one is that we are underestimating the output gap by incorrectly interpreting changes in GDP as changes in potential. Under this scenario, the fiscal adjustment is too fast because we are shooting for a target that is too ambitious.

And there is a third interpretation that can be even more damaging: potential output is indeed falling but it is falling as the result of the policy actions. So the fiscal consolidation is not only changing GDP growth but it is also changing potential output. And if in addition we are underestimating potential, then we would be making an even bigger mistake. Pessimism regarding potential output requires a larger fiscal adjustment that further depresses GDP and potential, and reinforces our pessimism. Is there any evidence in favor of this hypothesis?

The Permanent Effects of Fiscal Consolidation

The fact that cyclical events can affect long-term outcomes is at odds with some of the traditional macroeconomic models where business cycles and growth are treated separately and assumed to depend on independent models. However, from an empirical point of view, there is strong evidence that large crises (especially those that involve the financial and banking sectors) tend to leave permanent scars on the level of output. The mechanisms for this persistence can be related to labor market outcomes, what Blanchard and Summers (1986) labeled hysteresis in the context of European labor markets. It can also be related to the process of capital accumulation and innovation (or technology adoption) as in Fatás (2000).

If this interpretation is correct, then our measures of fiscal consolidation can be distorted and the analysis of optimal speed of fiscal consolidation needs to take into account its effects on potential output. As DeLong and Summers (2012) argue, when this effect is large, we have the extreme possibility that a fiscal consolidation is self-defeating.

Knowing whether this interpretation is right is very difficult to establish empirically. The issues that have made the literature on fiscal policy multipliers very contentious are all relevant for this analysis. In addition, potential output is not observed and, as such, depends on the perceptions and interpretations that are taking place at the time the estimates are being produced. Fatás and Summers (2014) estimate the permanent effects of the fiscal consolidations of 2009–11

using the methodology of Blanchard and Leigh (2013), and provide evidence that those permanent effects are large for euro countries. We reproduce below some of their results. We take as a reference the years 2010-2011 to measure the amount of fiscal consolidation as in Blanchard and Leigh (2013). This is measured as the April 2010 forecast of the change in the structural balance as a percentage of potential GDP over those two years ($\Delta SB_{i,t:t+1:t}^f$). Using this variable, Blanchard and Leigh (2013) try to explain the forecast error in GDP over the same period ($Y_{i,t+1} - Y_{i,t+1:t}^f$) in order to assess the size of fiscal multipliers. They run the following regression:

$$Y_{i,t+1} - Y_{i,t+1:t}^f = \alpha + \beta \Delta SB_{i,t:t+1:t}^f + \varepsilon_{t:t+1}$$

Our interest is in how fiscal consolidation changed not output but potential output. Given that potential output is by nature a long-term measure of activity and likely to be noisy at high frequencies, it makes more sense to select a longer horizon for our analysis. Using the same data source as did Blanchard and Leigh (2013)—the IMF WEO of April 2010—we compare the estimate of potential for 2014 with the potential output that appears in the most recent WEO (October 2014). The difference is the four-year forecast error for potential output for 2014 ($PY_{i,t+4} - PY_{i,t+4:t}^f$). We then regress this variable on the fiscal consolidation of the years 2010 and 2011:

$$PY_{i,t+4} - PY_{i,t+4:t}^f = \alpha + \beta \Delta SB_{i,t:t+1:t}^f + \varepsilon_{t:t+1}$$

In the work of Blanchard and Leigh (2013) on the left-hand side we have the forecast error for GDP growth. Under the assumption that the forecast had been made using the right fiscal policy multipliers, the coefficient β should be equal to zero. In the work of Fatás and Summers (2014), we also expect the coefficient β to be zero. The difference is that this coefficient is an estimate of the total effect of the fiscal consolidation on potential output, given that the model assumes that potential output is not be affected by fiscal consolidation (the “long-term multiplier” is assumed to be zero).

The first column of Table 1 (from Fatás and Summers 2014) replicates the specification of Blanchard and Leigh (2013) for all euro countries for which data are available. They obtain a

coefficient of -1.17 , consistent with the results of Blanchard and Leigh (2013).²⁰ When they replace output with potential output, column 2, the coefficient becomes -1.365 .

Table 1. Effects of Fiscal Consolidations

	Dependent Variable: Forecast Error of	
	GDP Growth	Potential
Fiscal Consolidation	-1.170** (0.437)	-1.365** (0.524)
Constant	0.951** (0.439)	-2.343*** (0.688)
Observations	15	14
R-squared	0.550	0.422

Note: Robust standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

The interpretation of the coefficients is as follows: the IMF model has a fiscal policy multiplier of 0.5 built into it. So the fact that the coefficient of the first column is about -1.17 means that the actual multiplier is about 1.7 (and this is the interpretation of Blanchard and Leigh 2013).

For potential output, the large coefficient (-1.365) in this case should be interpreted as the long-term multiplier. In other words, the effect of a fiscal consolidation of 1 percent of GDP resulted in a decrease in potential output of 1.365 percent.

Using the logic of DeLong and Summers (2012), and given the size of these multipliers, we would conclude that the change in fiscal policy during these years was self-defeating. Despite the consolidation efforts, the policy actions led to an increase in the debt-to-GDP ratio rather than a decrease because of the negative effects on potential output.²¹

²⁰ Notice that the results should not be identical because we are using a more recent IMF WEO database to calculate the actual change in GDP.

²¹ It is not easy to map our coefficient into the hysteresis parameter η of DeLong and Summers (2012). The coefficient that we estimate is in some sense the product of the hysteresis parameter and the standard short-term fiscal multiplier. Given that the multiplier is estimated to be -1.7 , and our coefficient is -1.3 , this would imply a value for η

The result that a large cyclical shock changes potential output is validated by Ball (2014) in his analysis of the long-term effects of the Great Recession. Also, the International Monetary Fund (2009) finds that financial crises tend to have large and permanent effects on output, as GDP never returns to previous trends due to the permanent effects of the crisis on labor markets, capital accumulation, and productivity. In addition, the IMF finds that “economies that apply countercyclical fiscal and monetary stimulus in the short run to cushion the downturn after a crisis tend to have smaller output losses over the medium run.” This is entirely consistent with our analysis of the euro area data for the post-2009 sample.

A potential criticism of our results is that the IMF could be putting too much weight on actual output changes when estimating potential output, so the fall in potential output is exaggerated. There are two responses to this criticism. First, it is difficult to imagine that euro countries will fully regain their precrisis trend level, so some losses are permanent. Second, if we are confusing cyclical movements in output with permanent ones, we are still implementing the wrong fiscal policy. As we judge the appropriateness of structural balances relative to potential GDP, we are underestimating the true fiscal contraction and pushing for further consolidation when it is not needed.

Too Slow or Too Fast?

Our analysis of the recent fiscal consolidation experience in Ireland has presented a mixed view of the policy path that was followed. Given the unfavorable circumstances that the Irish government faced during the crisis, a succession of fiscal plans managed to stabilize the debt-to-GDP ratio and as of 2014 put it in a downward trajectory. It has done so by requiring large sacrifices in terms of budgetary adjustments, and the commitments of the government have all been fulfilled with minor delays. And this is remarkable, given the constant downward revisions to the euro and global macroeconomic outlook. The fact that the Irish government is now able to access international financial markets stands in stark contrast with what we witnessed a few years ago in the middle of the euro sovereign debt crisis.

Despite its success, the Irish experience, as well as that of other countries in the euro periphery, is marked by a deep crisis that was made worse by the fiscal contraction. While almost everyone

around 0.8. This is much larger than the value required for a self-defeating fiscal consolidation in DeLong and Summers (2012), typically below 0.2.

agrees that the fiscal contraction must have had an impact on growth, the estimates of this impact are still up for debate. Our analysis of the data suggests that the impact was significant—more so if one is willing to concede that potential output was indeed affected by consolidation. Our estimates for euro countries estimate that the size of these effects possibly put some of these countries into a self-defeating path of reductions in spending that caused potential GDP to fall and the debt-to-GDP ratio to increase. And the response to this was an even larger need for an adjustment in the following years. In that sense, the speed of adjustment measured by the actions taken (not the outcome) was clearly too fast.

