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Developing a Framework for Effective Financial Crisis Management

by

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This article discusses the roles and responsibilities of the various agencies that are part of the financial system safety net, and it sets out a framework for the decision-making process for these actors in the management of a financial crisis. In this context, the article discusses issues of micro- and macro-prudential oversight and argues that more needs to be done to ensure accountability, independence, transparency and integrity of the various actors of the financial system safety net.

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OECD work on financial sector guarantees

OECD work on financial sector guarantees has intensified since the 2008 global financial crisis as most policy responses for achieving and maintaining financial stability have consisted of providing new or extended guarantees for the liabilities of financial institutions. But even before this, guarantees were becoming an instrument of first choice to address a number of financial policy objectives such as protecting consumers and investors and achieving better credit allocations.

A number of reports have been prepared that analyse financial sector guarantees in light of ongoing market developments, incoming data, discussions within the OECD Committee on Financial Markets. The reports show how the perception of the costs and benefits of financial sector guarantees has been evolving in reaction to financial market developments, including the outlook for financial stability. They are available at www.oecd.org/daf/fin.

- Financial safety net interactions
- Deposit insurance
- Funding systemic crisis resolution
- Government-guaranteed bank bonds
- Guarantees to protect consumers and financial stability

As part of that work, the Symposium on "Financial crisis management and the use of government guarantees", held at the OECD in Paris on 3 and 4 October 2011, focused on bank failure resolution and crisis management, in particular, the use of guarantees and the interconnections between banking and sovereign debt. Conclusions from the Symposium are included at the back of this article. This article is one of nine prepared for presentation at this Symposium.

- Managing crises without guarantees: How do we get there?
- Costs and benefits of bank bond guarantees
- Sovereign and banking debt interconnections through guarantees
- Impact of banking crises on public finances
- Fault lines in cross-border banking: Lessons from Iceland
- The macro-prudential authority: Powers, Scope and Accountability
- Effective practises in crisis management
- The Federal Agency for Financial Market Stabilisation in Germany
- The new EU architecture to avert a sovereign debt crisis

1 Introduction

Public confidence plays an important role in sustaining financial system stability. In normal times the regulation and supervision of banks, the promotion and use of standards of sound business and financial practice, central bank actions, explicit deposit protection and an effective bank closure mechanism all help to reduce the adverse consequences of a financial crisis emanating from bank failures. It is understood that banks, like other firms, will fail[1] and the likelihood of this happening is higher when risks in a particular banking concern are not managed appropriately, bubbles in certain markets burst or financial markets are very fragile due to either domestic or foreign reasons. In almost all circumstances private sector solutions, such as rights issues or mergers, should be pursued in the first instance to deal with problem or failing banks, as in most cases they can limit the pressure on the financial system safety net (FSN). However, when problems become systemic governments tend to play a much more active role and call upon the agencies that make up the FSN to undertake extraordinary measures. Intervention can take a variety of forms. As such, there is a clear need for officials to undertake coherent contingency planning, financial risk assessment and crisis management. A significant development on that front has been the introduction of financial stability forums in the form of committees in individual countries to oversee agencies within the official safety net and improve how they govern macro-prudential and micro-prudential issues (Nier et al 2011).[2] However, financial stability committees are not new and the reinvigoration of a formal oversight body is unlikely to fulfil all that is expected of it. This gives rise to an expectations gap, which we explore.

It is trite to say, but financial market crises occur on a regular basis with similar causes, as explained by Reinhart and Rogoff (2009); however, recent experience suggests that very little attention has been given to how best to manage them. One explanation could be that one crisis seems to lead to another, so it is difficult to determine the endpoints. Another explanation might be that crisis management needs more attention so that lessons learned can be incorporated into improved techniques to minimise the effects of catastrophic events. Notwithstanding the fact that a considerable amount has been learnt about crisis management from past experiences, lessons from the past seem to be amiss in terms of guiding future directions, so the risk of repeating mistakes arises.

This article focuses on measures used to contain a financial crisis, and generally takes account of events in the European Union (EU). We review the experience of the crisis so far and seek to draw some conclusions on how it was overseen and managed based on that analysis. Section 2 sets out the main structure of a FSN and describes how the mandates, roles and responsibilities of the agencies within it tend to change during the course of a crisis. Attention is also given to the interests and impact that stakeholders, in the marketplace outside the FSN can have during a bank failure or financial disaster. The paper sets out why careful attention to the FSN and the market stakeholders is now quite important. Recent experience offers many examples of the need for more clarity in the management of a crisis. To help policy-makers a decision tree is offered and explained in section 3 as an alternative to the spurt of *ad hoc* pronouncements that have done little more than confuse markets and undermine the public's confidence in policy-makers. One of the clear messages is the need for more effective oversight of micro- and macro-prudential factors. But more effective oversight is not enough, as noted by the IMF, without attention to the need to ensure accountability, independence, transparency and integrity (Ingves and Quintyn 2003). In section 4, with the EU experience in mind, we examine the tools used to contain a financial crisis. Section 5 considers the usefulness of a micro- and macro-prudential system of oversight to contain a crisis before we set out a means to bridge the

gap with the introduction of some form of financial stability oversight body. Some conclusions are offered in the final section of the paper.

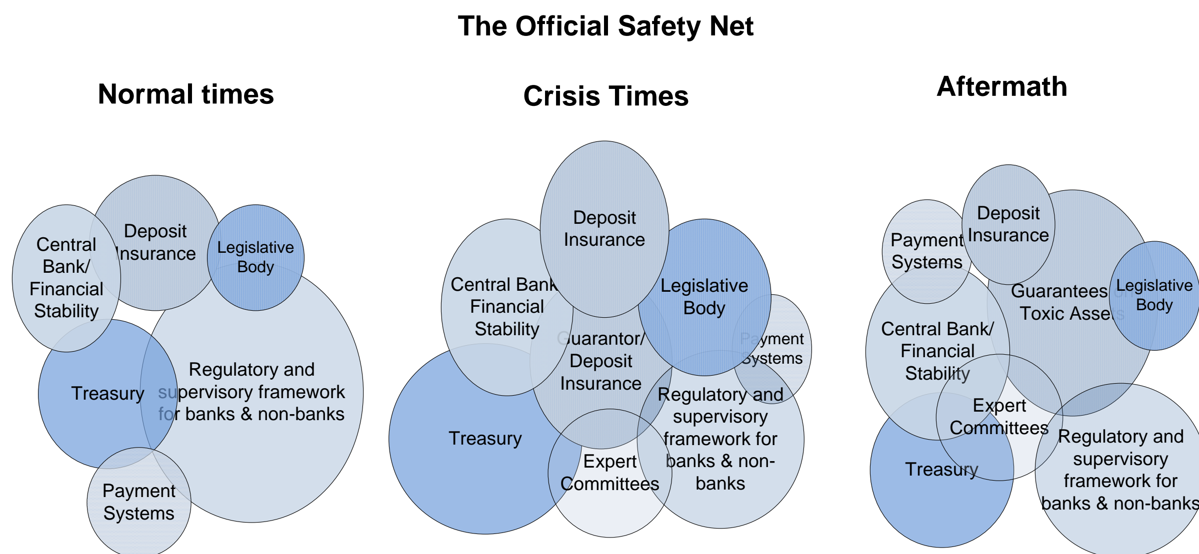
2 Reflections on the FSN Players: Their Roles and Responsibilities in Promoting Financial System Stability

The financial crisis that began in 2008 demonstrated severe weaknesses in the FSN (FSAP, 2010; IMF 2010; LaBrosse and McCollum 2011). While the deficiencies were evident almost worldwide, the most severe problems were found in European markets, largely due to the lack of coordination, consultation and development of coherent strategies to deal with the crisis (European Commission, 2010a, 2010b). For those reasons it is important to know at the outset what organisations should be included in an FSN, including their roles and responsibilities, and why the interests of other stakeholders are also quite important. In basic terms the question becomes: who should be included in the official safety net and deemed the core stakeholders in the financial system? The answer is important because during a crisis there needs be a high level of consultation, coordination and cooperation between the various interested parties. Figure 1 sets out the official safety net players, showing how their influence in decision-making and management of issues changes through a time spectrum.

