

PB 17-1 Management and Resolution of Banking Crises: Lessons from Recent European Experience

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After almost a decade of contrasting and somewhat unpredictable policy responses to each succeeding bank failure, global policy for bank resolution has coalesced around a new approach.¹ Replacing the seeming arbitrariness of earlier actions, the new international framework is designed to allow failing banks to be resolved smoothly without damaging interruptions to the payments and credit systems or imposing heavy fiscal costs.

This Policy Brief describes the changes and examines the European experience with banking crises over the past decade. It focuses on management and resolution policy in the countries of the euro area, with a view to identifying lessons about the likely policy response. It concludes by noting that despite improvements, more needs to be done to ensure the safety of European financial institutions and prevent future banking crises.

1. The internationally negotiated principles are set out in the Financial Stability Board's 2014 *Key Attributes of Effective Resolution Regimes for Financial Institutions*.

Relatively severe and costly banking collapses affected as many as 20 European countries in the past decade. Very extensive central bank liquidity (both within the euro area and outside it) was provided to keep the payments system running smoothly in most—but not all—of these country cases.

The policy approaches across European countries were remarkably different, reflecting the precrisis lack of administrative and legislative preparation for bank resolution. As banking systems that had been allowed to hypertrophy suffered in the face of the global downturn, the scale of bank failures that swept Europe overwhelmed existing policy structures. Not all of the policy choices made seem wise in retrospect; a new policy approach was clearly needed.

Despite improvements, more needs to be done to ensure the safety of European financial institutions and prevent future banking crises.

Along with new institutional arrangements for early warning of systemic instability and a single bank supervisor in the euro area (see box 1), the European Union (EU) has adopted a new resolution policy framework, which has been in operation since the beginning of 2016. It includes a Single Resolution Board for the euro area and comprehensive resolution legislation empowering the public authorities to take steps, including bail-in of certain creditors, to achieve the smooth and speedy restructuring and resolution of failing banks. Consistent with the international post-crisis understanding that banks need to have high levels of loss-absorption capacity, the new EU resolution legislation envisages much less reliance on public funds.

The new regime suffers from complexities. The decision to resolve a bank is shared by the Single Resolution Board, the supervisor, the European Commission, and the Council of Ministers, potentially hampering speedy and effective implementation. The rules limiting the degree to which public funds can be used in resolution seem to be strict and demanding, although there is some flexibility in the event of severe systemic stress and the legislation

Box 1 European institutional and legislative response to the crisis

Extensive institutional and legislative change in the European Union followed the 2008 financial crisis. Changes affecting the banking system involved regulation, supervision, and resolution.

The capital adequacy of banks was tightened, in line with successive generations of the international Basel agreements, and enacted in the EU-wide Capital Requirements Directive and Regulations of 2011 and 2013. In 2011 harmonization of prudential rules across the European Union was entrusted to a new institution, the European Banking Authority, headquartered in London.

In November 2014 supervision of banks in the countries of the “banking union” (currently equivalent to the euro area) was entrusted to the Single Supervisory Mechanism (SSM), a new arm of the European Central Bank, headquartered in Frankfurt. The SSM directly supervises more than 100 “significant” banks, with the remainder supervised by national authorities, subject to the final authority of the SSM.

Enacted in May 2014, and fully in force since the start of 2016, the Bank Restructuring and Resolution Directive,¹ together with the associated regulation and national implementing laws, enhances the capacity of resolution authorities to deal with the complexities of resolving a failing bank. It includes powers to bail in certain creditors of a failing bank and requires bail-in to be used ahead of public funds, though public funds may be used in cases of extraordinary systemic stress. In 2015 a new Single Resolution Board was established to ensure an effective common resolution regime across the banking union countries.

Also relevant are the preexisting powers of the European Commission to ensure that state aid to banks is not a source of distortion to competition. The rules it applies are set out in a July 2013 communication.²

1. Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0059>.

2. Available at [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0730\(01\)](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013XC0730(01)).

establishes a hierarchy of uninsured creditors, placing the deposits of small and medium-sized enterprises and individuals ahead of other senior creditors, for example. Although the complexities could give rise to teething problems and will likely need to be reviewed, the new regime represents a distinct improvement, giving European resolution agencies the kinds of power that were long available to the US Federal Deposit Insurance Corporation (FDIC) but were not available in Europe in the early years of the crisis.

Despite its shortcomings, the approach represents a considerable improvement over what went before. Serviceable tools are available to manage and resolve, in a reasonably satisfactory manner, immediate challenges, including the widely discussed issues of recent months concerning some Italian and German banks.

The imperfections of the new regime are no excuse for ignoring the solid principles that have been established, in particular the principle that subordinated debt of a failing bank should be bailed in. The framework should be used coherently from the outset.

It is easy to imagine a better-funded, less rigid, and less operationally convoluted resolution regime, with fewer rough edges than the system that Europe has adopted. It is less easy to achieve political agreement on such a regime. Refinement efforts should nevertheless continue.

THE CONTEXT

In any country, the emergence of a banking crisis, often characterized by a bank struggling to source cash to repay its liabilities as they are withdrawn, demands a prompt and decisive policy response.

