Banking Crisis Management in the EU: An Interim Assessment

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Introduction

To say that the European Union (EU) was institutionally ill prepared to manage a financial crisis, especially one involving systemic cross-border institutions, would certainly not be an overstatement. Well before the 2007/2008 crisis, many authors, both from academia and policy circles, had warned that the architecture for resolving problems within the European single financial market was deficient.

There was concern about the ability to manage either liquidity or solvency difficulties. On the liquidity side, the worry focused on the absence of clear guidelines for implementing the EU lender-of-last-resort function in situations when pan-European banks would experience problems (see, in particular, Prati and Schinasi, 1998 and 1999, Schinasi and Teixeira, 2006 and Nieto and Schinasi, 2007). On the solvency side, there was equal concern about the lack of clear arrangements for the resolution of cross-border banking crises, in particular fiscal burden-sharing mechanisms (see, in particular, Goodhart, 2004, Goodhart and Schoenmaker, 2006, Mayes, Nieto and Wall, 2007, and Nieto and Schinasi, 2007). Even Alexandre Lamfalussy, the former managing director of the Bank of International Settlement and former president of the European Monetary Institute, deemed existing European arrangements “suboptimal” (Lamfalussy, 2004).

Against this background, this paper attempts to assess the actual response of EU and national authorities to the financial crisis. Our main finding is that, so far, their policy performance has been better than may have been expected prior to the crisis, but only because institutional arrangements were so sub-optimal.

The paper is organised as follows. Section 1 describes the pre-crisis EU banking landscape in terms of both market integration and crisis management arrangements. Section 2 describes the main banking events and the policy responses since the start of the crisis. Section 3 presents our assessment of the management of the crisis using first the pre-crisis institutional arrangements and then the EU arrangements deemed desirable by the literature as benchmarks. Section 4 concludes with a discussion of policy lessons and the choices ahead.

Interestingly nearly all the researchers in this area are (or were at one point) affiliated with public institutions in charge of managing financial problems. Goodhart is a former official at the Bank of England, Mayes is with the Bank of Finland, Nieto with the Bank of Spain, Prati and Schinasi with the International Monetary Fund, Schoenmaker was an official at the Dutch Ministry of Finance, Teixeira is with the European Central Bank and Wall with the Federal Bank of Atlanta.
1. The pre-crisis EU banking landscape

Financial and specifically banking integration has been regarded by EU policymakers as a goal in itself since the early days of the single European market. The cross-border provision of financial services was envisaged very much in the same way as the provision of any other service, and emphasis was put on the efficiency gains a more integrated market would provide. This meant relying on the home country principle that allowed a financial institution legally established in any member state to provide banking services cross-border.

The single market for banking was slow to take-off and the pure cross-border provision of consumer-oriented services proved to be an illusion – largely because tax and regulatory differences make financial products differ across countries. What remained of the single market was the predominance of the home country principle. Banks are supervised by the authorities of the countries where they are headquartered, and only the fiscal authorities of that country are in a position to bail them out.

1.1 The internationalisation of the EU banking sector

European banking witnessed important changes after the liberalisation of capital movements in the early 1990s, the introduction of the euro in 1999 and the enlargements to the new member states (NMS) in 2004 and 2007.

The creation of a single market for financial services and the introduction of the single currency produced conditions for greater consolidation and internationalisation in EU banking. Kleimeier and Sandler (2007) summarise the main evidence found in the existing literature, while the ECB (2006 and 2008) and the European Commission (2006 and 2007) provide additional information:

- There was extensive mergers and acquisitions (M&A) activity. Most of it was between domestic institutions, but cross-border mergers also gained momentum. In 2004, for instance, cross-border mergers accounted for less than 25 percent of the total number of bank mergers within the EU-25 but reflected approximately 80 percent of the total value of deals (European Commission, 2006).

- Schoenmaker and van Laecke (2007) calculate a transnationality index (TI) for banking, based on UNCTAD’s measure of internationalisation which uses three indicators: assets (loans and securities), revenues and employment. Based on the achieved TI scores the authors classify banks as domestic, regional or global. Comparing the situation of the top 30 European banking groups in 2000 and in 2005, they find that the number of predominantly domestic and global banks decreased, respectively, from 18 to 15 and
from 5 to 3. By contrast, the number of predominantly regional groups increased from 7 to 11, with the total number of European groups having dropped by one unit due to a merger. They conclude that “the long expected cross-border merger wave in Europe has started. European banking is finally arriving” (Schoenmaker and van Laecke, 2007, p. 61).