The Official Safety Net Players

The FSN has traditionally included a lender of last resort (central bank), prudential regulation (by a bank supervisor), a government department (Ministry of Finance or Treasury) and explicit deposit protection (insurance or other form of a limited guarantee) (Financial Stability Forum 2001; Schich 2009). But the recent financial crisis underscored that the group of official safety net players has become somewhat more elastic. There is a need to consider the roles of the legislative body, non-bank regulators such as securities commissions, housing agencies and insurance company regulators, as decisions that they take can have an important impact and threaten financial system stability. Moreover, there are compelling reasons to consider other stakeholders and bring them into the dialogue so that financial system stability can be addressed more effectively and efficiently. The roles of shareholders, external auditors, the courts and credit rating agencies need to be appreciated and understood better in the pursuit of financial system stability as external decisions by those parties can have a direct impact on the official safety net players' response to safeguard system stability. This is not to suggest that they reside in the FSN, but to ensure the FSN is able to respond proactively rather than reactively to instil a better degree of confidence in the financial system.

Figure 1: Official Safety Net Players



The Ministries of Finance, or Treasuries, take a particular interest in the efficient functioning of FSNs. During relatively stable times the Treasury sets tax policy, manages a country's finances, is the steward of the government's accounts and provides advice on financial sector policy issues. In light of these tasks it has oversight responsibility for monetary and economic policy. The role of the Treasury inevitably brings it under the surveillance of the IMF and into OECD forums, where its performance is assessed on a regular basis. Broadly speaking the Treasury will act in good faith in terms of how it manages a country's finances. The exercise of its discretion can and may well be directed by the government with limited autonomy or, as in the case of Germany, the right to veto government decisions on public finances.

The Treasury's role in terms of financial sector policy development is broadly speaking one of oversight, with responsibility for monetary policy and financial regulation and supervision delegated to other organisations within the FSN. In the context of the euro area the European Central Bank (ECB) has the mandate for setting monetary policy. In other countries monetary policy is delegated to the central bank and the functions of regulation and supervision to a different department of the central bank or a separate authority. International forums for policy discussions on financial matters are technically the responsibility of the Treasury, but it may have the central bank, the prudential supervisor and the deposit insurer by its side. In most instances the prudential supervisor has direct responsibility for day-to-day oversight of the financial system, and may be able to initiate changes in regulatory policy with relative independence once the regulatory architecture is agreed by the government and a country's legislative body. The gaps in financial regulation could reasonably be laid at the door of the Treasury since it is its role to initiate reform in this area, which in practical terms leads it to rely on its central bank and prudential supervisor and perhaps other regulators for advice. Moreover, the move towards macro- and micro-prudential regulation highlights a need for a holistic approach to the management of financial sectors.

Central banks are responsible for safeguarding the payments system and providing liquidity against security to the financial system and, at times, to individual but still solvent banks. The primary forums for dialogue between central banks is the BIS, and in the euro context the ECB. Such activities are often called lender of last resort (LOLR) facilities or

emergency liquidity assistance (Wood 2000). The facility of LOLR is used with an eye to avoiding a liquidity problem that might otherwise turn into a panic in the banking and financial system. The central bank could exercise the LOLR function either through open-market operations or by providing loans to individual banks. Central bank interventions are designed to promote and if needed stabilise market confidence and avoid unnecessary bank failures that result from temporary liquidity problems. In Bagehot's, view it should be made available provided that it is used to avoid panics when banks experience such problems (Bagehot 1915 reprint). It is given at a rate to ensure repayment is made expeditiously once the event is over; and it should also only be given against good forms of collateral. Moreover, during a crisis LOLR can be provided to solvent institutions with collateral. Another important ingredient in providing liquidity is that the central bank must act decisively and quickly without hesitation, otherwise a panic could be prolonged and spread into other parts of the financial system which were unaffected by the original problem.

The LOLR facility is traditionally considered the preserve of the banking system, but it can be and has been used to avoid liquidity problems more widely. However, the existence of the LOLR does give rise to a number of concerns that require central banks and prudential supervisors to gauge carefully when support is given, namely moral hazard and 'too-big-to-fail' (TBTF) connotations (Wilmarth 2010). The concern over moral hazard is exacerbated by the policy of intervening with financial support if the institution is considered TBTF.

The primary member of the FSN tasked with day-to-day responsibilities for the financial system is most likely to be the prudential supervisor. It must protect the perimeter in terms of both entry to and exit from the financial system. This is notwithstanding the fact that the resolution of problem banks may be located in another part of the official safety net. A focus on adherence to prudential requirements and compliance is a way to influence and, in the extreme, change the behaviour of banking institutions either collectively or individually. The supervisor needs to be equipped with appropriate enforcement tools to ensure compliance with laws, regulations and guidelines. In relation to enforcement a problematic issue is supervisory forbearance, as it can lead to accommodations rather than formal actions, and questions about what the regulator knew about a bank that is subsequently closed or fails (Garcia 2010). It is generally asserted to be best practice that the tasks of supervision should be conducted independently of political interference. However, the extent to which this can be accomplished during a crisis is questionable, considering the political response during the recent crisis to bailout depositors and individual banks. Decisions to protect depositors or even banks when formal systems of explicit deposit insurance and a bank resolution regime are in place are primarily political rather than regulatory. Obviously, during a systemic crisis the policy rationale of letting a bank fail or providing full coverage for depositors must address the loss of confidence in financial markets. Again, it is evident that the FSN can also forbear from closing non-viable banks because they are perceived to be too big to fail (Garcia 2011).

Deposit protection has become an important feature of modern banking systems. Its role in a systemic crisis is limited, as it is generally designed to deal with either a few small bank closures or one medium-sized bank closing. What is evident from the current financial crisis is that a poorly designed system of deposit protection can escalate a bank failure into a crisis, as experienced in the United Kingdom with Northern Rock.

Deposit protection can take two basic forms – implicit or explicit insurance or guarantees. Implicit deposit protection exists when depositors will be fully reimbursed if a bank fails and in regimes where taxpayers rescue banks that might otherwise fail. The belief that depositors will be fully compensated is usually linked to past statements by

government officials. Governments may also believe that the failure of one bank will precipitate a run on deposits in otherwise healthy banks. It is important to note that implicit arrangements do not have an administrative mechanism to repay depositors, which may mean using the courts to settle claims. The uncertainty that is created as to whether a government will actually step in to reimburse depositors in a failed bank encourages customers to place their savings in larger banks and banking markets tend to become less competitive. Trust in an implicit guarantee could be misjudged in light of the fact that the guarantee may mean only a partial rather than a full payout. As well, the pressure on governments that results from depositors having reduced or no access to their funds can create instability in financial systems. These problems, coupled with the instability and uncertainty inherent in implicit systems, lead governments to consider adopting explicit deposit protection.[3]

Interestingly, the number of explicit deposit protection systems has increased significantly to over 100 countries.[4] Explicit arrangements can take the form of a formalised insurance system (sometimes referred to as the 'North American model') or a guarantee system (the 'European approach') (Singh and Walker 2009; Gerhardt and Lannoo 2011). While both kinds of arrangements have many features in common (such as setting defined coverage limits and compulsory membership), the system funding facilities can be quite different. It is evident that guarantee systems often are not well funded and tend to rely on *ex post* industry levies to repay depositor claims on the estate of a failed bank. Also, many features of guarantee systems are not well understood by the public (very few such systems spend any time or money on public awareness activities). While the insurance aspects of both approaches may increase moral hazard, the North-American-style systems, if used properly, can address the hazard created in a much more direct way: they use differentiated *ex ante* premiums, which instils greater market discipline and discourages excessive risk taking, and have proactive prudential supervisors that undertake mutually reinforcing actions.