It is not easy to rationalize fully the seemingly zig-zag policy approach adopted in Europe over the past years as successive waves of banking difficulties crested in country after country (as documented below). Some banks were resolved with heavy losses to depositors as well as shareholders and other investors; most were recapitalized with public funds, leaving only the equity shareholders nursing losses.

Contrasting scale and timing help explain the actions taken.

On scale, countries facing losses that, though large, were easily absorbed by the public finances through direct or indirect bailouts. Banking system losses in a few countries (Cyprus, Iceland) were too great for the state to absorb.

On timing, the unforeseen nature of the post-Lehman panic and the unprecedented level of money market disruption in the last quarter of 2008 discouraged talk of bail-in as much in Europe as in the United States. It was not until almost four years later that market conditions allowed the voices of people emphasizing the economic and political

costs of bailout to be heard more clearly, with consequences that ranged from the handling of the Cyprus crisis to the enactment of the European Union's Bank Recovery and Resolution Directive (BRRD), which came into effect at the beginning of 2016 and provides a much more robust and coherent policy framework than existed during the crisis.

In the euro area, the creation in 2014 of the SSM (which directly supervises the main banks of every euro area country) has considerably improved the information available to the public authorities about the health of banks. The change should facilitate prompt and better-informed management and resolution decisions. The BRRD is intended to predetermine the agreed approach to loss allocation.

If market confidence is to be restored and sustained, it is essential that the improved clarity and predictability offered by the BRRD be validated by adherence to its principles in the implementation of any future EU bank resolutions. Shareholders and the holders of bailable debt, rather than the public purse or retail customers, must bear the main burden of needed recapitalizations. At the same time if, as has been alleged, banks have sold unsuitable subordinated capital instruments to small customers (i.e., cases of mis-selling), they should receive prompt and sufficient compensation.

It would thus be a mistake to discard the BRRD framework at the first sign of pressure. After all, policymakers have always been tempted to gloss over issues of bank solvency with a liberal coating of public funds.

The scale of the pending recapitalization needs of a handful of large and medium-size banks recently discussed in the media does not present a threat to the creditworthiness of any of the governments concerned. Although the degree of competition in European retail banking still falls far short of what would be ideal, recapitalization solutions are available that would not threaten material distortion of that competition.

The European Commission has been increasingly assiduous in challenging bank restructurings that could threaten the effectiveness of competition by granting government-funded advantages to the rescued bank. Their efforts in this regard must not derail what has already been an unduly delayed restructuring.

No. The chief reason to adhere now to the bail-in principles of BRRD is that these principles offer a much more robust and coherent policy framework than was present during the crisis since 2007.

EMERGENCE OF THE CRISIS

The past decade has been associated with an exceptional cluster of national systemic banking crises. They differed in their origins, their management (accommodating or strict), and the wider consequences they generated. Although the

wave began in the United States, it soon reached Europe in a metastasized form, especially parts of Europe that had not experienced systemic banking problems for many years.

With the tendency to focus on countries where the sovereign had to have recourse to International Monetary Fund (IMF)-financed programs, it is easy to forget just how widespread severe banking problems in Europe were in the last decade. As a rough indicator of the scale and range of the problems, some 15 European countries (both within the euro area and elsewhere) experienced bank failures that led to estimated direct (gross) fiscal costs of more than 5 percent of national GDP (figure 1); many other countries were also affected by significant bank failures. Fiscal costs are only one dimension of the scale of the problem. The overall net economic cost of these crises (the difference between actual economic performance and a counterfactual no-crisis scenario) is likely larger but difficult to estimate.²

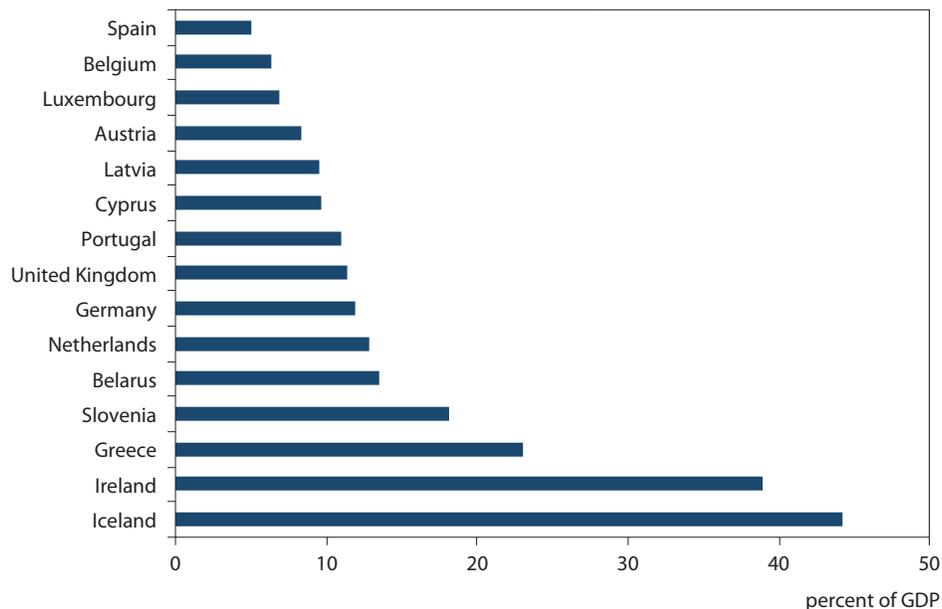
Although the banking failures occurred in quick succession, the triggers varied significantly from country to country and even, to some extent, between different banks in the same country. Earlier experience distinguished between crises associated with macroeconomic boom and bust cycles, crises caused by government interference, and a small number of isolated cases in which failure was attributable to actions by individual large banks.³