- The European Commission (2007) finds that, indeed, one the new features of the European financial landscape was the emergence of major pan-European financial institutions and groups. Moreover, the ECB (2006) identified 46 systemically important banking groups that accounted for 68% of EU banking assets, of which about half with significant cross-border activity.

- The national presence of foreign banks, measured by their asset share in domestic markets, varies a great deal across EU member states. In 2004, it was less than 10 percent in France, Germany and the United Kingdom, but more than 90 percent in the Czech Republic, Estonia, Lithuania, Luxembourg and Slovakia. In general, foreign presence is much larger in the new member states than in the old ones. According to ECB (2008), in 2007, foreign entities in the NMS accounted for 70 percent of total banking assets, while the corresponding figure for the EU-15 was slightly below 30 percent.

- Persson (2007) calculates a cross-border banking index defined as the sum of the share of domestic banks’ total assets held in EU-25 countries outside the home country and the foreign banks’ share of the domestic bank market. In 2005, EU member states fell into four categories: those with an index of more than 75 percent (the Czech Republic, Estonia, Hungary and Slovakia), those with an index between 50 and 75 percent (the three Benelux countries, the three Scandinavian countries, Cyprus, Italia, Lithuania and Poland), those with an index between 25 and 50 percent (Austria, Germany, Ireland, Latvia, Malta, Portugal, Spain and the UK) and those with an index of less than 25 percent (France, Greece and Slovenia).

- Véron (2007) and Posen and Véron (2009) contrast the situation in Europe with those of other continents. European banks are significantly more internationalised than banks in the US, Japan or China and this primarily results from their internationalisation within Europe (Figure 1).

To sum up, prior to the crisis the European banking sector was undergoing a process of market integration. The process was slower than expected by the architects of the single market but it was undoubtedly taking place.

1.2 Crisis prevention: the supervisory system
With the slow but steady advance of banking integration, Europe was being confronted to what Schoenmaker and Oosterloo (2007) have called the trilemma of financial supervision: like for the famous Mundell trilemma, there is an inherent incompatibility between integration, financial stability and independent national supervision. Furthermore, there was – and still is – a fundamental tension in the EU between home country responsibility for the supervision of financial institutions and host country responsibility for financial stability. The home country supervisors’ mandate does not include co-responsibility for financial stability in partner countries but the host country authorities, whose mandate is to ensure financial stability, do not have authority for supervising financial institutions from partner countries unless they operate through subsidiaries.

These problems were recognised early on but there was no will to address them in a radical way as was done for the Mundell trilemma with the creation of the euro. No competence was transferred to the EU level as was done in 1999 for monetary policy. Instead, the emphasis was put on two main principles, decentralisation and cooperation, with the hope that coordination within specialised committees and procedures for information exchange would, temporarily, address the deficiencies of the system.

Specifically, cooperation was strengthened in three areas. First, the prudential framework followed by national supervisors was largely harmonised by EU legislation. Second, a Committee of European Banking Supervisors (CEBS) was established in 2003, but its role is limited to facilitating consultation among supervisors and to providing technical advice to the European Commission on regulation and convergence of supervisory practices. Third, provisions were made for cooperation in time of crisis (see infra).

Reasons for rejecting a reform of supervisory arrangements were several. The strongest argument was that since most banks were mostly national, there was an informational advantage in keeping supervision at national level. However this argument was only valid as long as it corresponded to reality. But when merger and acquisitions led to the emergence of pan-European banks supervisory arrangements did not keep pace. National responsibility for financial stability was even used as a pretext to deter the acquisition of national champions by foreign banks, as famously illustrated by governor Fazio’s stance on foreign investment in Italy.

1.2 The architecture for crisis management

The main responsibility for financial stability and crisis management in the European Union lies with national banking supervisory bodies, central banks, treasuries and deposit insurance schemes. However, a number of EU bodies and procedures exist that provide some degree of harmonisation between national rules and cooperation between national authorities.