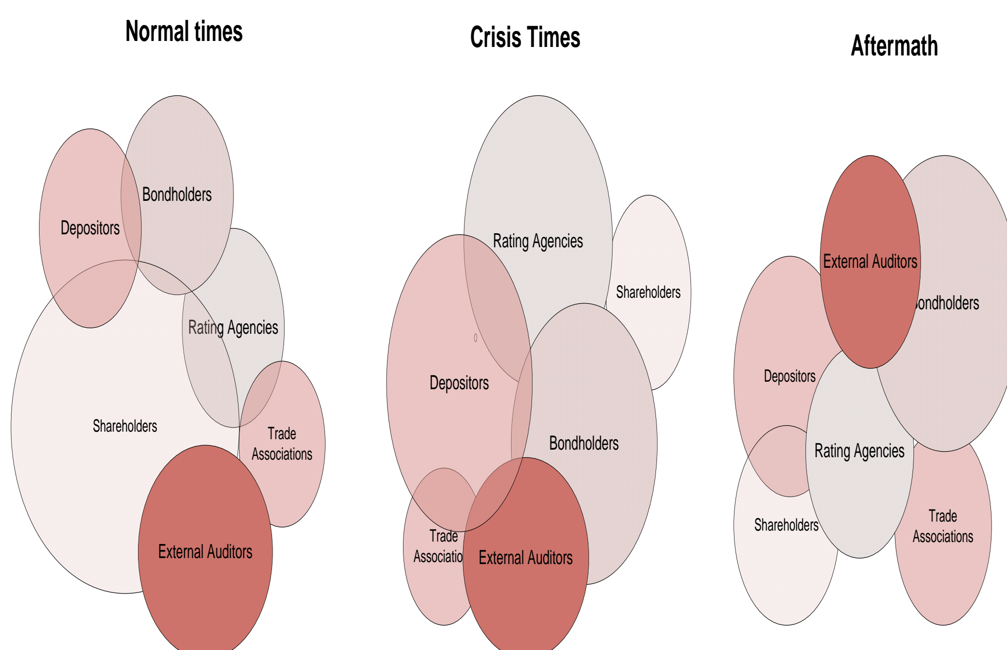
Legislative bodies obviously play a crucial role in the development of laws and holding incumbent governments and their agencies accountable. Legislative bodies principally safeguard the constitutional and public interest by calling officials to testify in open forums. The legislative body will also be the primary port of call for holding the FSN players accountable for their decisions,[5] and may consider the interests and activities of various stakeholders. While legislative scrutiny is a continuous process, its intensity is much more marked during times like these: the level of public finances used to bail out or prop up the financial markets and the extent and depth of crisis make it vital (BBC 2011). The principle of the right to protect one's private property is certainly controversial when the state intervenes and takes some interest in or takes control over or interferes with those property rights (Hopt et al., 2009). Only through legislative means could such steps be taken.

The response to the 2008 financial crisis has meant that the mandates of FSN players have been extended, either by legislative means or through delegation by the Ministry of Finance or Treasury. It is therefore important to assess what likely role the legislative body will play in any given crisis. In the country case studies explored later in this paper it is clear that the approach to initiating responses to the crisis varied quite significantly. The level of *ex ante* and or *ex post* accountability of the decisions is also evident. However, one principal ingredient in the majority of responses was the need for the legislative body to enable the FSN to use the tools necessary to contain the crisis (Darling 2011).[6] Appropriate discussion and influence on the extended mandates certainly need formal consideration.

Stakeholders in the Financial Markets

The dynamics of some key stakeholders in the financial system are illustrated in Figure 2. Intervention by the authorities during the crisis was partly a result of financial intermediaries' inability to raise funds in the markets. Figure 2 highlights only some of the stakeholders. It is suggested that in normal times the principal focus of managements is the interests of shareholders and shareholder value. The reaction of the various stakeholders will also vary because of the asymmetry of information the principals and agents have about one another; and how distress has an impact on their interests in the institution. Interlinked is the role of the external auditor, as the party which is required to provide an opinion on the performance of the institution to the shareholders, but is also relied upon by FSN players when they conduct supervisory responsibilities for the regulator.

Figure 2: Stakeholders in the Financial Markets



The interests of depositors in such periods are not necessarily at the forefront of the minds of the banks, albeit there is a general duty on the FSN to protect depositors and to a lesser extent investors rather than owing a duty to the shareholders as a whole. The responsibility to exercise enforcement of regulation and supervision requirements to protect the interests of depositors and investors is an illustration.

In times of crisis the priority placed on the interests of stakeholders changes. During the crisis the interests of depositors were very much at the forefront of the FSN players' minds because of concerns of a bank run or panic selling (Mayes 2010). Once risks at a bank are publicised the prospect of a run is very real and sustaining confidence in the retail deposit market is paramount. It is normatively argued that stakeholders in the equity and debt markets can also affect the decisions of the FSN players in the course of containing a crisis. The response is likely to be coordinated rather than reactive given the speed at which these markets operate and their size and transnational nature. It is useful, however, to try to put

these stakeholders into any decision-making process to reflect on their importance. A principal point of the containment process is the need to get the markets to orchestrate a response which is considered acceptable without setting off a panic. In many instances the steps to recapitalise a bank are initiated by the prudential supervisor. But the success of the rights issue offered by the institution will essentially be dependent on the market's confidence in the institution (Ferran 2008; Hupkes 2009). If it is not evident, the FSN players may intervene with public funds to recapitalise the institution. In such cases the interests of shareholders and other creditors are first in line to be wiped out. The bondholders of distressed banks will also be concerned about any risk to the credit rating of the institution and haircuts that may need to be made.

Credit rating agencies and external auditors should be viewed as 'information intermediaries', and also play an important role: a decision to downgrade or qualify the accounts will likely result in a panic in the markets (EFinancialNews 2011; Evans-Pritchard 2011). In light of these decisions the FSN players have to respond to restore confidence. However, the ability of the official safety net to assist with public support can burden the state and place pressure on its own credit rating. How these information intermediaries work with the official FSN players does vary when it comes to external auditors, with some governments relying heavily on undertaking day-to-day monitoring including on-site inspections (House of Lords 2011). However, how credit rating agencies are to be brought under the broad regulatory umbrella has not been given as much attention as how external auditors are used in bank supervision (Basel Committee on Banking Supervision 2008). To avoid coordination problems between the regulator and the credit rating agencies it may be an idea to devise a memorandum of understanding to assist in this matter in the first instance. It is suggested lessons learnt from how external auditors are used could provide valuable insights. This would mean both the external auditor and the credit rating agency would become 'supervisory gatekeepers' in one form or another (Singh 2011a; Coffee 2006). The opportunity for dialogue between the information intermediaries enables the authorities to orchestrate a response to information disclosed to the markets in a coordinated fashion rather than reacting without prior knowledge.

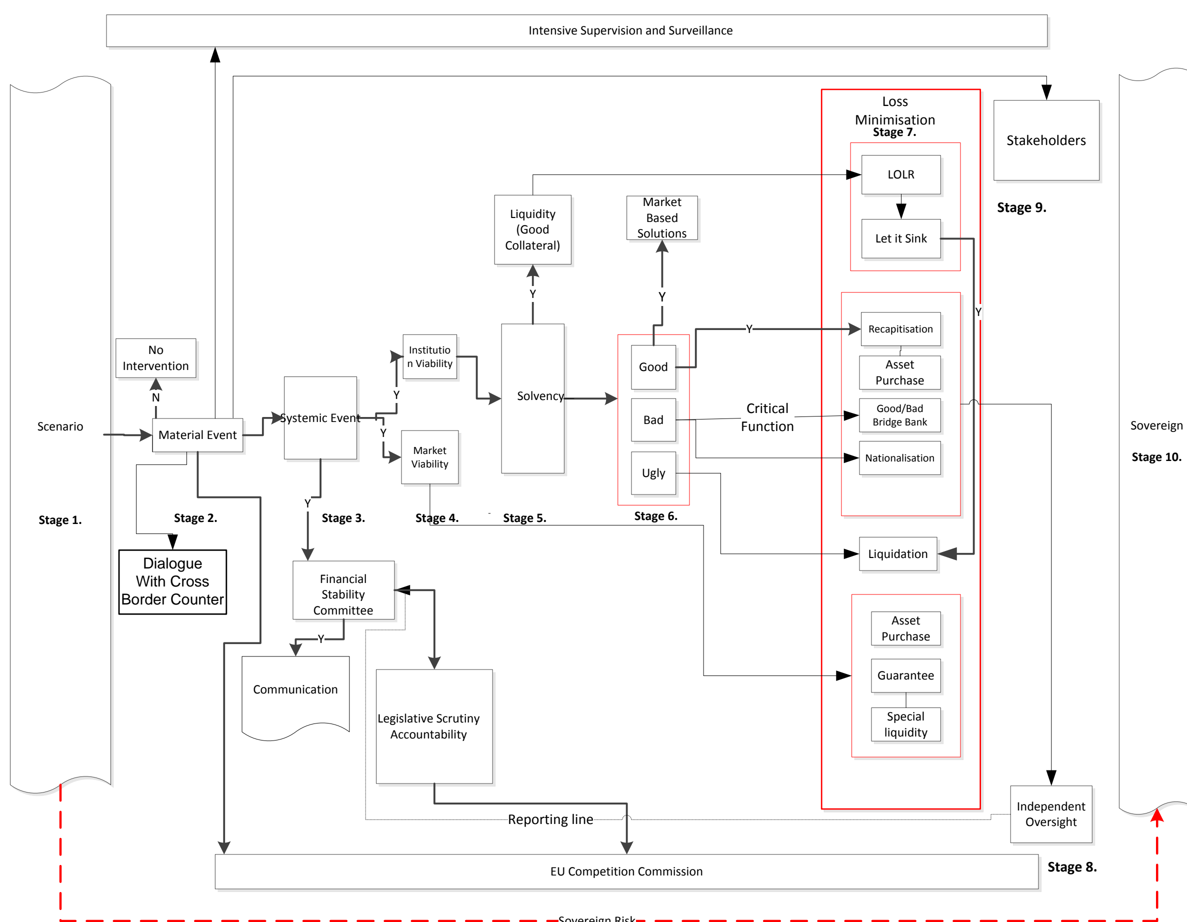
3 Crisis Management and the Decision-Making Process