Our analysis is limited by the fact that it is impossible to produce a counterfactual of what would have happened if consolidation had followed a slower pace, although our econometric analysis offers a hint that this could have led to a faster reduction in debt. Also, we are assuming that there was indeed a choice when it came to the speed of adjustment. For countries that had no access to credit markets, this might just be an illusion. But even if this is the case, we can argue that for the euro area as a whole, there was a choice to allow for a different type of adjustment as long as there was a consensus among EU members (and the IMF), and that the policies implemented were credible enough in front of capital markets.

5. The Road Ahead

Despite all the success, the road ahead is not an easy one. The high levels of government debt will require a sustained fiscal effort over the years and decades ahead. While growth in 2014 has surpassed expectations, the medium-term outlook for public finances remains challenging, given the demographic pressures on government budgets. Ireland is not alone on this path; most euro countries face the same or even bigger challenges, and they will have to navigate this together using the EU and well as the national fiscal frameworks.

We have seen a similar situation before in the run-up to the euro. In that case, Ireland and several other euro countries managed to reduce their debt at a very fast pace. But the countries that were successful did so in an environment of fast growth that is unlikely to be repeated. And Ireland was the best example, with growth rates that were substantially faster than those of any other country; as a result, Ireland witnessed a more dramatic reduction in debt. It is unlikely that we will see such large positive growth surprises in the coming decades. If anything, demographic trends will reduce growth and at the same time increase pressure for additional spending.

What will then be the path of debt reduction? If we look at the previous experience of euro members, the answer is that it will heavily depend on both economic and political developments within those countries. As an example, Italy never managed to reduce its debt despite being part of the same EU fiscal framework with a debt ceiling of 60 percent. It is true that, going forward, the new EU rules are designed to avoid these high-debt-level situations by imposing a path of adjustment toward 60 percent. But it is very unclear how situations such as Italy in the past 15 years (with very limited GDP growth) will be addressed in the future. The history of enforcement of rules under the EU framework shows that there is room for renegotiation and creative interpretation.

In the case of Ireland, although the government is committed to a reduction in debt, there is no explicit target on a particular debt level. EU-based fiscal rules (such as the MTO or the adjustment path condition, or the expenditure benchmark) provide a framework for a fiscal adjustment to be followed over the coming years that should lead to a reduction in debt. This framework is respected by the current medium-term government plans, although there are some areas where the margin is very small (or could even lead to noncompliance, depending on the actual numbers, as highlighted in Irish Fiscal Advisory Council 2014a).

Is it possible to imagine a path of adjustment that is faster than that implied by EU framework? Yes, but only if growth is strong and there is enough domestic consensus. The discussions around the 2015 budget are a good example of the difficulties in going faster. While the 2015 budget is consistent with the previous plans of the Irish government and EU rules, there is a concern that the government is not taking enough advantage of the improvement in growth. The Irish fiscal policy council refers to the 2015 budget as a “missed opportunity to move the public finances more decisively into a zone of safety.”²² The IMF argues that the 2015 budget plan “shows fiscal restraint but makes less progress than desirable.”²³ And the European Commission also expresses its concerns when arguing that “in turn, the tax cuts and expenditure increases included in the 2015 budget conflict with the part of the EDP recommendation that asks Ireland to seize opportunities, including from better economic conditions, to accelerate the reduction of the gross debt ratio back towards 60 percent of

²² See Irish Fiscal Advisory Council (2014b).

²³ See International Monetary Fund (2014b).

GDP.”²⁴ Given the sense of fatigue after six years of fiscal adjustment, it is not a surprise to see some relaxation of the pace of fiscal adjustment in the 2015 budget.

Is it possible to imagine a situation where the adjustment toward lower debt stops or slows down? Yes, if another large economic crisis happens in the short to medium term. The debt surprise in 2008 was directly linked to a single event: the global financial crisis. Can more be done to plan and manage risks associated with such large events? There are always ways to improve the budgetary process with stronger commitment and enforcement on multiyear plans that include targets for spending. But the reality is that planning for a very large crisis might not be technically possible or politically feasible because of the difficulty in estimating the probability of such an event and raising its visibility and attention in the political debate. And this is indeed one of the important lessons from our empirical analysis: fiscal sustainability depends heavily on our assumptions about potential growth. Excessive optimism leads to unsustainable behavior, and excessive pessimism can lead to lower growth, especially during a crisis. And after looking at the evidence, it seems that we are, at best, guessing potential GDP growth rates, revising its history as new developments happen, and relying too much on short-term forecasts of GDP growth. This makes for a very difficult environment for sensible long-term budgetary planning.

²⁴ See European Commission (2014).

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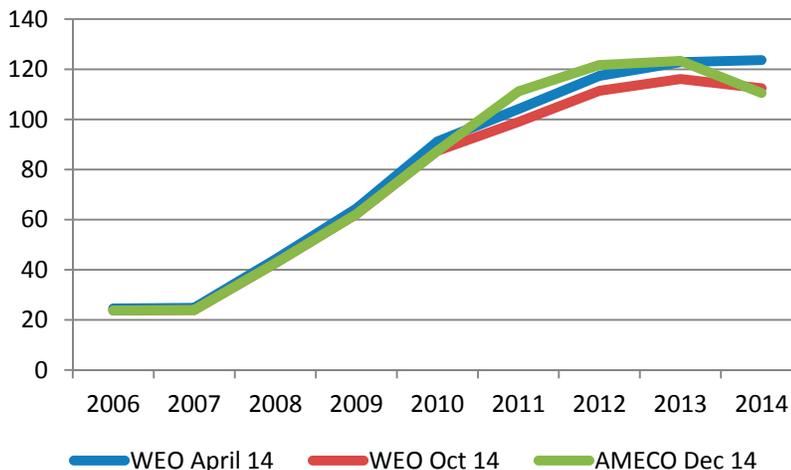
Appendix: Government Debt in Ireland

For consistency purposes all data used in the paper is coming from the October 2014 online database of the IMF World Economic Outlook (WEO). Because of several accounting changes over the latest years, the figures for the Irish government debt have been significantly revised. The chart below provides a comparison of three sources:

1. WEO database from April 2014. These data do not include the shift to ESA 2010 national accounts.
2. WEO database from April 2014. These data include the shift to ESA 2010 accounts for GDP, so the ratio of debt to GDP is lower than in the earlier estimates.
3. AMECO database from the European Commission (December 2014). This data includes both the ESA 2010 changes to GDP as well as some related changes in the fiscal policy accounts. The most significant change is the inclusion of the Irish Bank Resolution Company in 2011 and its removal in 2013.

While there are differences between the three series, they are small and do not much change the analysis and prognosis of the fiscal situation. The upward revision of GDP figures has reduced the debt-to-GDP ratio by about 6 percentage points. The treatment of the Irish Bank Resolution Company in the government accounts modifies the data for the years 2011–13, but it leaves the final number around 110 percent of GDP, consistent with the IMF *WEO* October 2014 data used in the paper.

**Figure 16. Ireland Gross Government Debt (Percent of GDP)
Comparison of Sources**



The second issue with measurement of government debt is the potential difference between gross and net debt as a result of the sales of assets, such as the use of the National Pension Reserve Fund.