The bust of a real estate finance-driven macroeconomic boom was at the heart of the British, Irish, and Spanish crises. But the European crises had at least five other triggers. The spillover from the United States of the mispricing in the structured finance market brought several German and Swiss banks to their knees. Sovereign default was central to the banking problems in Cyprus and Greece. Unrestrained lending to tycoons connected with bank insiders was an important factor in Cyprus, Iceland, Portugal, and probably some other countries. Sluggish overall macroeconomic

2. Governments justify these bailout costs as representing an investment in preventing even greater GDP loss. The estimates in figure 1 represent measured increases in government liabilities, not the ultimate net cost. Most cases also involved the acquisition of assets that, when realized over time, tend to reduce the net cost. In the case of Greece, the "fiscal costs" arise largely because of the restructuring of government debt.

3. Many previous banking crises in developing countries were attributable to specific government actions that weakened the banks (see Honohan 1997, Caprio and Honohan 2015). In the recent crises, there was a wholesale failure of bank supervision in the run-up to the global financial crisis; governments also contributed to the crisis in other ways, including by promoting mortgage lending to insufficiently creditworthy low-income households in the United States (Rajan 2011), allowing politicians and overindebted capitalists to maintain close connections (Iceland), and providing tax incentives for property development (notably in Ireland). Most of the recent crises were caused much more by bankers than by governments, however.

Figure 1 Estimate of gross fiscal cost of banking crises in 2007–13 in selected European countries



Source: Bova et al. (2016).

performance weakened banks in Italy and elsewhere. Banker overreach was a factor in the failure of overambitious banks in Belgium, Germany, Ireland, and the United Kingdom.

How can the simultaneous emergence of so many disparate crises be explained? The culprit seems to be the growth of financialization, characterized in particular by three correlated changes: the scale and speed of flows, the high level of leverage, and overreliance (by bank directors, investors and regulators) on what proved to be grossly inadequate (albeit sophisticated) risk management tools. This trio should map to the needed policy responses in terms of management, containment, and resolution. (They also have implications for prevention, an issue that lies beyond the scope of this Policy Brief.)

MANAGEMENT AND RESOLUTION OF BANKING CRISES

Ideally, awareness by the regulatory authorities of capital adequacy problems at a bank would trigger corrective action before the market loses confidence. In practice, it rarely does so, especially in a systemic liquidity crisis, when a common shock affects several banks or the emergence of problems at one bank triggers contagion to others. Inaction by the authorities in such circumstances leaves an impaired payments and credit system.

Some of the needed policy actions when a banking collapse hits (such as transferring control of a failing bank

to effective and unconflicted directors and executives) are uncontroversial but difficult to pull off with precision and alacrity.

Others are more challenging to conceptualize. They include the need to manage and contain the problem, by ensuring sufficient continuity of payments, credit, and other banking services, and the need to make decisions about, and implement, loss allocation.

Provision of liquidity helps ensure that the economy's normal payments and short-term credit system continues to function smoothly. Public intervention is necessary to limit wider economic damage from bank failure. Absorption of the losses of the banking system eats into the public sector's ability to provide needed public services, however; if the losses are large enough, it can also damage national creditworthiness. Bailout by the public authorities (including the central bank) also creates moral hazard and gives an unfair advantage to bank investors.

The degree to which accommodating or strict approaches were adopted to liquidity and bail-in differed substantially between European countries and over time.

In the early stages of the crisis, a relatively restrictive approach to liquidity provision seemed to prevail. Beginning at the end of September 2008, policy became very liberal. By providing exceptional quantities of liquidity, the ECB, and the Bank of England joined the US Federal Reserve in stabilizing the liquidity situation in October 2008. Extensive provision of collateralized liquidity to support

stressed banks continued in the euro area for several years, with national banking system recourse to central banking liquidity exceeding 100 percent of GDP in some cases.

Furthermore, reluctant to risk further market instability by imposing losses on senior creditors, European governments (including the governments of Germany, the United Kingdom, France, Spain, and the Netherlands, to mention only the largest) injected substantial government resources into the capital of certain banks, ensuring that their creditors were made whole.⁴ Sizable parts of these injections will not be recovered. (After September 2008, the US government acted likewise. Its outlays to bailout private banks will likely be more than fully recovered.)

By 2013 policy had toughened. First Cyprus and later Greece experienced administrative controls on deposit withdrawals, as ceilings were placed on banks' access to central bank funds. Some senior creditors began to be bailed in ahead of the new BRRD legislation (effective from 2016) mandating private sector bail-in ahead of the use of public funds in resolution. (The bail-in of some junior creditors began in 2010.)

Provision of Emergency Liquidity Assistance

The purpose of providing emergency liquidity assistance (ELA) should be to avoid unnecessary disruption of payments and credit systems. Central banks have no mandate to intervene in order to bail out bank creditors *per se*. They therefore hesitate to provide liquidity when they perceive a risk that they will incur losses for the public purse (a public sector bailout of bank creditors by stealth).