Dealing with a failing financial institution or indeed a crisis is a complex matter and can involve numerous official FSN players and stakeholders. Figure 3 depicts a realistic decision-making tree surrounding financial crisis management. When a crisis occurs (stage 1), particularly if it involves a bank failure that becomes the focus of media attention, it is important to determine if it is a material event (stage 2). If it is not, then no action may need to be taken. On the other hand, a large bank failure or several small or medium-sized banks failing in a short period could be problematic and lead to a systemic event which could trigger a number of subsequent steps. Once a material event is identified the regulator will be required to initiate even more intensive supervision and surveillance continuously until the matter is resolved (stage 7). It would also be hoped that the issues arising are identified soon through a formal system of early intervention which could reduce the social and economic costs of any subsequent action (Krimminger and Lastra 2011; Singh 2011c). In addition to these steps officials need to initiate dialogue with overseas counterparts where the institution has a material presence to coordinate any subsequent actions (Mayes 2009a; Bliss and Kaufman 2011). One of the first initiatives should be the creation of a steering group, possibly around the financial stability committee that will oversee the management of subsequent events (stage 3). The role of the financial stability committee is explored in more detail in section 5. The steering group will find value in establishing two specific committees: one charged to generate a communications plan and the other asked to develop

legislative reforms that may need to be deployed at a later stage of the crisis. During stage 3 the legislative body will need to be continuously informed and required, when necessary, to empower the official safety net players with the tools to contain the crisis through legislative means, so that the public interest can be safeguarded. This is quite controversial, as the containment of a crisis may impact on property rights.

When a bank is failing policy-makers are often faced with the challenge of determining whether the bank is viable (stage 4). We believe that using a test of viability is important, as it is generally considered to be a point at a higher capital level than insolvency – the latter is the stage where there is no capital left to support the bank (stages 5–6). There is always an interest in trying to 'ring-fence' a failing bank (stage 6), as failure to do so may precipitate a run on other banks and thus deepen the crisis. Policy responses could include measures such as increasing a bank's capital ratio, strengthening the quality and sources of bank capital, evaluating a bank's liquidity plans based on future cash flows, increasing credit monitoring, undertaking special examinations that could be necessary in the event of a depositor payout and expediting asset recovery.

Figure 3: Decision Tree Surrounding Financial Crisis Management



We have introduced another dimension to this discussion: market viability, which requires a different set of containment measures. In this context we argue the tools that are

utilised are market-wide facilities. Compounding the problem could be a lack of liquidity, which may require closer monitoring by the prudential regulator and possibly an extension of a government guarantee. A good example of this would be the OTC derivatives market and the concentration of risk in a relatively small number of broker dealers. If the institution is viable there might be a number of options available – the 'good' (collateral) could be sold as part of a market-based solution and the 'bad' (non-performing loans) part of the bank could be recapitalised through public funds. In that regard a bridge bank could be created to assist in a transition of parts of a bank's business to save certain critical functions (Mayes 2007; LaBrosse 2011).

Some parts of a bank's assets book might simply be 'ugly' (non-performing after three months or simply ready to be written off), but with the careful attention of a bank resolution agency could be rehabilitated. For example, if a bank has taken security on a property that would have little or no value in liquidation, a bank resolution agency might be able to minimise its exposure to loss by injecting funds or taking an equity interest in the completion of the property. Guidance respecting bank resolutions is now more widely available and some of the more important aspects have been developed based on a survey of good and effective practices and lessons learned. Research by the Financial Stability Forum (2001), encapsulated in stages 7–9, found there are many ways to resolve a failing bank, and the techniques can generally be grouped under three headings: liquidation and reimbursement of depositors' claims; purchase-and-assumption transactions (sales); and open-bank financial assistance. Clearly, the more recent attention to 'living wills' can be helpful to regulators in evaluating options (Avgouleas et al., 2010). Existing bankruptcy/insolvency and other laws such as depositor priority may influence heavily the choice of resolution methods, and in some cases may make a particular resolution method difficult to implement.

The potential failure of a number of banks in a short period can threaten the stability of markets, so we have provided a separate category with bank viability to include market viability. We argue normatively that the need to maintain market viability may not necessarily be minimised by the introduction of innovative restructuring and resolution powers. So in a market where liquidity is scarce the FSN players may still be required to step in with additional liquidity support or other schemes, namely asset purchase or liability guarantee schemes. When the market as whole becomes too fragile, the option of closing several banks or non-banks may not be available.

In stage 7 we address various options and strategies for loss minimisation. The first group surrounds the role of LOLR for institutions that are experiencing short-term liquidity problems. The next set of options is for institutions that are primarily experiencing insolvency issues of various degrees. The subsections provide options either to recapitalise or restructure the bank and ring-fence the good parts from the bad. In circumstances where the bank is possibly too big to rescue, as a last resort the FSN may decide the best option is to nationalise it. A primary task with those options is to ensure that the critical functions are safeguarded (Hupkes 2005). The last set of options, the provision of guarantees to the market, gives rise to contingent liabilities that require careful monitoring. Finally, we have set out a stage 9: the FSN needs to consider the various stakeholders, as they can have a significant impact on decisions.

The 2008 financial crisis provoked extensive use of techniques such as loan guarantees, capital injections and sales of assets, banks or parts thereof (stage 7) (Singh 2011b; Lastra and Wood 2011. The exercise of these additional tools requires the setting up of an independent body (stage 8) to oversee the public interest in government assistance to private banks. As we show below, a number of countries introduced various types of

independent oversight bodies, such as asset management companies or simply an entity to manage the relationship between the government and the publicly recapitalised banks. It is suggested that some kind of reporting line needs to be put in place between the newly established body and the legislative body so there is additional oversight of what they are doing. We have (stage 9) set out the need for the FSN players to have in mind the decisions taken by key stakeholders, namely credit-rating agencies and external auditors, referred here as ‘supervisory gatekeepers’ (Singh, 2011a). The power of shareholders needs to be considered, as they can influence or potentially block any negotiated takeover during such periods. In some instances countries experienced a situation where difficulties in access to the international financial markets led to a position where the state needed either to seek assistance from the IMF (Hungary) or assistance from key regional players, for instance Iceland from certain Nordic countries. Later, as the problem with Ireland worsened, we saw the United Kingdom provide assistance to its neighbour. Both Iceland and Ireland subsequently received IMF assistance. Finally, at the bottom of the decision tree we have placed the EU Competition Commission. It is evident that the Competition Commission has been crucial to monitor the moral hazard implications of the bailout operations. The extent to which it has been able to contribute to the dialogue regarding the pricing of the bailouts is explored later.

4 Using the Tools of Containment: The Response

The primary objectives in containing a financial crisis are first, simply to stop it, and second, to prevent it from affecting the real economy (Gelpern 2009; Mayes 2009b; Mayes 2009c). However, pulling out all the stops to contain a crisis can have serious long-term consequences for the ‘viability’ of the state to raise finance in the future at pre-crisis rates from the markets (Sighvatsson and Gunnarsson 2011). The recent financial crisis has led to considerable costs. Panetta et al. (2009) note that:

> *The overall amount of resources committed to the various packages by the 11 countries examined totalled around EUR5 trillion or 18.8 per cent of GDP; the outlays have been EUR2 trillion or 7.6 per cent of GDP. The size of the interventions varies greatly across countries: it is higher in countries such as the UK and the Netherlands (where outlays have reached 44.1 per cent and 16.6 per cent of GDP, respectively) where the banking system is large relative to the real economy and is dominated by large institutions that have been severely hit by the crisis.*

The idea is to stabilise market confidence in individual banks, reduce the risk of a bank run and prevent depositors from removing funds and thereby draining a bank. The attempts of depositors to place their money in what are perceived to be healthier banks during a crisis are not a material concern for the authorities unless those healthier banks are in other jurisdictions, which would equate to capital flight. The attempts to manage the crisis included a combination of private as well as public measures to contain the crisis and restore confidence in the markets. Examples of this include moves to recapitalise by a rights issue, and when this failed recapitalisation by government means as the last option. These strategies have been used in efforts to restore the solvency of the banking system and enable banks to continue lending and return to profitability again.