Figure 17. Gross versus Net Government Debt (Percent of GDP)

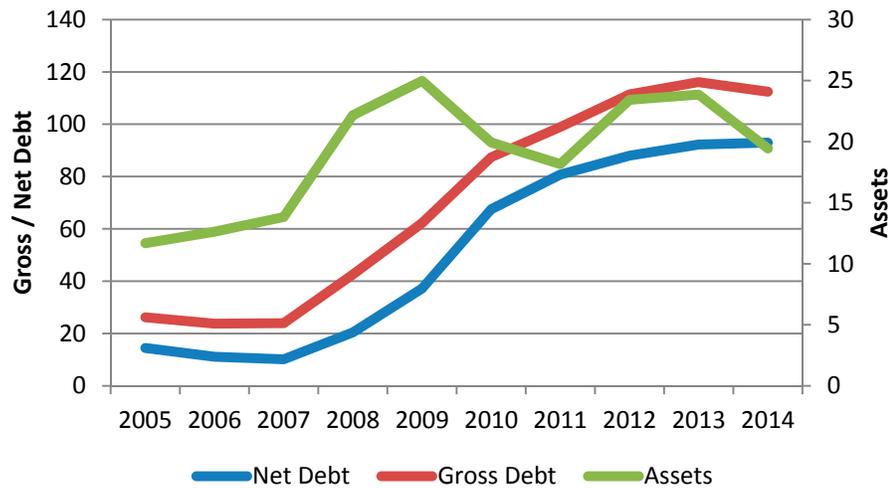


Figure shows the evolution of gross and net debt as well as the difference between the two (labeled as “assets” in the figure). While the evolution of gross and net debt is similar during the period 2008–14, the difference between gross debt and net debt has increased by about 5 percentage points of GDP. The level of assets remains, however, higher than that of the precrisis years (such as 2005–06), although the recent fall represents a clear break from the previous trend toward fast accumulation of financial assets.

3

The Irish Crisis and the EU from a Distance

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History is littered with banking crises—a fact that renders Ireland's 2008 crisis less than unique. What is special about the Irish case is that it was the first banking crisis in a country that is a member of the euro area. As such, Ireland, its government, and central bank faced distinctive constraints when the crisis struck. The central bank could not expand its balance sheet at will—it could not print money to bail out the banks. It could provide Emergency Liquidity Assistance (ELA) but subject to assent of the European Central Bank (ECB), a body on whose governing council it had just one vote. As a member of an economic and monetary union characterized by a single financial market, Ireland came under pressure to minimize destabilizing spillovers to its European partners.

Conversely, the Irish economy and financial system were strongly affected—unusually strongly affected by events, policies, and decisions elsewhere in Europe. Here one might cite the onset of recession in other euro area countries, the policies of the ECB, and the rescue package provided by the EU and the International Monetary Fund (IMF). Those strong effects then continued to be felt in the restructuring of the obligations to the European System of Central Banks that the country incurred in the course of resolving its crisis and in the implications for the country of the EU's efforts to construct a banking union, an initiative in which Ireland's own experience had no little influence.

¹ I thank Craig Beaumont, Stefan Gerlach, Philip Lane, Ashoka Mody and Karl Whelan for comments. The usual disclaimer obviously applies.

This paper reviews the role of the EU and its institutions in the Irish crisis. The author is conscious that he likely to be seen as carrying coals to Newcastle or, in this case, Dublin. Others in the room will be closer to the Irish case and better informed about its details. Still others will be better informed about the inner workings of the European Union. The goal of this paper therefore is not to provide a detailed account of the crisis and EU response, but rather to offer some reflections on how Ireland's status as a member of the EU and the euro area shaped its crisis in distinctive ways. Another caveat: it is not possible to discuss the role played by the European Commission and the ECB without considering also the third member of the troika: the IMF. Happily, the organization of this conference, of which the IMF is co-sponsor, signifies recognition of this fact.

1. Before the Crisis

It is tempting to argue that the structure and, indeed, the very existence of the European Union and the euro area helped set the stage for the crisis—that conditions in Ireland could not have developed as they did in the absence of these entities.

The situation in 2007–08, when claims on the Irish banking system peaked at some 400 percent of GDP, was largely, though not entirely, unprecedented. This was an exceptionally large, highly leveraged banking system atop a small island. It grew out of the high mobility of financial capital within the single market. It reflected the freedom with which Irish banks were permitted to establish and acquire subsidiaries in other EU countries. It reflected the ease of accessing wholesale funding given the perception that the exchange risk that would have otherwise been associated with making local currency loans to Irish banks was absent in a monetary union. It reflected the perception (more accurately, the misperception) that bank failures, like sovereign defaults, had been rendered a thing of the past.² This misapprehension was evident in the compression of credit default swap spreads on private nonfinancial sector debtors that accompanied the decline in sovereign bond spreads following the transition to monetary union. The crisis was further shaped by the absence of a banking union to accompany the monetary union. It reflected the absence of a single supervisor, allowing national supervision and regulation to proceed without due attention to their impact on neighboring banks and countries.

² The basis for this conclusion was unclear at the time, and it remains unclear even now. Some argued that lower interest rates were justified because adopting the euro eliminated the possibility of money finance of budget deficits which ruled out national bailouts of insolvent financial intermediaries. This last argument is especially ironic, of course, in the Irish case.

This said, other cases, like that of Iceland, point to the fact that it was possible to replicate these achievements, such as they were, outside the euro area. Iceland surpassed even Ireland in building a very large banking system atop a small island economy, allowing that banking system to grow dependent on flighty wholesale finance and permitting the banks to become overcommitted to risky investments. Developments in Iceland were not entirely independent of the EU, of course. It was Iceland's membership in the European Economic Area that allowed it to set up subsidiaries in EU countries so readily, attract Internet deposits so freely, and offer foreign retail investors deposit insurance so credibly. But Iceland is also a reminder that it is possible to have a banking crisis with Irish characteristics without being a member of the EU and its monetary union. It is a reminder that the connections between Ireland's crisis and its membership in the EU and the euro area are complex.³

The same caveat applies to the real estate boom and the importance of risky exposures to the property market in the subsequent problems of the banks. While borrowing by property developers and aspiring homeowners was fueled by the decline in interest rate spreads that flowed from the advent of the euro, the experience of other countries, like the United Kingdom, reminds us that property booms and the associated financial weaknesses could arise equally without help from the euro. In Ireland, the availability of financing at floating rates meant that interest-rate convergence reduced the cost of financing for new and old borrowers alike, which fueled the bubble. Public policy encouraged the view that everyone, including those most at risk of unemployment in the event of a recession, should become owner-occupiers. A poorly regulated rental market with a limited supply of well-maintained properties, dearth of professional investors, and no security of tenure beyond 12 months gave potential renters ample incentive to seek mortgage finance for home purchases instead.

In hindsight, the weaknesses of the Irish banking system are blindingly clear. Loan-to-deposit ratios were high. Loan books were allowed to expand rapidly, which would not have been possible without declining lending standards. Large portfolio concentrations heightened the sensitivity of bank balance sheets to the changing fortunes of the property market and, indeed, to those of individual property developers. Banks were led by a new generation of officers possessing little practical experience with risk management. Internal controls and accountability were lax. Loans were sometimes backed not by cash flow or collateral but by simple personal

³ Other channels through which membership in the EU and its monetary union might have influenced the course of events in Ireland include growing international competition, which put pressure on bank margins and encouraged additional risk-taking, and the introduction of new products (100 percent mortgages, tracker mortgages, etc.) by new entrants into the market.

guarantees, and even where collateral was provided, valuation could be an issue. Bank managers were allowed, even encouraged, to borrow from their own banks. In banks like Anglo-Irish, the credit committee provided little in the way of checks and balances. Not until the late stages of the boom were the minutes of Anglo's credit committee even taken.

While the Central Bank and Financial Regulator pointed to some of these problems, they took little in the way of corrective action.⁴ Ireland is not the first case where the relevant authority was tasked with promoting the national financial system as much as with regulating it. Capture is a classic problem for regulation. Moreover, there is a good reason to worry that regulatory capture is a particular problem in a small economy, where the same individuals interact (play golf) repeatedly.

In such a setting, independent assessments of the conduct of regulation and its consequences are especially important. Here, Ireland was blessed by external surveillance of its financial regulation, and of its economic and financial policies generally, by the European Union and the IMF. Between 2004 and 2011 the Irish banking system was subject to the oversight of the Committee of European Banking Supervisors (CEBS; what subsequently became the European Banking Authority). The responsibilities of the CEBS included monitoring the adherence of member states to EU standards for financial supervision and fostering supervisory cooperation so as to encourage national supervisors to internalize the cross-border spillovers of their policies. However, CEBS reports display a preoccupation with defining standards and best practices rather than with examining the conformance of individual member states with those standards and practices.⁵ The excesses of banking practice in Ireland seem to have received little scrutiny.