ELA is not necessarily incompatible with bail-in, should that prove necessary, if banks turn out to be truly insolvent: Collateralized lending can provide breathing space while the authorities determine the appropriate resolution plan.⁵ If too readily granted, however, ELA can result in socialization of losses or inflation.⁶

The approach of the European public authorities to ELA seems to have oscillated from reluctance through liberality and then to a seeming reversal, with two national banking systems (Cyprus and Greece) left for extended periods with administrative controls on deposit withdrawals.

4. Iceland was the early exception to this generally accommodating approach.

5. ELA allows short-term creditors to be made whole and accordingly cannot easily be justified in circumstances where the bank is clearly facing a net balance sheet deficiency. This consideration may have been relevant in the Lehman case.

6. The potential social costs here do not relate to the provision of liquidity *per se* but to the increased danger that the central bank will end up with capital losses if the borrowing bank proves to be balance sheet insolvent.

There has also been an evolution in the degree to which ELA decisions are made transparent.

How should one make sense of the authorities' actions? The changes partly reflect an evolving understanding of the relative costs and benefits of liberal and restrictive approaches to liquidity in a crisis, especially perspectives on the dangers of contagion. But they also reflect contrasting circumstances (box 2).

For one thing, the capacity of national central banks to provide ELA is not unrestricted. Iceland could not have provided ELA in foreign exchange to the extent required in late 2008.

In the euro area, national central banks have the ability to provide ELA (at their own risk) as long as there is no objection by a sufficient majority of the ECB Governing Council (which might object out of fear of the impact on the monetary policy of the euro area). Even though the national central bank accepts the credit risk, losses could be so great as to spill over to the rest of the currency union, raising potential distributional issues between the weaker and stronger economies of member states. The restrictions on ELA in Cyprus and Greece reflect the inability of failing banks to provide sufficiently credible collateral; no spillovers to the rest of the euro area were detected (table 1).

Lessons

Many observers believe that the failure or inability of the US authorities to provide ELA to Lehman generated large economic costs worldwide (see the discussion by Cline and Gagnon 2013). But the economies of Cyprus and Iceland recovered much more quickly than was expected from outright systemic bank failure and a period of administrative controls. The difference in the cases likely stems from the scale and complexity of the economies concerned. The fear of a global payments and credit freeze was more damaging to the affected economies than the closure of parts of one or two small national banking systems whose economic agents had at least some access to banks in unaffected neighboring countries.

Given the lack of legislative and administrative preparedness in 2008–10, extensive recourse to ELA was an inevitable component of the best available policy response. When granted to a solvent firm, the direct social costs of liquidity provision even to a significant bank are small, and the anti-contagion benefits can be considerable. Still, provision needs to be tempered by concern for the moral hazard created by too liberal an approach. (Thus, for example, coordination between the central bank and the financial regulator needs to ensure that there are appropriate consequences for the controlling insiders of the assisted bank, so that management incompetence is not bankrolled.)

Box 2 Provision of emergency liquidity assistance: Selected cases

The first conspicuous bank run of the global financial crisis was of Northern Rock, a medium-sized building society (mortgage bank) in the United Kingdom that had become heavily involved in the securitization of mortgages. An initial decision by the Bank of England to refuse emergency liquidity assistance (ELA) when Northern Rock was unable to refinance itself in the rapidly deteriorating money market conditions of September 2007 was soon reversed, but disclosure of the ELA (which, at £50 billion, was far larger than any sum ever previously provided) led to depositor panic and long lines outside the offices of the bank. Systemic damage from the Northern Rock run was negligible.

The potential side effects of a failure to finance a bank run were evident in the case of Lehman Brothers. The relevant public authorities stated that they lacked legal authority to provide the liquidity assistance that would have been needed to prevent its sudden bankruptcy in September 2008. The US authorities acted swiftly to ensure the continuity of payments of other financial firms in the following weeks, but considerable collateral damage ensued—as the authorities apparently foresaw (Bernanke 2015).

The weeks following Lehman's collapse saw sizable ELA provision by larger European central banks to banks in Belgium, the Netherlands, Germany, and the United Kingdom. None of it was announced publicly at the time, a decision perhaps attributable to the experience with Northern Rock the previous year but not very easily reconciled with principles of market transparency. These ELA loans were repaid in the following months, but they were succeeded by ELA loans to other banks as the euro area crisis deepened. Transparency around these loans was limited, although the ECB gradually relaxed its approach to confidentiality of these operations.

The authorities did not provide ELA to Irish banks in 2008 (though they did in the following years). The reason for avoiding ELA at first was their fear that disclosure of ELA might worsen the liquidity position, as it had in the case of Northern Rock. Instead, the Irish parliament enacted a formal guarantee to bank creditors that was, at first, sufficient for the banks to regain market access. Following the Irish guarantee, several other countries felt obliged to follow suit, albeit with more restricted scope and in some cases without the backing of an enforceable legal instrument.¹

Iceland also did not provide open-ended ELA to the failing banks (SIC 2010; Benediktsson, Danielsson, and Zoega 2011; IMF 2012). A large share of these banks' liabilities was denominated in foreign currency; the central bank did not have sufficient foreign currency reserves to meet the likely outflows.