Table 1: The International Response to the Financial Crisis 2007-2010

	Austria	Belgium	Bulgaria	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	United Kingdom	Iceland	Canada	United States of America
Institution-Based Solutions																														
Nationalisation	●	●				●				●			●		●		●		●								●	●		●
Recapitalisation	●	●				●		●	●	●		●	●							●	●		●		●		●	●	●	●
Individual guarantee	●	●				●				●		●	●						●		●						●	●		●
Market-Based Solutions																														
Guarantees-based solutions	●			●		●				●	●	●	●	●		●			●	●	●		●	●	●	●	●	●	●	●
Special liquidity schemes	●	●	●			●		●	●	●	●	●	●		●		●		●	●	●		●	●	●	●	●	●	●	●
Deposit Guarantee																														
Deposit Guarantee/ insurance	●	•	•	•	•	●	•	•	-	●	•	•	●	-	•	•	•	•	•	•	•	•	•	•	•	•	✪	•	-	•

Notes: Measures taken (●) Blanket: Explicit(●) and Implicit (✪),Increased: (•) and No change (-)

The European FSN players used a wide range of 'extraordinary measures', such as blanket guarantees, individual bank guarantees, recapitalisation and asset purchase and asset insurance schemes, to ease panic and contain the crisis (European Commission 2011). These measures went beyond the use of emergency liquidity for individual banks and the special liquidity schemes on a market-wide basis in place several EU members, as well as orchestrated on a concerted level internationally. While originally the liquidity facility was for the banking sector, it was soon opened up to the non-banking sector as well. In a complex financial crisis such as this, no one single means of intervention is likely to succeed, because financial crises are such complex beasts. Indeed, according to Laeven and Valencia (2008): 'There has been little agreement on what constitutes best practice or even good practice.' This is an issue that we return to later in the paper.

The European Responses

In Table 1 we see the variety of tools used across the EU, Iceland, Canada and the United States of America during the crisis (Pisani-Ferry et al. 2009; Sherman and Sterling LLP 2009). It shows clearly this crisis required a range of responses, from rescuing individual institutions to safeguarding the functioning of specific markets that financial firms were reliant on for liquidity. We have divided the crisis experience between individual bank bailouts and market-wide responses. The authorities have tended to focus on individual bank concerns, and then as a last resort to maintain the efficient functioning of the markets. The mix of tools used ranges from individual bank bailouts to individual guarantee, recapitalisation, nationalisation and assumption of bad assets. In the context of the wider problems we see more open-market tools such as liquidity schemes and asset-purchase schemes on an open-market basis. It is asserted that those member states with a heavy exposure to the principal conduits to the financial crisis, namely the structured finance markets, experienced the need to bail out individual banks and also provide market-wide liquidity. So for some member states the crisis response warranted individual bailouts and liquidity and guarantee schemes.

Deposit Guarantee and Insurance Arrangements

Table 1 also indicates that once the systemic crisis griped the EU member states, a general policy to protect retail depositors and reduce the risk of a retail bank run was a primary concern (Financial Stability Board 2010). The majority of member states increased coverage levels. The panic in some jurisdictions led them to put in place an explicit blanket deposit guarantee. The lack of a coherent crisis policy response led to individual state responses. The catalyst for these individual responses was the decision by Ireland to introduce an explicit guarantee, which provoked responses by Germany and Austria: Austria followed almost immediately once Germany had put in place its unlimited guarantee (Schich 2009). During the early part of the crisis the USD100,000 coverage limit in the United States was deemed in the United Kingdom as a gold-plated limit and one which was considered the benchmark. However, the crisis in the United States soon meant it had to increase its coverage limit to USD250,000. Moreover, in some jurisdictions the coverage level changed as the crisis got worse and different banks started to experience problems, notably the United Kingdom. What one can see from this experience is the low coverage levels the EU had in the first place. In hindsight, little confidence could be offered by such coverage. While all countries in Table 1 experienced the impact of the crisis and undertook to put in place tools to provide liquidity, it is evident that Canada did not experience a systemic crisis and this distinguishes it from the rest, which is partly reflected by it not needing to change its coverage level. A significant

part of the reason is that it did not experience the same level of retail panic as the others; another reason is perhaps the level of public awareness. Public awareness regarding deposit insurance coverage is very high in the United States but it needed to be raised to the stave off the panic, so the key factor is arguably the systemic nature of the crisis and the level of panic. A significant part of the concern would still be with unprotected depositors and the risk of flight to safety where a blanket guarantee is a likely option, albeit with significant costs attached.

The distinction between an explicit and an implicit guarantee in policy terms can, at times, become blurred. For example, in 2007 the authorities in the United Kingdom authorities provided support to Northern Rock which within a year led to nationalisation of the firm. Through that process 100 per cent of the deposits of the mortgage lender were guaranteed without regard to the explicit limit of GBP 35,000 (later raised to GBP 50,000 and now GBP 85,000) that was applicable to all other United Kingdom banks under the programme administered by Financial Services Compensation Scheme Ltd. As well, the Chancellor of the Exchequer later announced that the United Kingdom would guarantee all the retail deposits booked in the United Kingdom of Icesave and Heritable (both branches of Icelandic, Landsbanki, which has been nationalised by the Icelandic government). Naturally, the banks not covered by the full guarantee raised issues of competitive advantage that was being accorded to depositors in Northern Rock, Icesave and Heritable. Their concern was heightened when the United Kingdom brought in the Banking Act 2008 (and subsequently replaced with the Banking Act 2009), allowed the authorities to nationalise the banks. Implicitly, all banks in the United Kingdom were accorded a 100 per cent guarantee. In February 2010 the government announced that it was removing the full guarantee on Northern Rock deposits. How well the lower guarantee limit is understood by the public is not clear and should a run on the deposits of another bank emerge there is every expectation that a full 100 per cent guarantee will be reinstated, which suggests that in the absence of an effective public awareness strategy depositors in failing banks will naturally expect the authorities to back deposit claims fully.

Coverage limits, we are learning, are not simple to set as a whole host of factors can be used to calculate a particular level. The move to EUR 100,000 coverage by the EU was essentially an implicit full guarantee of all retail deposits in banks. This response was headquartered in the United Kingdom, given the nationalisation of Northern Rock and the public outcry that would have ensued had the government tried to implement a less-than-full guaranteed payout after a bank failure (Shin, 2009). Moreover, several member states put in place coverage levels much higher than EUR 100,000, notably a EUR 129,000 limit in Belgium, Greece, the Netherlands, Portugal and Spain (Schich, 2011).

It is interesting to note how the coverage level in France and Italy remained the same during the course of the banking crisis but later was increased above the EU minimum. This suggests that a coverage level at EUR 90,000 or EUR 133,000 was high enough for at least a period of time to avoid retail depositors panicking about their savings or moving their funds to another jurisdiction. In addition, other EU member states appear to have increased their coverage to levels much higher than the pre-crisis position. Therefore, just as the argument above extends the concern about the implicit full guarantee in the United Kingdom, the current coverage level is itself arguably meaningless. As noted earlier, an infrastructure to fulfil the deposit guarantee mandate is left wanting.

The structure of the EU guarantee system is fraught with problems. While the logical solution would be to have a single scheme across the EU, it is still quite possibly

politically contentious given the disparity in the economic circumstances of individual member states, so the middle ground would be to initiate a system of guarantee arrangements but with an improved, diversified and risk-based funding arrangement. Attention must also focus on the need for more effective Europe-wide supervision to complement the development of a fully funded and adequately resourced Europe-wide deposit insurer (Sighvatsson and Gunnarsson, 2011).

Recapitalisation on a Market-wide Basis and Individual Bank Basis

The general strategy for the recapitalisation of banks is primarily to ensure that the authorities are capable of figuring out which banks are the most viable. According to Hawkins and Turner (1999), 'In theory, it is necessary to draw a three-way distinction between those banks strong enough not to require government capital, those viable only with a capital injection and those unlikely to survive even with substantial assistance.' The question is whether the authorities can actually make such a distinction. The uncertainty surrounding the quality of the banks' balance sheets and the reliability of the valuations of their assets (both of which are clouded in a considerable level of doubt during a crisis) makes this very difficult. Given the magnitude of the crisis, an attempt to discover the health of the banks by stress-testing them in extreme scenarios was the response to address concerns about the viability of the banking system. Claessens et al. (2011) concluded the public recapitalisation programme had been 'spread too broadly, foregoing the benefits of separating viable from nonviable institutions' *sic*. In some respects the complexity and speed with which the crisis took hold required a range of strategies which in hindsight one could argue was possibly questionable on grounds of its piecemeal approach to crisis management. During the crisis a two-pronged recapitalisation effort was put in place: one part based on the circumstances of individual institutions, and the other a market-wide project as part of a broader financial stability programme.