Surveillance by the European Commission, for its part, focused on fiscal policy under the provisions of the Stability and Growth Pact. Ireland's budget surpluses thus freed it of serious criticism, although there was some mild chiding of the country for running declining surpluses in the late stages of the boom, which lent a modestly procyclical stance to policy.

Similarly, the record of IMF surveillance is at best mixed. The 2007 Article IV Consultation with Ireland, concluded in September, pointed to rapid loan growth as a source of potential

⁴ Details may be found in Nyberg (2011), formally the Commission of Investigation into the Banking Sector in Ireland.

⁵ Thus, its annual report for 2007 makes no mention of Ireland other than to identify the Central Bank of Ireland as lead regulator.

vulnerabilities. It flagged the high share of bank lending to construction and real estate firms, and highlighted the banks' dependence on wholesale funding. These observations did nothing, however, to challenge the impression that the banking system was fundamentally sound. As the executive directors' conclusion put it, "Directors welcomed the indicators confirming the soundness of the Irish banking system, including the stress tests suggesting that cushions are adequate to cover a range of shocks even in the face of large exposures to the property market."⁶

This assessment echoed the Financial Sector Stability Assessment undertaken in early 2006. Here the IMF was buying into—when it could have been challenging—the stress tests undertaken by the Central Bank of Ireland using its in-house macroeconomic model, and by the financial institutions themselves.⁷ In particular, the cumulative two-year 22 percent decline in house prices posited in the adverse scenario does not strike one, in hindsight, as especially stressful.⁸

The problems of connected lending and lax internal controls brought to light subsequently escaped the IMF's scrutiny. The staff report for the 2007 Article IV Consultation praised the banks for their "relatively high degree of arm's length transactions...[and] high standards in areas such as bank competition, investor protection, and corporate transparency" (IMF 2007b, 14). Staff praised the country for taking the recommendations of the earlier Financial Sector Assessment Program to heart. These are not the sort of statements that would call Irish regulators to task or have them alert the fire brigade.

2. The Crisis and the Guarantee

The banking crisis in late 2008 focused on two institutions, Anglo-Irish Bank and the Irish Nationwide Building Society, an ostensibly unrelated institution with which Anglo's CEO did personal business. From the start, there was uncertainty and lack of agreement about whether the problems of other Irish banks were remotely as severe. Anglo's high profile and earlier success had made it a business model for its competitors. Even if there were an absence of

⁶ Language taken directly from the staff report, International Monetary Fund (2007b).

⁷ Similar conclusions were then repeated in the Financial Stability Report issued by the Central Bank and Financial Regulator using data through September 2007 (Central Bank and Financial Services Authority of Ireland 2007). Writing a year later, the government's consultants, Price Waterhouse Coopers, did no better.

⁸ Hindsight is always 20/20, of course, but recall that home prices rose by roughly 70 percent in the five years through the end of 2006.

overt problems at other banks, there were still grounds for worrying that these might be lurking in their balance sheets. Under the circumstances, the prudent response for creditors—retail depositors and wholesale funders alike—was to limit their exposure.

This, then, was a classic case of contagion growing out of asymmetric information. The response of the authorities was to render that asymmetry irrelevant by issuing their blanket guarantee of the banks' liabilities. The circumstances surrounding their decision remain sketchy to outsiders like the present author, as transcripts and recordings of the deliberations are incomplete. But from the perspective of the present paper, a few observations are in order.

First, it is important to recall that the guarantee, however ill devised and regrettable, came two weeks after the failure of Lehman Brothers. Financial markets and confidence were in an extremely fragile state. This context is important for understanding why the Irish authorities felt compelled to resort to drastic measures.

Second, it does not appear that the EU officials, whether at the Commission or the ECB, were implicated in the decision. Indeed, it does not appear that they were consulted.⁹ There are indications that, if anything, they were less than pleased, given that a generous guarantee might draw divert deposits from other troubled EU countries. The Honohan Report makes the point that the absence of a European-wide effort to help distressed financial institutions was regrettable. This allowed each national authority, in its wisdom, "to take whatever measures might prove necessary to deal with its own situation" (Honohan 2010, 121). The EU can absolve itself of guilt for the guarantee but not of responsibility for failing to anticipate the problem or to offer a coherent response.

Related is the fact that the ECB did not offer a clear alternative. To be sure, it was possible for the banks to apply for Emergency Lending Assistance (ELA) from the Central Bank of Ireland. This could have been obtained, in principle, even in the absence of ECB-eligible collateral, subject to the agreement (lack of objection) of the ECB governing council.

However, whether that agreement would have been forthcoming was uncertain. Although ELA was a bank obligation to the Irish central bank, not the ECB, the government was obliged to guarantee the Irish central bank's claim. And whether the Irish sovereign had the capacity to stand behind it might become a question, not least in the minds of the ECB's governing council.

⁹ The ECB and the Commission were informed of the government's decision early in the morning of September 30th, prior to public announcement (Honohan, 2010, 126).

Resorting to ELA could thus activate the sovereign-bank doom loop and elicit a negative market reaction. Evidently, there were fears on the part of Irish policymakers that large-scale resort to ELA could dent confidence in the Irish banking system and in the sovereign's finances, both, and that this might be just like being denied ELA. Thus, the absence of a liquidity facility free of stigma—and the absence of a mechanism for directly recapitalizing troubled banks like that eventually discussed in the context of banking union—was one factor that pushed Irish officials toward their guarantee.¹⁰

This is not to deny that more selective alternatives were available. Irish officials could have guaranteed deposits and new wholesale funding while applying haircuts to existing bank bondholders. They could have exempted other bondholders—beyond only holders of undated subordinated debt—from their guarantee. They could have guaranteed the liabilities of banks other than Anglo-Irish and Irish Nationwide while seizing, resolving, and recapitalizing the two troubled institutions.¹¹

But this would have required a judgment that Anglo and Irish Nationwide were insolvent whereas other banks were only illiquid. It seems clear that Irish policymakers themselves were operating under a severe asymmetry of information. Around 2008 they took at face value the assurances of Anglo's management that the problem was simply one of liquidity. And not having devised a resolution strategy *ex ante*, their lack of information extended to how best to respond to market pressures.

In throwing a blanket over the banking system rather than intervening more selectively, the Irish authorities were disregarding a large literature on the resolution of banking crises.¹² This emphasized the importance of having a clear crisis resolution strategy in place before the fact. It emphasized the importance of marshaling the information needed to distinguish insolvency from illiquidity. It emphasized the importance of quickly resolving insolvent financial institutions rather than keeping them on life support. It emphasized the importance of bailing in uninsured creditors. And it emphasized the importance of transparency. Problems of asymmetric

¹⁰ See also footnote 15 below.

¹¹ This refers to how they might have responded in September 2008. Anglo-Irish Bank was of course nationalized later, on January 21, 2009. Prior to that it would have been possible to split Anglo into a good bank, deposits in which were secure, and a bad bank that would be put through liquidation, with losses for unguaranteed creditors. Note also that the 2008 guarantee did have certain exclusions, such as undated subordinated debt.

¹² Many examples could be cited, but an exceptionally clear distillation of the conventional wisdom on these matters is Hoggarth, Reidhill, and Sinclair (2003).

information in this case evidently extended to information regarding best practice in responding to crises. That asymmetry may have reflected hubris. But it also resulted from the misguided belief that old-fashioned banking crises were no longer possible in Europe's newfangled monetary union. And it reflected the absence of strong guidance from the EU and IMF both before and at this critical juncture.

The initial guarantee, offered unilaterally by Irish authorities, extended for two years. Over its life, the banks came to rely on ECB credit (both standard credit and ELA), as wholesale funders worried about the impending expiry of the guarantee and, even if it was extended, about the ability of the Irish sovereign to make good on it.¹³ ELA borrowing effectively worked to bail out the bondholders, as maturing bonds were repaid. In this way the Irish sovereign paid off its maturing debt (more precisely, the maturing debt it guaranteed) and funded itself through the summer of 2011.