With loss of market access by the relevant sovereigns spilling over into creditor fears around the standing of their claims on banks in certain member states, ELA volumes surged in the euro area during 2010–15. The limitation on Greek ELA in the summer of 2015 followed the Greek government's decision to hold a referendum recommending refusal of the terms of continued international financial assistance, heightening the risk that the collateral backing the ECB's rapidly growing claims on the Greek banking system might be defaulted on. In this case—and the rather different case of Cyprus—the national banking systems were subject to prolonged administrative controls restricting the withdrawal of depositor funds. (In Cyprus controls persisted for more than two years; in Greece they went in effect in mid-2015 and were still in effect in the fourth quarter of 2016.) Although economic performance of Greece and Cyprus since the introduction of these administrative controls has not been good, the economic damage caused seems to have been less severe than foreseen by many commentators at the time of their introduction.

1. The extent of this guarantee, covering old debt, including some subordinated debt, arguably went well beyond what would have been sufficient to restore bank access to the markets. For more on Ireland, see Honohan (2010, 2015) and Lane (2011).

ELA in the euro area should arguably be made a system-wide responsibility rather than one taken primarily at the initiative of national central banks. After all, the ECB now has improved visibility of the financial condition of the banks it supervises through the SSM. If, for example, ELA is being rationalized partly or wholly on the ground that resolution of the bank concerned would destabilize other countries, the decision would lie more naturally with the

ECB (which could internalize those spillovers) than with the national central bank. (Reimagining the case of Cyprus in this context might be instructive.) Nor can the ECB be indifferent to a country-specific disruption to the payments system; it should be involved in decision making in such cases. ECB action need not open the euro system to sizable losses. Indeed, ELA has not resulted in losses by the euro area central banks.

Table 1 Contrasting decisions on the provision of emergency liquidity assistance

Institution or country	Year	Emergency liquidity assistance
Northern Rock (United Kingdom)	2007	Not provided, then provided
Lehman Brothers (United States)	September 2008	Not provided
Germany, Belgium, Netherlands	September 2008	Provided
Ireland	September 2008	Not provided (until 2009)
Iceland	October 2008	Not provided, except for onshore offices
RBS and Lloyds (United Kingdom)	September 2008	Provided
Cyprus	2012	Provided, but capped in 2013
Greece	2011	Provided, but capped in 2015

Early hesitation in providing ELA also reflected the fear that it might trigger the wider loss of confidence it was intended to avoid. This issue has been widely debated since the Northern Rock episode, where disclosure of ELA seemed to accelerate the run. More recent experience suggests that a strategy of proactive and comprehensive communication about the crisis management plan offers the best prospect of a quick return to stability.

Simplification of the structures of global finance and improvements in the resolvability of the major international banks (discussed below) can justify restoring the old belief that use of ELA should be very sparing. It was useful in the crisis given the lack of preparedness; it is not so useful now.

Nevertheless, euro area central banks have the power—and, as has been made clear in the context of break-up threats to the currency union, will doubtless have the willingness, in conditions of system-wide banking distress—to deploy ELA at whatever scale is needed.

Bail-In or Bailout?

When it comes to deciding how to allocate the direct financial losses entailed in a bank failure among potential stakeholders, it would be useful for the authorities to know in advance the size of the hole in a failing bank's balance sheet. Such information is rarely available. Poor information about the balance sheets of the banks hampered good decision making during the crisis. Almost a decade after the first signs of the crisis, the “size of the hole” question continues to throw up surprises.

Successive decisions in different countries regarding the distribution of the losses have differed sharply. These differences partly reflect the evolution of thinking on the part of some of the main policymaking entities (the European Commission, the ECB, and the IMF).

One answer to the question “who pays?” would be simply to follow the normal hierarchy of claims in bankruptcy. This choice could seem obvious, given the evident

moral hazard of bailout and the fact that bailout with public funds is a market-distorting action.

In 2008–11 European policy was driven in part by a perception that the bail-in of bank creditors even in a weak country could destabilize the wider European bank funding market through a contagion effect, increasing the cost of bank funding and limiting the availability of credit to the economy, with a knock-on effect on economic activity. Although equity holders were typically wiped out or heavily diluted, governments succumbed to the old temptation to socialize at least part—usually a large part—of the remaining losses.

With the growing scale of potential losses, some European countries began thinking about the feasibility of government bailout. Recapitalization of a large failing bank with public funds can stress the sovereign's debt sustainability—and weakening of the sovereign may drag other banks down, through a variety of channels (ownership of sovereign debt, exposure to arbitrary taxation, etc.). Even if bailout of uninsured creditors is not contemplated, the sustainability of the sovereign debt might be threatened if the government backstops a deposit guarantee fund that is insufficiently capitalized. All of these problems moved from the hypothetical to the real in 2010–11 (see Cline 2014).