Market-wide recapitalisation programmes were adopted in Austria, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Poland, Portugal, Spain and Sweden (European Commission, 2009). The case of Greece (2010) epitomises the reason for recapitalisation programmes: the lack of capital in the market meant the authorities used an IMF support package to provide equity capital to the Greek banks, thereby providing a public solution to a private problem (European Commission, 2010c, 2010d). In the case of Poland the facility was for insurance firms as well as banks, highlighting the problem was not just with banks but also non-bank financial firms. The Polish programme offered up to 100 per cent capital increase if firms were unable to secure it from the financial markets (European Commission, 2009a, 2009b). The scheme introduced by the French authorities focused on the 'fundamentally sound' banks to deal with the risk of them reducing the level of credit in the economy (European Commission, 2008a, 2008b). In the French case the recapitalisation was provided with the condition that remuneration incentives were changed: 'The beneficiary banks must also undertake to adopt measures concerning the remuneration of senior management and market operators (including traders) and to observe ethical rules consistent with the general interest, including restrictions on the remuneration of senior executives. The rules also limit severance payments to senior executives and ban all severance payments where a senior executive or enterprise has failed or where a senior executive leaves voluntarily'. While the French approach is explicit and prohibits changes to the remuneration regime, the recapitalisation approach adopted by the United Kingdom was ambiguous and based on moral persuasion to do the right thing: 'At a company level, it limits managers' remuneration and requires the

beneficiaries to respect good governance practices.' Sir Fred Goodwin's pension was an area of political outcry when it was announced as part of his severance package (BBC, 2009). The United States adopted a similar line with commercial banks under Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA 1991), and prohibited such things as parachute payments (Schooner, 1996). In Denmark the recapitalisation prohibited the payment of dividends. A variety of conditions were imposed to limit the potential distortions of the programmes.

The focus on what some member states referred to as the 'fundamentally sound institutions' suggests that the recapitalisation programme was primarily to protect solvent institutions. The determination as to whether or not an institution was solvent at the time has been called into serious question by the markets. So the rationale behind the recapitalisation was to stop questions from the markets regarding bank viability and restore confidence. A lack of confidence in the FSN meant the markets wanted further explicit reassurances of their capital cushions being sufficient to withstand the shocks. In the case of Austria this became quite explicit: Neelie Kroes of the Competition Commission said 'even banks that meet the regulatory solvency ratios may be required to reinforce their capital ratios to satisfy market expectations. The measure will enable Hypo Tirol to continue lending to the real economy, whilst avoiding disproportionate distortions of competition' (European Commission, 2009c see also 2008c and 2008d). The scepticism showed that the levels of capital required by the authorities lacked credibility (Wolf, 2010).

Individual Bank Recapitalisation Initiatives

A number of banks required tailor-made recapitalisation. In the United Kingdom the banks that participated in the recapitalisation scheme – RBS, HBOS and Lloyds TSB – were unable to access the markets at that particular time. As a result of a failure to recapitalise with private investors, the government had to intervene, and consequently took a 58 per cent stake in RBS and a 43 per cent stake in Lloyds TSB (European Commission 2008e; Singh 2011). The shares of institutions given capital injections did not rally on the news, but lost further ground before stabilising at a fraction of their previous value. The objective was to ensure the banks survived and avoided bankruptcy. In light of the position of these banks in the United Kingdom financial markets, the consequences of their collapse for world markets could have been equal to the Lehman collapse. In the case of Belgium and KBC, 'Due to the current financial crisis, even fundamentally sound institutions like KBC Group N.V. may experience distress and be required to reassure financial markets of their stability. Against this background, it was considered necessary to strengthen KBC's capital base against possible future losses. Thus, the capital injection will increase the tier 1 ratio of KBC Bank to above 10 per cent and the solvency ratio of KBC Insurance to 280 per cent' (European Commission 2008f). Other components of the recapitalisation programme included protection from the write-downs experienced in the structured finance market. For instance, in the case of Germany and BayernLB, it was 'a risk shield for part of the ABS portfolio of BayernLB for an amount of EUR4.8 billion. [To] avoid further write downs on the ABS portfolio which would weaken the capital position of BayernLB' (European Commission 2008g).

Asset and Liability Purchase Programmes

The principal tool to clean up the balance sheets of banks is the purchase of bad or commercially non-viable assets where the markets have lost their investment interest. The European Commission put in place guidelines to ensure a level playing field in crisis

management. For example, Commissioner Charlie McCreevy said: 'These guidelines will help Member States deal with impaired assets on bank's balance sheets. If we don't face up to this issue then we risk prolonging this crisis with zombie banks that are incapable of performing a useful role in our economies' (European Commission, 2009c).

These institutions are generally referred to as 'bad banks', in contrast to a 'good bank', which has better-quality assets and performing loans that would remain with the private bank. As with the other responses to contain the crisis, the member states that introduced schemes had to show some degree of burden sharing, such as limits or caps on remuneration or dividend payments. The scheme places the burden of managing the assets on the state, or the participating banks through an insurance facility, as was the case in the United Kingdom (European Commission, 2009d). In that scheme the participating banks were required set up their own subsidiaries for bad assets and then manage them. This a helpful step, as the bank benefits from in-house knowledge about the counterparties. It does not incentivise simply writing off assets and then burdening the state with the losses, but ensures that banks continue to manage assets and 'maximize the economic value of their protected assets'. However, this does need to be monitored by the authorities, or the bank could seek to asset-strip and sell off, which would lead to a greater burden on the state. The scheme's payout price would presumably be market value, which might not be the best deal for the taxpayer providing the insurance. Thus the incentive for the Ministry of Finance or Treasury is for banks to retain and manage the assets on their own balance sheets as long as possible until market conditions improve. Another type of asset purchase scheme for impaired assets introduced by Germany was to transfer assets (subject to a haircut) to a separate 'special purpose vehicle' and issue bonds (European Commission 2009e). The authorities in Ireland set up National Asset Management Agency (NAMA), its equivalent of a bad bank, to help its institutions transfer distressed debt off their balance sheets to the state-owned NAMA to improve their viability (European Commission, 2009f). Relieving banks of their impaired assets is a contentious process in terms of what is decided to be distressed debt (Dellway Investments, 2010): in Ireland the authorities faced litigation over the transfer of what were considered by the owner as performing loans to NAMA.

Some Further Reflections

In the early phase of the crisis some countries had a relatively good time, like Spain, but its position later became threatened by the ensuing contagion of the sovereign debt crisis. This suggests that policy-makers need to look at these separately rather than together. It is suggested that the crisis in confidence subsequently led to questions about other parts of the financial system, notably the sovereign debt market, with bulging levels of public debt and relatively little respite, plus poor prospects for growth easing the pain.[7] The thesis explored below enables us to try to understand better the direction a potentially systemic event could take, whether triggered by an individual bank or a sovereign or market failure. In the context of market-wide failure the risk of contagion is a major concern, so the authorities have either provided market-wide liquidity or guarantees which give participants in those markets access to the liquidity they need.

In Europe, several countries provided guarantees against a variety of forms of bank debt. The agreements between private banks and member states covered, for example, loss or risk of loss relating to assets owned by the bank (Laeven and Valencia 2011). The rationale typically offered was that the guarantees would avoid exposure of the troubled bank to serious liquidity issues by putting in place loss-sharing, usually with the government exposed after the first tranche. The guarantees limit the volatility of the prices

of asset classes, notably structured products. Naturally, when guarantees are extended by governments to individual institutions they distort markets and competitive issues become important. Government intervention had the effect of reducing the default risk of recipient banks. In accordance with rules governing state aid set under the EC Treaty, the European Commission was required to review the transactions and arrive at a determination as to how to treat the implicit subsidy. Given concern about financial stability, the EC decided not to raise any objections. In considering the specific case of Dexia the EC found that 'several factors (including Dexia's size, its dominant position in certain markets and the exceptional circumstances on the financial market at the time the aid was granted), the collapse of the bank would have had a snowball effect on the Belgian banking sector and, consequently, on the entire Belgian economy'. Similar justifications were used in many other cases to conclude that the rescues did not give rise to 'disproportionate distortions of competition within the Single Market'. However, the troubles at Dexia have continued with its significant exposure to the sovereign debt crisis in Greece. Dexia required a second round of support in October 2011 by the Belgium and French governments; a part of the support includes the setting up of a bad bank for its more toxic assets. It should also be noted that European banks have become major buyers of sovereign debt, and hence the banking crisis has a direct link to the sovereign debt crisis. The Global Financial Stability Report (IMF 2011a) noted that 'In the euro area, sovereign pressures threaten to reignite an adverse feedback loop between the banking system and the real economy. The euro area sovereign credit strain from high-spread countries is estimated to have had a direct impact of about EUR200 billion on banks in the European Union since the outbreak of the sovereign debt crisis in 2010.' The additional support by Belgium to assist Dexia has subsequently increased the cost of borrowing for Belgium so placing it under further pressure. The effects, of course, become amplified because of the connections between highly levered banks and the exposure they have to states that also are facing severe market pressures. The IMF went on to say that 'Banks in some economies have already lost access to private funding markets. This raises the risk of more severe deleveraging, credit contraction, and economic drag unless adequate actions are taken to deal with the sources of sovereign risk—through credible fiscal consolidation strategies—and to address the potential consequences for the financial system—through enhancing the robustness of banks.' It is not clear where the policy-makers will be able to find the tools to address the fragility of financial markets in the coming months. Certainly, having low interest rates is a device that can be used to spur economic activity, but the current extremely low levels will do little if anything to encourage people to save. Also, many American households have little or no equity left in their mortgaged homes. These households have no real incentive to refinance their properties even at historically low interest rates as long as outstanding loan balances substantially exceed the prevailing market value of their homes. Certainly, getting a better balance in banks' balance sheets is now a very long-term project.