It is not surprising that the ECB was uncomfortable with this situation. ELA was designed to provide temporary liquidity assistance to individual banks, not to meet the funding needs of an entire national banking system and not to substitute for the capital shortfall of insolvent financial institutions. It is understandable, given this, that ECB officials were disquieted by Ireland's growing dependence on the facility.¹⁴

But signs of their discomfort helped to fuel the wholesale funding runs on Irish financial institutions. Then there was ECB pressure for Ireland to negotiate a troika program. Letters released by the ECB last November confirm that President Trichet threatened Ireland with the termination of ELA, forcing it to apply for aid.¹⁵

¹³ Many of the bonds issued in extremis, in 2008, matured in September 2010, coincident with the expiry of the guarantee, something that only heightened the urgency of funding problems. The increase in borrowing from the Euro system was mainly through standard, collateral-eligible facilities before 2009 and through ELA starting in February of that year. ELA was initially extended only to Anglo Irish; eventually it was offered to all guaranteed banks. Borrowing through standard facilities, which remained the largest share of the total even in 2010, was a liability of the European System of Central Banks as a whole.

¹⁴ In the retrospective assessment of Draghi (2015, 3), "the level of liquidity provided by the Eurosystem in support of the Irish banking system had reached about €140 billion (including ELA), or about 85% of Irish GDP, by November 2010. This represented about one-quarter of the ECB's total lending at the time—an unprecedented level of exposure to any country, not least in light of the fact that Ireland's share in the capital of the ECB was [only] about 1 percent."

¹⁵ The relevant ECB webpage is <http://www.ecb.europa.eu/press/html/irish-letters.en.html>. Draghi (2015, p. 4) notes that the decision to request a program was made by the Irish authorities only, but it was made under duress.

Some commentators go further and suggest that Trichet insisted (telephonically) that the Irish authorities not bail in bank bondholders on the grounds that doing so would damage the big French and German banks holding Irish bank paper.¹⁶ Others, such as Draghi (2015), appear to dispute the claim. They point to the Irish authorities themselves, or at least some of them, as underestimating bank losses and resisting calls to haircut the bondholders. They point to the fact that there was, in fact, substantial burden-sharing with holders of subordinated debt of Irish credit institutions. But they also allude to the possibility that bailing in senior bank bondholders might have been considered a default event, leading the ECB to withdraw funding for the Irish banking system. Whether the ECB had a choice under these circumstances will continue to be re-litigated by legal scholars, without question. But there is no doubt that the threat, even the uncertainty, caused Irish authorities contemplating further haircuts to hesitate.

A key point is that the monetary union did not possess a mechanism for directly recapitalizing the insolvent banks of euro area members. This would come with the move to establish a banking union, complete with resolution fund and with the capacity of the European Stability Mechanism to directly recapitalize banks—but not in 2010.¹⁷ Its absence in 2010 reflects more general neglect, at that time pervasive, of the need for banking union to accompany monetary union.

Controversy then turns to the treatment of the banks' creditors in the troika program. At the time, controversy centered on whether to impose losses on the holders of €19 billion of senior unsecured and unguaranteed debt. The IMF initially favored a haircut of roughly 50 percent, a proposal that gained the Irish government's full support. But the ECB opposed this approach on the grounds that it might disrupt the flow of wholesale funding to other euro area banks. Again the ECB's position prevailed.¹⁸ That the ECB was involved in program design and monitoring, exceptionally and controversially, suggests that its opinions carried weight. That the IMF was outmaneuvered, or felt obliged to give way, raises questions about whether it should allow itself to participate in such programs as a "junior partner" (contributing only a minority of the finance) along with regional entities.

¹⁶ McSharry (2014) recounts conversations with Brian Lenihan, who characterized the situation this way.

¹⁷ Whether direct recapitalization using ESM resources backed jointly and severally by the members is now agreed to continues to be disputed; see below. In contrast, the ECB did move quickly, starting in 2008, to create other channels for meeting the liquidity needs of national banking systems, notably through the fixed-rate full allotment policy of October 15, 2008, under which "financially sound" counterparts have their bids fully satisfied, against "adequate collateral" (Gonzales-Paramo 2011).

¹⁸ As Pisani-Ferry, Sapir, and Wolff (2013) note, some countries represented on the IMF's Executive Board, such as the United States, were not entirely unsympathetic to the ECB's concerns.

The decision contributed to understandable public outrage over the program. The banks' creditors, other than holders of its equity, were shielded from losses for the time being, while Irish taxpayers were saddled with an enormous bill. The absence of burden-sharing undermined public support for the program. A better way of addressing the ECB's concerns would have been for it to reiterate its commitment to provide funding against collateral to banks elsewhere in the euro area. That this was not done may have reflected worries about how further expansion of the central bank's balance sheet would be perceived in other member states. If so, it is regrettable that such concerns were allowed to prevail.¹⁹

3. The Promissory Note Deal

In the course of 2010 it became increasingly questionable whether the Irish sovereign would be able to borrow on financial markets to recapitalize the banks. As an alternative, the government provided the banks—or, more precisely, the Irish Bank Resolution Corporation (IBRC), which inherited the skeletons of Anglo Irish and Irish Nationwide—with a lump of money in the form of so-called promissory notes. The Irish government directly provided the IBRC with €31 billion of promissory notes that threw off roughly €3.1 billion annually (2 percent of GDP) for the first 13 years and smaller amounts thereafter. With the government unable to borrow, the scheme relied on the ability of the Central Bank of Ireland to accept the promissory notes as collateral and provide cash in return, which it did in the familiar form of ELA. By injecting the promissory notes, the Irish government was effectively guaranteeing that the Central Bank of Ireland and, by implication, the Eurosystem would be repaid.

The scheme was designed to reassure the ECB's governing council, whose approval was required for the extension of ELA. The extension of ELA is formally contingent on a national government guarantee to stand behind its national central bank, as noted above—consistent with the ECB's no-money-finance-of-deficits rule. This promissory-note mechanism was designed to indicate that the government was serious about the guarantee.

The corresponding problem was that the Irish government was required to come up with substantial amounts of money in a period of painful austerity. Paying out €3.1 billion in interest and principal reduction required the authorities in Dublin to cut an additional 2 percent of GDP out of the budget or, once market access was restored, to repay ELA, whose cost is only marginally above the ECB's refinancing rate, by borrowing at considerably higher cost, thereby

¹⁹ The case of Cyprus in 2013 suggests that EU officials drew some lessons from Ireland's experience in 2010 and subsequently, although they would need to refine those lessons in the wake of their Cypriot adventure.

raising anew questions of debt sustainability.²⁰ The first course, cutting spending further, was politically toxic, not least because of the public perception that fiscal adjustment was being undertaken to repay the ECB for losses made by a few bad banks and property developers; the second was economically destructive.

In February 2013, the government therefore restructured the promissory notes. In conjunction with the early liquidation of IBRC, instead of simply transferring the promissory notes to the account of the central bank, the authorities converted them into long-term bonds with maturities of 27 to 40 years. This eliminated the need to make repayments of principal for the next 27 years, in turn obviating the need for yet more politically problematic austerity in the short run as well as addressing longer-run concerns for debt sustainability. Back-loading the repayment of principal and extending maturities reduced the present value of the obligation by roughly 33 percent.²¹

There was an element of circularity in these payments, as Whelan (2013) notes. The central bank returns its surplus or profits to the government. Assuming that it otherwise had a surplus or profits, additional interest earnings on the new bonds, serviced by the government, would translate into additional surplus or profits for the central bank, which would then be returned to the government. A possible fly in this ointment was that, as part of the deal, the central bank agreed to sell off the bonds to the private sector as quickly as possible.²² The government will then be paying interest to private investors, foreign as well as domestic, in order to repay the Irish central bank's Target 2 liability to the ECB. What the government pays out will no longer come back to it in the form of transfers of Central Bank of Ireland (CBI) profits.²³

The ECB governing council was studiously silent about the deal, but its "non-objection" was presumably required for the Irish government to proceed. It has been speculated that the decision to sell the bonds on a specified schedule was intended to allow the ECB to claim that there was no violation of the prohibition of money financing. While the CBI hadn't purchased

²⁰ The ECB's refinancing rate was close to zero, and ELA was provided at roughly 75 basis points above that rate. Even when Ireland was again able to access the bond market in March 2013, yields on its new 10-year bonds were on the order of 4 percent.