Although bank failures were widespread, the degree of recapitalization required could not have challenged the debt sustainability of the European Union as a whole. However, even where official sector European funds were employed in recapitalizations (e.g., Ireland, Greece, and Spain), the funds were channelled through national government borrowing, thereby weakening the national public finances. Using European official funds to fill the insolvency would have entailed a transfer to the creditors of the relevant banks; using such funds to bring the capital of the relevant banks from zero to a sufficient level would not have done so. If appropriately structured, the European funds could have been directly used to cover a proportion of the recapitalization, yielding a satisfactory return to the lending countries

Table 2 European bank creditor bail-in decisions: Contrasting cases

Institution or country	Year	Bail-in
Lehman and Washington Mutual (United States)	2008	Yes, but not since
Hypo RE (Germany)	2008	No; nonperforming loans purchased at book value
RBS and Lloyds (United Kingdom)	2008	No; government equity injection unlikely to be recovered (Similar 2008 cases in Belgium, France, and the Netherlands)
Greece	2012	No (despite restructuring of government debt)
Cyprus	2013	Yes (but not Greek branches)
Spain and Italy	2013–16	Yes for subdebt
Portugal	2014–15	Yes, but selectively

while relieving the borrowing countries from the deadweight of a debt overhang, thereby speeding economic recovery.⁷ In fact, only slow and tentative steps have been taken toward mutualization of bailout costs; direct use of mutualized funds to strengthen the capital of weak banks remains highly constrained.⁸ (See table 2.)

Bailout has taken various forms in the recent crisis, each subtly different in its benefit to different stakeholders and its likely ultimate impact on the government's finances.

- The injection of funds (cash or other instruments) in return for an equity stake or subordinated debt protects more senior creditors while diluting existing shareholders; the degree to which dilution occurs depends on the price of the equity. In some cases (e.g., Anglo Irish Bank), the failing bank was fully nationalized and the shareholder not compensated. In other cases (e.g. RBS, Fortis), shareholders retained significant value.
- An alternative approach is to provide no cash but instead a government guarantee of creditors. Guarantees have typically required an insurance premium payment by the covered bank. Even if the guarantee shows a profit in the end, it may have benefited both the creditors and the shareholders *ex ante*.
- A third mechanism for bailing out creditors is for the government to acquire problem assets at an above-market price. The most conspicuous example is the German bank Hypo RE in 2009 (box 3). The Irish asset management agency NAMA also acquired a very large

portfolio of assets in 2010–11, but in this case pricing was closer to market and NAMA is now expected to make a net profit.

To an extent, the resolution policy reforms now being implemented in Europe and elsewhere are designed to ensure that following the normal hierarchy of claims, without government bailout, is viable both politically and in terms of the ability of the financial markets to absorb such action.

The essential elements of the reform involve (1) making a clear *ex ante* differentiation between accounts whose interruption would disrupt customers' ability to make the payments needed to conduct normal nonfinancial transactions (and as such might deserve protection) and liabilities that are more akin to investment assets and (2) ensuring that there are sufficient transactions of the second type to absorb any plausible losses in bankruptcy. Another part of the process involves improving the resolvability of banks, through, for example, the preparation of progressively more detailed "living wills" intended to streamline the resolution process and avoid interruption of essential functions.

The general idea of what is admittedly a complex and little understood regime is that bailout of large holders of senior debt should be avoided in isolated banking failures and the legal and regulatory regime in place should allow failure to happen without damaging externalities.⁹

Still, bail-in of customer liabilities in a systemic crisis could trigger a wider failure of payments and interruption of economic activity as well as an unwarranted sharp increase in risk aversion. The fear of such adverse effects can explain and even justify the assumption by the authorities of fiscal costs of some bailouts in systemic conditions.¹⁰

7. A portion of the recapitalization of the largest Irish bank was achieved in 2011 through the sale of new equity to a consortium of North American private equity funds. Their investment was highly profitable: One almost tripled its investment when it exited.

8. Most such funds are channelled through the European Stability Mechanism (ESM), an entity whose creation was agreed to by the member states participating in the euro in 2011. It has channelled financial assistance to the governments of Greece, Ireland, Portugal, and Spain. The ESM Guideline on Financial Assistance for the Recapitalisation of Financial Institutions 2014 is available at www.esm.europa.eu/sites/default/files/esm_guideline_on_recapitalisation_of_financial_institutions_with_notice.pdf.

9. A 2014 European Commission frequently asked questions document about BRRD is available at http://europa.eu/rapid/press-release_MEMO-14-297_en.pdf.

10. The overall economic recovery performance of the most affected small European countries does not provide clear evidence for or against bail-in. Greece suffered the deepest and most prolonged downturn, but banking was not the main cause of the problems in that country. Competitiveness in Iceland, the main

Box 3 Bail-in or bailout: Selected cases

A large part of the problematic loan portfolio of Germany's Hypo RE was acquired by a government-guaranteed asset management company at a price well above market value. The move allowed the bank's creditors to be made whole, making it effectively a bailout. The European Commission estimated that, together with a government capital injection, the amount of state aid resulting from the portfolio acquisition totalled more than 20 percent of Hypo RE's precrisis risk-weighted assets (Buder et al. 2011). The federal government also provided loan guarantees and capital support to Commerzbank after its August 2008 takeover of Dresdner Bank.

In the United Kingdom, more than eight years on, the market price of the government's equity stake in the large rescued bank RBS is not yet high enough to repay the initial investment. All creditors were made whole here, too. Creditors were also made whole in the early Netherlands,¹ Belgian, and French cases. In each of these cases, the net fiscal costs could be financed through moderate proportional increases in tax revenue over a period of years.