5 Macro- and Micro-Prudential Oversight and Financial Stability

Government support for banks has a long history. At times it is targeted and highly correlated with specific transactions or situations. Recent events have focused policy-makers on ways to make their banking and financial systems safer and more resilient to shocks. While many bank-dominated financial systems stood up well during the crisis and did not require extensive overhauls, there is a clear need to reconsider the roles and responsibilities of the FSN organisations to determine where improvements can be made. In particular, it is evident that key micro- and macro-prudential issues may not have been

fully understood before the crisis began, especially the inter-linkages between deposit intermediaries and more sophisticated markets such as securitisation and derivatives. To address these matters attention has focused on prudential policies that will improve the resilience of individual institutions and the efficiency of the financial system as a whole. Moreover, how the FSN players carry out their responsibilities and the influence of stakeholders are important matters to consider.

The reforms have focused on macro-prudential and micro-prudential supervision (Milne 2009; IMF 2011b). The mutually dependent policies of macro- and micro-prudential oversight, as outlined by Crockett (2000), are a useful framework for analysing the crisis. A macro- and micro-prudential framework requires a holistic approach in overseeing the financial system and the risks that can threaten it (Galati and Moessner 2011). This means the authorities need to look not only at banks but organisations such as insurance companies that are counterparties to banks, as well as securities dealers which are regulated mainly for market conduct without much attention to capital levels. To be effective they need to consider both prudential issues and conduct of business to get a better sense of the systemic risks when institutions fail or experience distress, and the institutional linkages (such as inter-bank lending within the global financial system, guarantee and other counterparty exposures) and monitoring thereof. Moreover, the link between bank and non-bank business has become blurred with markets such as OTC derivatives and the asset-backed securities; such markets need effective oversight as well.

To be sure, the asset-backed securities market lacked what the banking system has grown accustomed to: a system of regulation and supervision where issues of systemic risk are factored in, as well as an LOLR to provide emergency liquidity support if events threaten confidence in the system. The implications of poor due diligence in the sale of mortgages in a booming property market mean it is not just the sophisticated financial instruments that can have systemic implications, but even the more mundane financial products when there are significant linkages. Reform agendas must ensure that core banking services can continue if a large bank needs to be resolved, and policies need to be developed to ensure that the cost of a bank failure falls squarely on the shoulders of shareholders and creditors. To be successful, policies need to address deficiencies in financial system safety net arrangements.

The links between the banking and sovereign debt crises are quite interesting, and we now know more about the two-way relationship. This means that the gap between macro- and micro-prudential oversight of the financial system needs to be addressed (Goodhart 2011). Viewing the recent crisis from that perspective demonstrates that the authorities need to focus on economic policies as well as their implications for the financial system and its systemic stability. The challenge to policy-makers is to elevate legislators' attention to follow through with implementing supporting legislation to provide central banks with the needed authority to carry out their added responsibilities. The dialogue about macro- and micro-prudential supervision between the FSN players will bring the FSN under a different sort of scrutiny. For instance, expansion of home ownership at unsustainable levels, the absence of mortgage underwriting standards, keeping interest rates low, inadequate bank capital and liquidity requirements and non-existent regulation of huge financial markets are macro- and micro-issues these authorities must address.

How can the gap be addressed? As we have shown, the FSN players all have mandates and roles, and benefits can be achieved through the creation of a financial stability committee (FSC): it would bring those discrete roles together so that if a change in supervision needs to take place it can be initiated from a broader vantage point. If

certain stress points are detected, it would be a good platform to direct change or hold those responsible for regulation and supervision to account. The stress points in the financial markets were certainly discussed in the financial stability reports, but how the information trickled down into day-to-day regulation and supervision is not so clear.

The FSC therefore needs to have a surveillance role linking macro-oversight with micro-regulation, distinguishing it from any regulatory or supervisory role. One thing which does seem inevitable with the introduction of the new generation of financial stability oversight is the 'conversation' about financial stability could flow into a range of financial and economic policy affairs. The FSC will need to have a mandate to act and initiate actions to prevent a financial and economic system overheating. This will obviously pose considerable political tensions, but as we have seen the risk to financial stability can arise from a variety of sources and bank and non-bank institutions, and the following of certain social and economic policy objectives. Nor is it likely that the FSC will extend or be allowed to extend its reach beyond concerns about the financial system, hence the political expectations will not mirror the actual reality.

The role of crisis management needs to be clearly given to one of the FSN players. But to whom is quite possibly a contentious issue. Crisis management does raise a variety of concerns about conflicts of interests over whether or not banks and markets should be assisted. One option would be to allocate crisis management and bank resolution to an independent FSC. This would be sensible on two counts: firstly, no agent responsible for the day-to-day oversight of a firm or a market will ultimately have the power to decide to use public finances for a bailout; and secondly, there would be a degree of independence over crisis management separate from the political body. This is obviously controversial but it would build on the principle of independent regulators under the Basel core principles 2006, with an extension to include independent crisis management. It could also be desirable to have a voting system on such decisions to reduce supervisory and political capture.

The creation of an FSC is well established. However, recent experience has highlighted the need for better coordination and cooperation between the official safety net players when considering stability. The preliminary research in this section suggests there is no real specific model on structuring financial stability oversight. What seems to be important is what powers it should be given. Certainly an expectation gap will grow with the introduction of a new generation of financial stability committees. At first glance it seems EU members that experienced some sort of crisis do have some responsibility for crisis management. In other jurisdictions it is implicit that maintaining financial stability will inherently mean restoring it, if and when a crisis occurs. One point that must be highlighted is the need for a separate budget and resources to enable the FSC to fulfil its mandate. It is suggested that it should be separately funded to safeguard its independent position.

6 Conclusions

This paper has sought to recast the FSN when faced with a systemic crisis, from the traditional focus on regulation and supervision, the central bank's role as LOLR and deposit insurance to a much wider set of players. It is suggested that elaborating on the specific roles of the various interested parties helps policy-makers better understand how the FSN should work during times of crisis. Moreover, it will assist with a better understanding of what tools are actually required to contain a crisis and whether the legislative body needs to provide those tools. A key lesson learnt during the crisis has

been the need to understand the roles of the different FSN players and how they work together as a crisis intensifies. The paper has also tried to bring in the importance of the key stakeholders and the influence they can have on the decision-making associated with a systemic crisis. While the countries at the epicentre of the crisis may now recognise the importance of the FSN, those not quite gripped by the crisis can certainly learn lessons: the importance of timely decision-making and the expectations associated with the FSN players and the wider stakeholders.

The paper then drills down into the decision-making process associated with containing a crisis and the possible policy options. It first highlights the importance of having access to a range of options. It suggests a ten-step process to dealing with a crisis and the possible issues associated with the decision-making. However, as we have explained, many of these options are not within the traditional toolkit of the narrow set of FSN players, and gaining those powers during a crisis could delay matters. Moreover, policy-makers need to recognise the importance of dividing issues into those of a liquidity-type crisis and those of a solvency-type crisis, with the latter requiring the greatest level of intervention. In the midst of this discussion is the important matter of moral hazard, which we briefly touch on.