²¹ By how much the present value was reduced depends, obviously, on the discount rate. The estimate in the text is based on Whelan (2013).

²² More precisely, "as soon as possible, provided that conditions of financial stability permit."

²³ Of course, when the CBI sells the bonds, it will receive additional income in the form of the proceeds, adding to its profits and to immediate transfers to the government, other things being equal. But there is then the worry that precipitous bond sales will depress their prices, imposing an additional drain on the public finances.

the bonds directly in violation of Article 123 of the European Treaty, it had ended up with them anyway, which was presumably too close to the same thing for the comfort of those involved. Pre-committing to a schedule for selling off its holdings was a way for the CBI to signal that any stretching of Article 123 was purely temporary—the problem being that this comes at the price of some financial risk to the Irish sovereign.

Finally, there is the question of whether the €25 billion of long-term bonds should remain an obligation of the Irish sovereign now that the European Union, by empowering the European Stability Mechanism to directly recapitalize banks, has opened the door to the possible mutualization of such obligations in the future. Pressure to allow direct recapitalization by the ESM reflects in no small part the lessons of Ireland’s experience, where a country that had previously displayed fiscal virtue found itself caught in the diabolic loop where banking problems create debt problems that aggravate those banking problems.²⁴ The Irish case was explicitly cited in the June 2012 euro area summit communique that committed to introducing direct ESM recapitalization.

Direct recapitalization will require evidence that the member state is unable to provide financial assistance to the troubled institutions without suffering “very adverse” consequences for debt sustainability.²⁵ The financial institutions in question must be systemically relevant for the euro area or its member states. The member state in question must have a sound fiscal and macroeconomic record.²⁶ There are no grounds for questioning that Ireland would have satisfied these conditions had the relevant guidelines been in place in 2010.

Whether this also opens the door to the ESM assuming some of the €25 billion of bank-related debt incurred by the Irish sovereign is more opaque. The June 2012 communique emphasized that “similar cases will be treated equally,” to the delight of Irish policymakers. Other European policymakers are more cautious: they interpret this to mean that similar cases will be treated similarly *when they occur in the future*. Advocates for Ireland point to the “encouragement” the country received in 2010 from the ECB to extend its guarantee. Others like the German, Dutch, and Finnish governments insist that Ireland made its own bed and should now be made to sleep in it.

²⁴ The transfer of credit risk from the banks to the sovereign at the time of the bank rescue package is documented for Ireland by Attinasi, Checherita, and Nickel (2009).

²⁵ See European Stability Mechanism (2014).

²⁶ Whether even if these circumstances are met the ESM will assume meaningful amounts of credit risk directly remains to be seen.

4. Other Issues

A comprehensive treatment of the impact of the EU on the Irish crisis would consider not just issues related to the banking crisis and its resolution, but also other provisions of the troika program, other EU and ECB policies, and the European recession itself. This paper makes no pretense of being comprehensive, but a few reflections on these issues are in order.

The program for Ireland was based on overly optimistic assumptions about growth, both domestically and euro area wide. In 2011 the euro area grew at roughly the pace forecast by the IMF. In 2012 and 2013 growth was then sharply lower than forecast (euro area GDP shrank rather than expanding as anticipated in late 2010). By 2013 euro area GDP was more than 5 percent lower than expected at the outset of the program. This obviously made it more difficult to boost exports and grow the Irish economy. Domestic demand also proved weaker than the IMF and its troika partners initially forecast. Where the initial program anticipated that the Irish economy would grow by 5.4 percent between 2010 and 2013, actual growth was just half that—2.7 percent, according to the latest data.²⁷

The IMF has acknowledged that its excessive optimism about euro area growth reflected its underestimation of the relevant fiscal multipliers in an environment of near-zero interest rates where there was little scope for monetary policy to offset fiscal consolidation, and in circumstances where multiple European countries were consolidating simultaneously.²⁸ Hindsight suggests that a slower pace of fiscal consolidation, not just in Ireland but in its euro area partners, could have helped to moderate the loss of output and rise in unemployment while doing relatively little to slow the decline in the debt-to-GDP ratio.²⁹ It is relevant here that the Irish authorities were fully committed to the goal of rapid fiscal consolidation. As pointed out by Pisani-Ferry, Sapir, and Wolff (2013), the troika may in fact have exercised something of a moderating influence.³⁰

²⁷ Growth looks somewhat stronger if the depressing effect on the data of patent expiry in the pharmaceutical sector is excluded. Looking at GNP rather than GDP growth paints Irish growth experience in a somewhat more favorable light (GNP growth in 2010–13 was 3.6 percent).

²⁸ See, for example, Blanchard and Leigh (2013).

²⁹ Somewhat slower fiscal consolidation might have been possible, as noted above, had the government not committed to make payments to the banks' bondholders.

³⁰ Initial program negotiations led the government to agree to postpone by one year, to 2015, the goal of reducing the deficit to 3 percent of GDP.

Ireland was hit by financial shocks from the EU as well. Chancellor Merkel and President Sarkozy's Deauville declaration of October 19, 2010—that, in future crises, bondholders would be automatically bailed in—caused a sharp increase in spreads on the debt of the Irish sovereign. Subsequent backtracking by EU officials, in the view of most, did not fully repair the damage. To be sure, the Irish crisis was already fully under way. But Deauville heightened the dependence of the Irish banking system on the CBI and ECB, and left Irish policymakers even less time to prepare for what came next.³¹ Similarly, the Greek crisis and its management (including the long delay and associated uncertainty in moving to restructure debts to private creditors) had an adverse impact on Irish spreads.³²

More attention or at least verbiage was directed toward banking programs in troika documents for Ireland than in the comparable documents for Portugal and Greece.³³ The Irish program anticipated that deleveraging of the banking system would be achieved in substantial part by asset sales.³⁴ The pace of these fire sales has been criticized for depressing asset prices, ultimately at the cost of the Irish taxpayer (Pisani-Ferry, Sapir and Wolff 2013, 89). If the front-loaded nature of asset sales reflected the desire of the ECB, as a troika partner, to reduce its exposure to Ireland, this is regrettable. Even now, there are questions about the capital adequacy of the country's banks, given the large stock of nonperforming loans (Central Bank of Ireland 2014, 21). Not to beat a dead horse, but more rapid and comprehensive write-downs of debts to bank bondholders would have helped to address this problem.

Last there is the impact of the ECB's monetary and credit policies, something that has been a mixed bag for Ireland. The ECB's decisions to tighten in 2008 and 2011 were unhelpful from a growth standpoint, to put an understated gloss on the point. In contrast to their findings for Spain and Portugal, Godl and Kleinert (2014) do not find that announcement of the ECB's Securities Market Program and Long-Term Refinancing Operation had a favorable impact on Irish spreads. More important was President Draghi's "do whatever it takes" statement in 2012 in taking the specter of euro break-up off the table. It is hard to imagine that Ireland could have achieved its clean exit from its troika program (as opposed to a messy exit from the euro) in the absence of this statement.

³¹ The point is disputed by Mody (2014).

³² Evidence to this effect is provided by De Santis (2012).

³³ Verbiage here refers to frequency of banking-related terms per page of documentation, as reported by De Sousa and others (2014).

³⁴ Other options, like raising additional deposits, not being possible under the circumstances.

5. Conclusion

Financial crises leading to international rescues are never happy, and Ireland's case is no exception. Economic costs are large and distributed unevenly. With emergency lenders concerned about being paid back, assistance comes with politically difficult, and often resented, conditions. Adjustment and recovery goals are difficult to meet. Crisis countries do not recall their experience fondly.

These observations are important for putting in context criticisms levied against the troika for its actions in Ireland. That said, there is plenty to criticize. The EU can be criticized for failing to do more to anticipate a classic banking crisis, allowing supervision to be delegated to national authorities, and raising few cautions about the results. It may be too much to ask, paraphrasing the Queen of England, to expect them to have seen "it" coming. That said, financial surveillance could have been more systematic and effective. The EU has now acknowledged as much by creating a single supervisor as part of its banking union.