A more complicated case is Greece, whose banks were weakened by both the deep slump in 2009 and the heavy losses in the sovereign debt restructuring of 2012 (see Zettelmeyer, Trebesch, and Gulati 2013). However, in contrast to the direct holders of Greek government debt, and despite heavy outflows of deposits (total deposits fell 48 percent in the six years from mid-2009), Greek bank creditors were made whole. Administrative controls sharply limited their access to funds in 2015–16, but inflation was negligible, so they did not suffer depreciation of the real value of their deposits during this restriction period.

In Iceland, Ireland, and Cyprus, bank losses represented a much higher proportion of GDP. It is much harder to argue that assuming all of the losses would have been a socially optimal for the respective governments. Iceland decided to protect only creditors of the offices of the failed banks in Iceland, and even then administrative controls restricted export of these funds, much of which then suffered depreciation from exchange rate changes.

The extensive guarantee provided by Ireland ran out after two years, and there was considerable bail-in of subordinated debt both before and after the introduction of special bank resolution legislation that would facilitate it. Senior debt continued to be honored at the behest of the official international lenders. (The senior debt remaining in the liquidated bank IBRC seems likely to be repaid in full from the proceeds of the liquidation).

Denmark's policy in 2010 was an outlier in that the authorities bailed in senior creditors of two small banks (Amagerbanken and Fjordbank Mors). Observers noted an increase in the cost of funds to other Danish banks at that time.

The best example of the use of classic bankruptcy rules is Cyprus. One of the two main banks (Laiki) was closed; uninsured depositors had to take their place in the liquidation. The other bank (Bank of Cyprus) remained open and began to manage business transferred from the first bank. However, uninsured depositors suffered a costly debt-to-equity swap. Somewhat paradoxically, the Greek branches of Laiki were sold to a Greek bank just before the resolution of the bank, with the result that the creditors of the Greek branches were made whole, in contrast to creditors at the branches in Cyprus.

Spain and Italy also experienced bank losses, but they were not fully recognized before 2013 (Spain) and 2016 (Italy). By that time, thinking at European institutions had hardened against the bailout of subordinated debt. Indeed, a new European law on banking resolution, which came into effect in 2016, proscribed further bailouts of subordinated debt. However, the bail-in of some subordinated debt in failing Spanish and Italian banks proved to be politically controversial when it was suggested that much of the bailed-in debt may have been mis-sold to retail customers, as the banks worked to build their capital to the higher levels mandated by regulators since the crisis.

The resolution of the sizable failed Portuguese bank Banco Espírito Santo (later called Novobanco) during 2014–15 entailed bail-in of senior bondholders as the new European resolution framework was coming into effect. Controversially, it was implemented by the Portuguese authorities in an unorthodox way that did not treat all bondholders equally (though the authorities argued that there were objective differences between the classes of bonds treated differently).

Less common in the recent crisis was bail-in through inflation and depreciation, a mechanism that proved important in many earlier crises. Many of the most affected countries this time were members of the euro currency union or countries (e.g., Latvia) that retained a tight currency peg with the euro. Even in the case of Iceland, the effect of this mechanism was influenced by the fact that Iceland's banking system was heavily dollarized.

1. Note, however, that subordinated debt holders were bailed-in as early as 2013 in the resolution of the small Netherlands bank SNS Reaal and also in the resolution of three failing banks in Slovenia in the same year. During 2010–11, subordinated debt holders of failing Irish banks accepted severe haircuts under the shadow of formal resolution.

But given the scale of modern finance and its cross-border nature, the size of a systemic bailout can easily result—and often has resulted—in distorting increases in taxation and cutbacks in needed public spending programs. It is not only in the rare cases where the cost is sufficiently large to trigger a vicious cycle of unsustainable debt that the balance of advantages (and the question of which public authority should bear the costs of bailout) needs careful evaluation.

Open-ended commitments to bailout, such as blanket guarantees, should be avoided in such circumstances. After all, it is not only the socialization of private costs that is at issue but the moral hazard generated by the practice of bailouts, which blunts the risk aversion of bankers and their financiers, increasing the likelihood of future crises.

The BRRD sets out clear, and overly rigid, rules for bail-in. The rule that bail-in must reach 8 percent of total assets (not risk-weighted) before public rescue or resolution funds are provided is demanding. It will be less challenging to put this rule into practice in the future when additional explicitly loss-absorbing liabilities are fully in place in each bank. It could create unnecessary problems in the interim, however. In addition, the rules on how much loss-absorbing liabilities (total loss-absorbing capacity [TLAC] and minimum requirement for own funds and eligible liabilities [MREL]) a bank needs to have are still not fully aligned with each other or with the BRRD's 8 percent rule; these requirements need to be harmonized. The BRRD does provide more flexibility for periods of general panic.

The reluctance of several European governments to implement the spirit of the new rules in full cannot be ignored.¹¹ It may be that a politically viable equilibrium has not yet been fully achieved in this area.

Insofar as only bail-in of subordinated debt is being considered, it is hard to see why there should be any public policy objection were it not for the strong suggestion that some of this subordinated debt was mis-sold. Bail-in of subordinated debt was accomplished smoothly in the crisis; it cannot be considered problematic per se.

bail-in country, was restored thanks to a sharp real depreciation, which led to a quicker reduction in unemployment than in the main bailout country (Ireland), albeit at the expense of a steeper reduction in the average real incomes of those at work in Iceland.