Another facet to the discussion is how to bring the key themes of the crisis together. The perimeter of the macro-prudential and micro-prudential dialogue highlights the complexity of the causes of a financial crisis and the difficulty of trying to build them into a coherent decision-making process. The move to a separate oversight body is certainly a useful one to try and should be given appropriate attention. However, the powers and responsibilities it will have need further reflection. One issue that needs to be addressed is with whom the ultimate responsibility for crisis management should reside. It is suggested that the new generation of financial stability committees should have the responsibility in order to improve the level of independence of decision-making and quite possibly the speed with which decisions can be made. Had policy-makers better understood the roles and responsibilities of the agencies within and outside the FSN and had they adopted a better decision-making process, then perhaps the crisis might have turned out just a bit different this time.

Notes

1. Bank failures in the United States are quite common. There were only two years (2005 and 2006) since 1934 where there were no bank failures. For a full list please see *www.fdic.gov/bank/historical/bank/*
2. There is growing literature on the issue of financial stability committees. A very useful analysis of the strengths and weaknesses of various forms of such groupings has been undertaken by Nier et al. (2011).
3. While we note that there are several deposit protection systems in existence, some of which like the Federal Deposit Insurance Corporation in the United States for over 75 years surprising little attention has been paid to pricing of the guarantees.
4. For a full list of deposit protection agencies either established or in the process of being developed please see www.iadi.org.

5. The usual three questions asked to officials during post mortems by Parliamentary-type committees are: What did they know about the situation, when did they find out and what did they do about the problem? Attention then focuses on who was responsible and, of course, what were the costs.

6. This is in contrast to the United Kingdom position as explained by Alistair Darling: 'I was also struck by the fact that the US president...cannot automatically get what he wants at home. He has to horse-trade. In contrast, when I effectively wrote a cheque to buy £50 billion of bank shares in the UK, I did not even have to get specific parliamentary authority to do so.'

7. We are grateful to Rodrigo Olivares-Caminal for the substantive links between banking and sovereign debt issues. The BIS found that the 'impact on banks is exacerbated by the fact that sovereigns (and other highly rated entities) often use unilateral credit support annexes (CSAs), meaning that they do not post collateral to offset mark-to-market losses on derivatives, but will receive collateral on their mark-to-market gains. This negatively affects banks in two ways. First, banks' mark-to-market claims on sovereigns are uncollateralised, increasing their CVA risk. Second, if banks hedge their derivatives positions with sovereigns using offsetting trades with other entities that are covered by bilateral CSAs, then banks can face additional funding strains as they need to post collateral in one transaction without receiving any reciprocal collateral in the corresponding hedge transaction. Banks sometimes hedge themselves against sovereign risk by buying CDS protection or short selling government bonds, but depending on the liquidity in these markets, this can push up sovereign risk *premia* and cause further CVA losses…' Please see Panetta 2011.

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Symposium on "Financial crisis management and the use of government guarantees"*

(OECD, Paris, 3 and 4 October 2011)

Background

Almost three years after what many observers had considered the peak of this global financial crisis, we are still waiting for normalcy to prevail. Instead, tensions in funding markets have risen very significantly in recent weeks mainly as a consequence of the sovereign debt crisis in Europe. Currently, we find ourselves once again contemplating guarantees, with some observers calling for the creation of explicit government-supported arrangements for guaranteeing bank debt, such as those temporarily put in place by many governments in 2008/09. In this context, the Symposium on "Financial crisis management and the use of government guarantees" held on 3 and 4 October 2011 turned out to be very topical, certainly more topical than policy makers would have wished.

The Symposium was characterized by an open and frank dialogue between policy makers, policy consultants and other academics on the policy response to the financial crisis, the use of guarantees, failure resolution, banking and sovereign debt interconnections, as well as other financial safety net aspects. The mix of participants from academia and the public and private sector, and both from the economic and the legal profession helped participants appreciate some of the institutional details that get lost in much of the public debate on the topic. Numerous policy suggestions were made as to how to improve the use of government-supported guarantees and the design of the financial safety net, so as to improve existing mechanisms to avert future crises or check them at an early stage. One key message was that guarantees can be a powerful policy tool, but that they need to be employed

with limits and priced appropriately.

Costs and benefits of the use of guarantees

The use of guarantees, where they worked well and where they precipitated other problems, were issues that came up throughout the Symposium. Together with measures to enhance liquidity and capital of financial institutions, sovereigns effectively provided the function of the guarantor of last resort for financial claims in response to the global banking crisis. Despite the rather ad hoc nature of some policy measures, the policy response helped avoid the worst outcome, which could have been a series of failures of systemically important financial institutions, with dire consequences for real activity. Despite their associated problems, guarantees have been an important element in preserving liquidity and restoring market functionality, and it would be difficult to manage financial crises without them. Moreover, other forms of intervention are likely to be more intrusive.

Nonetheless, guarantees were not without cost. Further to administrative costs, they created significant contingent potential liabilities for sovereigns, which was compounded by a failure to charge fees commensurate with the risk which created additional costs. The costs of such underpriced insurance included potential distortions to competition and incentives, which give rise to moral hazard and the potential for additional problems down the road.

Pricing government guarantees

In principle, pricing structures should be designed in such a way that the premiums paid by beneficiaries of guarantees reflect the costs that they would have incurred if markets had functioned properly. As it turns out, however, pricing was not always appropriate. For example, the case of Ireland has highlighted the risk of underestimating losses from already existing claims, but where the ultimate extent of losses arising from those claims is uncertain. Guarantees have also been introduced for new liabilities, such as bank bonds, in many OECD in an effort to help banks regain access to markets. This effort was generally considered a success. However, fees typically were set as a function of the characteristics of the issue or the issuer and, in practice, were on average broadly flat across countries. In Europe, an effort was undertaken to harmonise fee structures across borders, making them a close function of a measure of the history of credit default swap spreads for the issuer, with the explicit aim being to avoid competitive distortions between banks.

Unfortunately, the costs for banks of issuing such government-guaranteed bonds turned out to be significantly affected by the identity of the guarantor. This is not so surprising, as theory suggests that the market value of a sovereign guarantee is not only a positive function of the weakness of the borrower but also a positive function of the creditworthiness of the sovereign. Thus, to avoid competitive distortions, the strength of the sovereign should be taken into account in the pricing of government-provided guarantees.

Crisis management experiences and changes in the financial safety net

The costs and benefits of guarantees have to be weighed against the alternatives. In Iceland, for example, an all-encompassing guarantee would not have been credible. The more limited guarantee announced together with the resolution approach adopted implied that shareholders were wiped out and that unsecured non-priority creditors bore losses. The link between bank and sovereign credit risk was severed. Whether that approach was available elsewhere is questionable. In fact, extensive guarantees were in many cases introduced precisely because alternative tools for resolving severe problems were either not available or not trusted to work smoothly enough to avoid a systemic fallout. In particular, effective failure resolution mechanisms for some types of troubled financial institutions tended to be absent.

In the meantime, special legislation for dealing with stressed financial institutions has been introduced in many countries, which has successfully addressed some issues. For example, new institutions and legal frameworks have been introduced that facilitate the restructuring of stressed banks and the rescue of systemically relevant parts of banks. Other issues prevail, however, including the issue of how to resolve stressed large financial institutions in a cross-border context. For example, further reforms are needed for cross-border banking activities in the European Single Market, where the issue is to match the European passport for banks with a pan-European safety net including deposit insurance and supervision.

While use of guarantees was a central theme, the Symposium also analyzed other aspects of the design of safety nets. There is a need for policymakers to elaborate on the specific roles of the various safety net participants and stakeholders so as to better understand how the financial safety net should work during times of crisis.

Moreover, the traditional three-tier safety net, consisting of a lender of last resort, bank deposit insurance, and a (micro-prudential) regulator-supervisor was considered incomplete, which led to calls for the creation of additional players or functions, including:

- a macro-prudential authority, with the power to alter the composition of central bank assets, to adjust capital adequacy and liquidity ratios, and to propose fiscal and structural changes affecting financial intermediaries.
- an institutionalized tiered systemic crisis insurance function, inspired by mechanisms developed for funding resolution of natural or man-made catastrophes. To limit moral hazard, a layered approach with self-insurance as the first layer, private insurance and reinsurance as another layer and the government as a reinsurer of last resort was suggested.
- a bank failure resolution fund, which would be separate from the general government budget and funded through ex ante contributions of financial intermediaries according to their systemic importance, to finance resolution measures that require the rapid availability of funds in systemic crises.
- an institutionalized investor of last resort, which would establish ex ante conditions for providing support and establish credible bounds to the extent of support in systemic crises, thus helping to legitimize future support measures and limit associated moral hazard.

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* OECD Secretariat assessment, facilitated by the rapporteur James McCollum. The opinions expressed here do not necessarily reflect the official views of the Organisation or of the governments of its member countries. For further enquiries please contact Sebastian Schich at Sebastian.Schich@oecd.org.