Although the fatal decision to respond to the banking crisis with a blanket guarantee was taken by the Irish authorities, they did not receive wise counsel from the EU. Ireland's policy that no bank would be allowed to fail was also the EU's policy, de facto if not de jure. Uncertainty surrounded the provision of ELA; the Irish authorities received no assurance that if they immediately put Anglo Irish and Irish Nationwide into receivership, other banks would receive unlimited liquidity support. The absence of a mechanism for directly recapitalizing the two troubled banks allowed the sovereign-bank doom loop to come into operation. The ECB applied pressure for Ireland to request a troika program in 2010, to refrain from administering haircuts to holders of senior unsecured and unguaranteed debt, to undertake sales of bank assets more quickly than Irish officials thought best, and to sell off the long-term bonds acquired by the Central Bank of Ireland at a pace that posed risks to the government's finances.

Management of the euro area crisis did not help. Uncertainty surrounding Greece and its debt restructuring spilled over. Official talk about the possibility of exit, or a "temporary holiday," from the euro, even if prompted by the problems of other countries, affected market sentiment toward Ireland. Inaccurate assumptions about fiscal multipliers, botched stress tests, and on-again-off-again progress toward banking union made things unnecessarily difficult.

That said, the EU and its institutions learned from the experience. The creation of a banking union with a single supervisor, harmonized deposit insurance, a resolution mechanism capable

of directly recapitalizing troubled banks, and a dedicated resolution fund perhaps best symbolizes this fact. The idea is that taking supervision out of the hands of the national authorities, at least in part, will reduce problems of capture and will strengthen surveillance next time around. A well-specified and adequately funded resolution mechanism will prevent national authorities in the future from feeling obliged to resort to an Irish-style guarantee. Stronger banks across the euro area will assuage fears of uncontrollable contagion and financial chaos flowing from isolated bank failures.

Making this progress not just symbolic but real will now require giving that single supervisor real teeth, fully funding that resolution fund, and allowing the ESM to assume meaningful amounts of credit risk. Will it happen? Stay tuned.

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Biographies of the Speakers

Welcoming Remarks



Brendan Howlin was appointed Ireland's Minister for Public Expenditure & Reform in March 2011. In 2007, he was elected as Leas-Cheann Comhairle of Dáil Éireann (Deputy Speaker of the Irish House of Parliament). Previously, he was Labour Party Spokesperson on European Affairs, Constitutional Matters and Law Reform, and Human Rights. From 1994 to 1997, he was Minister for the Environment, and Minister for Health from 1993 to 1994. From 1982 to 1987, he was a member of Seanad Eireann (Irish Senate).

Session 1: Stabilizing and Healing the Banks



Dirk Schoenmaker is a Professor of Finance, Banking and Insurance at the VU University Amsterdam and Dean of the Duisenberg School of Finance. He is also a member of the Advisory Scientific Committee of the European Systemic Risk Board in Frankfurt and Chairman of the Institute for Integrity and Reliability of Finance Professionals in Amsterdam. Mr. Schoenmaker served earlier at the Dutch Ministry of Finance and the Ministry of Economic Affairs, and he is the author of *Governance of International Banking: The Financial Trilemma*.



Laura Noonan is a European Banking Correspondent at Reuters, based in London, and a CFA charter holder. Prior, Ms. Noonan worked at the *Irish Independent* as a business reporter and as a banking correspondent. She has also been a business reporter at *The Sunday Business Post*, an Irish national Sunday newspaper.



John Fell has been Deputy Director General for Macro-Prudential Policy & Financial Stability in the ECB since 2010. Prior, he was Head of the Financial Stability Division and Editor of the ECB's *Financial Stability Review*. As chair of the Comprehensive Assessment Stress Test (CAST) team, he led the stress-testing work for the ECB's "comprehensive assessment" in 2014 as well as the "join-up" of the stress test with the asset quality review. Having led ECB input into all EU-wide stress tests coordinated by the Committee of European Banking Supervisors (2009) and European Banking Authority (EBA; 2010, 2011, 2014), he has been a member of the EBA's task force on stress-testing since 2010. He has led ECB financial sector work for EU/IMF financial assistance programs, including stress-testing, and has participated in ("troika") program negotiations in several euro-area countries (for example, Ireland, Portugal, and Spain). Mr. Fell holds postgraduate degrees in economics (1987) and in finance (1993) from University College Dublin and Dublin City University, respectively.



Jonathan McMahon is Chief Risk Officer and a member of the executive board at St. James's Place plc., a FTSE 100 financial services group. Between 2009 and 2012 he worked for the Central Bank of Ireland, where he was involved in the restructuring and recapitalization of the Irish banking system.



Ann Nolan is Second Secretary General at the Department of Finance, Ireland, with responsibility as Deputy Head of Department. Ms. Nolan is currently Head of the Financial Services Directorate, with responsibility for policy and legislation in the banking and financial services areas. This also includes responsibility for financial stability/risk management and international financial institutions. She has worked in the Department of Finance for 29 years and has extensive experience in formulating policy and developing strategy in the areas of taxation, expenditure control, banking, and financial services. Ms. Nolan is currently a member of the Pensions Authority and is on the board of the recently formed state development bank, the Strategic Banking Corporation of Ireland. She has previously served on the boards of the State Claims Agency, the Legal Aid Board, and the ACC Bank.

Session 2: Putting the Budget on a Sound Footing



Antonio Fatás is a professor of economics at INSEAD, where he teaches the macroeconomics core course in the MBA program and global macroeconomic environment. His research is focused on business cycles, fiscal policy, and the economics of European integration. Mr. Fatás is also a Research Fellow at the Centre for Economic and Policy Research in London. He has worked as a consultant for the IMF, the OECD, and the World Bank.



Dan O'Brien is Chief Economist at the Institute for International and European Affairs, and a Senior Adjunct Research Fellow at University College Dublin's School of Politics and International Relations. Mr. O'Brien writes regularly for independent newspapers, including the *Irish Independent*. Prior, he was with the European Commission and was also a senior economist and editor at the Economist Intelligence Unit.



Gillian Edgeworth is a sovereign analyst for Wellington Management. Prior, she worked as Chief European Emerging Market Economist at Unicredit Bank, responsible for economic analysis of regional economies and developments in Ireland and Greece, and at Deutsche Bank, responsible for coverage of Greece, Ireland, and the newer EU states. Ms. Edgeworth is also a senior member of the Political Economy of Financial Markets program at St. Antony's College, Oxford University.



Tom Healy is Director of the Nevin Economic Research Institute. Mr. Healy has previously worked in the Economic and Social Research Institute, the Northern Ireland Economic Research Centre, the Organisation for Economic Cooperation and Development, the National Economic and Social Forum, and the Department of Education and Skills. He holds a Ph.D. (economics and sociology) from University College Dublin. His research interests have included the impact of education and social capital on well-being.



István Székely is a Country Director in the European Commission's Directorate-General for Economic and Financial Affairs. Before joining the Commission in 2007, he worked as Mission Chief at the International Monetary Fund (1999–2007). From 1996 to 1999 he served as General Manager and Advisor to the governor of the National Bank of Hungary. Mr. Székely holds a Ph.D. in economics from the University of Cambridge and is honorary professor at the Corvinus University of Budapest. His research focuses on financial market and macroeconomic policy issues, and on Central and Eastern European economies. He has published various books and articles in these areas.



Robert Watt is Secretary General of the Department of Public Expenditure and Reform in Ireland. Mr. Watt is leading a major public sector reform program in areas such as procurement, shared services, and digitalization. He is a member of the government's Economic Management Council and is a key advisor to the government on budget, financial, and economic matters. He is an economist and has experience in both the public and private sectors. He has worked in a range of roles within the Department of Finance as well as previously working as an economic consultant.

Keynote Speech



Patrick Honohan is the 10th Governor of the Central Bank of Ireland and was appointed in September 2009. Before his appointment, he was Professor of International Financial Economics and Development at Trinity College Dublin. Prior, he spent almost a decade at the World Bank, where he was Senior Advisor on Financial Sector Policy. He was previously a Research Professor with the Economic and Social Research Institute, Dublin (ESRI; 1990–98), and an economic advisor to Taoiseach Garret Fitzgerald (1981–82; 1984–86). He spent several years as an economist at the Central Bank of Ireland (1976–81; 1984–86), and at the International Monetary Fund (1971–73). A graduate of University College Dublin, he received his Ph.D. in economics from the London School of Economics (LSE) in 1978. In recent years, his research mainly focused on monetary and financial-sector policy.