11. The recent case of Heta (the defeasance vehicle created from the failed bank Hypo Adria Alpe, which had been guaranteed by the Austrian province of Carinthia) is a case in point. Bailed-in senior and subordinated bondholders were later offered (and accepted) an exchange for bonds guaranteed by the Austrian national government, imposing net present value losses of as little as 10 percent on senior bondholders—and removing a crippling burden from the Carinthian provincial government.

CONCLUDING REMARKS: A GLASS HALF FULL

Reflecting the multicountry context, the new resolution mechanisms of the European Union are complex and in some respects not fully articulated.

The promised banking union has not yet been completed. A common deposit guarantee scheme is still on the drafting table, and the funding of the common resolution authority is still in the early build-up phase. The reluctance to use collective resources directly to fund precautionary recapitalization on a mutualized basis (instead of routing such moneys through the budget of what may be stressed national governments) blocks what would seem the obvious route to strengthening the loss-absorbing capacity of European banks. The procedures of the competition authorities of the European Commission designed to prevent government-assisted restructurings from distorting competition can sometimes unnecessarily complicate the resolution process.

Yet the essential policy framework for a coherent approach to crisis management and resolution is in place, preventing society at large from having to shoulder the burden of private banking losses in order to ensure the smooth functioning of the payments and credit system. At the same time, enough emergency liquidity and bailout powers are still present to ensure that a severe panic can be halted.¹²

Although it could be deepened, the resolution framework is adequate to deal with the immediate challenges, which relate to a handful of banks that have not been fully restored to health and may need resolution. Despite the political challenges that are inevitably associated with bank resolution, any immediate resolution cases can and should be done within the new framework, cementing the approach and providing clarity for the future.

Policy also aims at ensuring that, through legislation and regulation to simplify and strengthen the structure of their balance sheet, large failing banks can be readily resolved or restructured without interruption to the operation of the payments system, without losses to the operational deposits of their customers.

Implementing the new resolution approach may present political difficulties, but it will be important to follow through on what has been agreed to. Only by doing so can governments provide investors and bank customers with the certainty needed for the effective functioning of finance. At the same time, retail investors to whom subordinated debt in failing banks was mis-sold should be compensated.

Ideally, the need for these measures will be reduced by the parallel efforts that have been made to improve the safety and soundness of the European banking system

12. Indeed, it may be that the legal powers of European financial authorities are now more flexible in this regard than those of the United States (see Geithner 2016).

through better supervision, not least in dealing with the still exceptionally high level of loan arrears and especially through general increases in the required capitalization of banks (although here, too, more could be done). Some regulatory authorities are going beyond capital requirements and adopting macroprudential rules limiting banks' exposure to types of credit contract that have been associated in the past with subsequent losses. It is unlikely that loss-absorbing or capital instruments will be as heedlessly mis-sold to retail

customers as may have been the case in some countries in the past. Attention is also focusing on the vulnerabilities created by excessive exposure of banks to the debt of financially weak governments.

Given the slow pace of nonperforming loan clean-up, it is not surprising that equity markets remain unconvinced about the capitalization of European banks. Adherence to a coherent resolution regime is one of the essential elements for redressing this situation.

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POLICY BRIEF. PB 17-1 Management. and Resolution of. Banking Crises: Lessons from Recent. European Experience. Patrick Honohan. January 2017. Patrick Honohan joined the Peterson Institute for International. Economics as nonresident senior fellow in March 2016, having. been governor of the Central Bank of Ireland from September 2009. to November 2015.Â the European experience with banking crises over the past. decade. It focuses on management and resolution policy in. the countries of the euro area, with a view to identifying. lessons about the likely policy response. It concludes by. noting that despite improvements, more needs to be done. to ensure the safety of European financial institutions and. prevent future banking crises. Executive summary Experiences of other countries, including in Eastern Europe, Latin America and Scandinavia, suggest several important principles for successful systemic bank crisis resolution and bank restructuring. Systemic bank restructuring, a lengthy process, requires sufficient public resources, and deep changes in institutions, rules of the game and attitudes. An early and systematic evaluation of the size of the problem, an overall strategy, and prompt action can help limit economic costs. The approach needs to be comprehensive and credible and repair the immediate flow and stock prob Senior Supervisors Group. Risk Management Lessons from the Global Banking Crisis of 2008. October 21, 2009. Risk management lessons from the global banking crisis of 2008. CANADA Office of the Superintendent of Financial Institutions.Â Traditional sources of funding, especially for European banks, such as securities lending reinvestment pools and money market mutual funds, faced significant and immediate pressures to reduce their investment positions. These pressures became apparent following the announcement of losses in the Primary Fund series of the Reserve Fund in the United States.Â A key lesson of the crisis, drawn by both firms and supervisors, was that complex corporate structures hindered effective contingency funding. The policy approaches to resolve the banking crises across European countries were remarkably different, reflecting the lack of administrative and legislative preparation for bank resolution. As banking systems that had been allowed to enlarge suffered in the face of the global downturn, the scale of bank failures that swept Europe overwhelmed existing policy structures. Not all the policy choices made seem wise in retrospect; a new policy approach was clearly needed.Â Patrick Honohan, 2017. "Management and Resolution of Banking Crises: Lessons from Recent European Experience," Policy Briefs PB17-1, Peterson Institute for International Economics. Handle: RePEc:ie:pbrief:pb17-1.