Session 3: Ireland's Market Access and Euro Area Policies



Barry Eichengreen is the George C. Pardee and Helen N. Pardee Professor of Economics and Professor of Political Science at the University of California, Berkeley, where he has taught since 1987, and Pitt Professor of American History and Institutions, University of Cambridge, 2014–15. He is a Research Associate of the National Bureau of Economic Research (Cambridge, Massachusetts) and a Research Fellow of the Centre for Economic Policy Research (London, England). His most recent books are *Hall of Mirrors: The Great Depression, The Great Recession, and the Uses—and Misuses—of History*; *From Miracle to Maturity: The Growth of the Korean Economy* with Dwight H. Perkins and Kwanho Shin (2012); and *Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System* (2011).



Seán Whelan is RTÉ's Economics Correspondent. He was appointed to the position at the start of 2010. Prior, he spent 10 years in Brussels as RTÉ's Europe Editor, reporting on European affairs and news stories the length and breadth of the continent. Before going to Brussels, he served as Deputy Foreign Editor, reporting the conflicts in Bosnia and Kosovo. He has also worked as a print journalist in Dublin and London with the *Sunday Tribune*, the *Irish Independent*, and *Marketing* magazine; he currently writes a weekly column in the *Sunday Business Post*.



Alan Ahearne is Professor and Head of Economics at the National University of Ireland, Galway. He is a member of the Board of Directors of the Central Bank of Ireland. He is also a member of the Central Bank's Audit and Risk Committees. Prior to joining Galway in 2005, he was Senior Economist at the Federal Reserve Board in Washington, D.C. There, he advised Alan Greenspan, Ben Bernanke, and other Fed governors on developments in the global economy. He served as Special Advisor to former Minister for Finance, the late Brian Lenihan, from March 2009 to March 2011. His research includes studies on property markets in Ireland and other industrial countries; global current account imbalances and exchange rates; and the economic performance of the euro area. He holds a B.B.S. from the University of Limerick, an M.Econ.Sc. from University College Dublin, and an M.Sc. and a Ph.D., both in economics, from Carnegie Mellon University.



Agnès Bénassy-Quéré is a Professor of Economics at Paris School of Economics, University of Paris 1 Panthéon Sorbonne, and the Chair of the French Council of Economic Analysis. She is also a member of the Commission Economique de la Nation, the French macro-prudential authority, and the Cercle des Economistes. Ms. Bénassy-Quéré has worked for the Universities of Cergy-Pontoise Lille 2, Paris-Ouest, and École Polytechnique, as well as for the French Ministry of Economy and Finance.



Colm McCarthy is an occasional lecturer at the School of Economics at University College Dublin. He has worked as an economist with the Central Bank of Ireland and the Economic and Social Research Institute, as well as with DKM Economic Consultants in Dublin. In 2011 he authored *Ireland's European Crisis: Staying Solvent in the Eurozone*. Mr. McCarthy is a regular contributor on economic affairs to Irish print media, radio, and television.

High-Level Panel Discussion



Wolfgang Münchau writes the European economic column of the *Financial Times*. His last book, *The Meltdown Years: The Unfolding of The Global Economic Crisis*, won the GetAbstract business book award in its original German-language version. Together with his wife, the economist Susanne Mundschenk, he co-founded Eurointelligence.com, a website dedicated to providing information and debate about the economics, finance, and politics of the euro area. The Eurointelligence Daily Morning Newsbriefing is widely considered to be most incisive daily information source on the euro area. He is a member of the Euro50 Group as well as the European Council on Foreign Relations. He has written three other German-language books, *Kernschmelze im Finanzsystem (Meltdown in the Financial System)*, *Das Ende der sozialen Marktwirtschaft (The End of the Social Free-Market)*, and *Makrostrategie (Macro-Investment Strategy)*. Before assuming his current position, Mr. Münchau co-founded and served as Editor-in-Chief of *FT Deutschland*. He holds master's degrees in mathematics and journalism.



Michael Noonan was re-elected to Dáil Éireann (Irish Parliament) in 2011 and was appointed Minister for Finance in March 2011. First elected to the Dáil in 1981, Minister Noonan was Leader of Fine Gael from February 2001 until May 2002. He was appointed Fine Gael Finance Spokesperson in July 2010. He was re-elected to the Dáil Éireann in May 2002 and was on the Fine Gael Front Bench from 2004 until 2007. During this time, Minister Noonan was also the party's spokesperson on Northern Ireland. Minister Noonan was the Fine Gael front bench spokesperson on Finance from 1997 to 2001 and was Minister for Health between 1994 and 1997. He held two different ministerial posts between 1986 and 1987, that of Minister for Industry, Commerce, and Trade and Minister for Energy, respectively. During Fine Gael's previous term in government, Minister Noonan was Minister for Justice from 1982 to 1986.



Benoît Cœuré is a member of the Executive Board of the ECB and the Chairman of the Bank for International Settlements' Committee on Payments and Market Infrastructures. Prior to joining the ECB, he served in various policy positions at the French Treasury. He was the CEO of the French debt management office, Agence France Trésor, then France's Assistant Secretary for Multilateral Affairs, Trade and Development, Co-president of the Paris Club and G8 and G20 finance sous-sherpa for France, and Deputy-Director General and Chief Economist of the French Treasury. Mr. Cœuré is a graduate of École Polytechnique in Paris. He holds an advanced degree in statistics and economic policy, and a B.A. in Japanese. He has taught international economics and economic policy at École Polytechnique and at Sciences Po in Paris. He has authored articles and books on economic policy, the international monetary system, and the economics of European integration, including, most recently, *Economic Policy: Theory and Practice* (Oxford University Press, 2010).



Valdis Dombrovskis is the Vice-President of the European Commission in charge of the euro and social dialogue. Before his election as member of the European Parliament, he served as a member of the Saeima (Parliament) of Latvia (January–June 2014). In March 2009, Mr. Dombrovskis was appointed Prime Minister of Latvia—the youngest head of government in the EU. He served as the Prime Minister until January 2014 and became the longest serving democratically elected head of government in Latvia's history. In 2004–09, Mr. Dombrovskis was a member of European Parliament and the head of Latvian Delegation in the EPP-ED Group. Prior to that, in 2002–04, he served as Latvia's Minister of Finance.

He graduated with a degree in physics from the University of Latvia and received a degree in economics from Riga University of Technology. Before pursuing politics, he worked as a senior economist and chief economist at the Bank of Latvia (1998–2002). He co-authored a book with Anders Aslund, *How Latvia*

	<p><i>Came through the Financial Crisis</i> (2011). In November 2014, he was awarded by the Order of the Three Stars (<i>Triju Zvaigžņu ordenis</i>), the highest state decoration of the Republic of Latvia.</p>
	<p>Christine Lagarde has been the Managing Director of the International Monetary Fund (IMF) since 2011, the first woman to hold that position. She graduated from law school at University Paris X, and she obtained a master's degree from the Political Science Institute in Aix-en-Provence.</p> <p>Ms. Lagarde joined the French government in June 2005 as Minister for Foreign Trade. After a brief stint as Minister for Agriculture and Fisheries, she became the first woman to hold the post of Finance and Economy Minister of a G7 country in June 2007. From July to December 2008, she also chaired the ECOFIN Council, which brings together economics and finance ministers of the European Union. As a member of the G20, Ms. Lagarde was involved in the group's management of the financial crisis, helping to foster international policies related to financial supervision and regulation, and to strengthen global economic governance. As Chairperson of the G20 when France took over its presidency for the year 2011, she launched a wide-ranging work agenda on the reform of the international monetary system.</p> <p>Before joining the French government, Ms. Lagarde was an associate at the international law firm of Baker & McKenzie. A member of the Executive Committee of the firm in 1995, Ms. Lagarde became the Chairperson of the Global Executive Committee of Baker & McKenzie in 1999 and, subsequently, Chairperson of the Global Strategic Committee in 2004.</p>