Lender-of-last resort
The provision of liquidity assistance to banks in the EU is the responsibility of national central banks. In the case of cross-border banking institutions, it is the central bank of the host country which bears the responsibility, regardless of whether the foreign bank operates as a branch or as a subsidiary on its territory. Since banking supervision is also national, with the main responsibility for cross-border institutions assigned to the home country, there is a distinct risk of insufficient flow of information and too little cooperation between in case of market stress.

The situation is similar in the euro area, where the European Central Bank (ECB) has not been formally assigned lender-of-last-resort responsibility by the Maastricht treaty. Liquidity assistance is decentralised. Furthermore the ECB has no supervisory authority, nor privileged access to information from national supervisors.

There are, however, two caveats to this. First, mechanisms have been in place since 1999 to ensure an adequate flow of information within the Eurosystem in case a national central bank takes the decision to provide emergency liquidity assistance (ELA) to an institution operating within its jurisdiction. The purpose is to ensure that the provision of ELA is consistent with the maintenance of the appropriate single monetary stance (ECB, 2000). Second, although the ECB is not the lender-of-last-resort in charge of providing liquidity to individual banks, it is, at least implicitly, responsible for providing liquidity to the euro area system as a whole, since no other institution is capable of assuming such task (Walter and Bergheim, 2008).

Cooperation within the EU concerns the exchange of information in crisis situations. Here cooperation is based on a Memorandum of Understanding (MoU) of March 2003 on high-level principles of cooperation between the banking supervisors and central banks of the EU in crisis management situations. The text of the MoU has not been made public. According to the press release, it consists of a set of principles and procedures for cross-border cooperation that deal specifically with the identification of the authorities responsible for crisis management, the required flows of information between all the involved authorities and the practical conditions for sharing information at the cross-border level. The MoU also provides for the setting-up of a logistical infrastructure to support the enhanced cross-border cooperation between authorities.3

Crisis resolution

When solvency becomes an issue, responsibility for crisis resolution shifts from central banks to treasuries. Since there is no EU or even euro area treasury or common pool of resources available for this purpose, crisis resolution is entirely the responsibility of national treasuries and there are no specific provision for crisis resolution affecting pan-European banks.

Cooperation among treasuries and between treasuries and central banks takes place at the level of ministers and central bank governors through the ECOFIN Council. The decisions of the ECOFIN in all matters, including crisis management, are prepared by the Economic and Financial Committee (EFC), which comprises of deputy finance ministers and deputy central bank governors.

The only ex ante crisis management arrangement that existed at the EU level prior to the crisis was a MoU of May 2005 on cooperation between the banking supervisors, central banks and finance ministries of the European Union in financial crisis situations. Like the previous one, the text of this MoU has not been made public. According to the press release, it consists of a set of principles and procedures that deal specifically with the sharing of information, views and assessments among the authorities potentially involved in a crisis situation, the appropriate procedures for such sharing of information and the conditions for cooperation and information flow at the national and cross-border level. In order to further support the enhanced cross-border cooperation between authorities, the MoU also includes arrangements for the development, at the national and EU level, of contingency plans for the management of crisis situations, along with stress-testing and simulation exercises. The MoU is explicitly non-legally binding. In particular, it contains no ex ante burden-sharing arrangement between national treasuries.

Deposit guarantee schemes

Within the EU, deposit guarantee schemes are purely national and have largely developed in independent ways across member states. Depositors are ensured according to rules in force in the country where the bank is headquartered, which implies that customers in any given market do not benefit from the same guarantee.

In 1994, however, the EU adopted Directive 94/19/EC on Deposit Guarantee Schemes that provided a harmonised minimum level of deposit protection throughout the EU. Such protection was to be achieved by requiring every credit institution to join a DGS and by having each DGS guarantee any depositor up to an amount of the minimum EU level which was set at €20,000. This amount remained unchanged until the crisis.

The main problem with the directive is that it fails to address the increasing cross-border activity within the EU single banking market. As noted by Persson (2007), “most schemes are only able to finance the problem if it is confined to minor banks and governments would have to intervene for larger systemic problems. No DGS is adapted to address a troubled institution in any of the major cross-border groups.”

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1.3 Conclusion

Two conclusions emerge from the previous discussion. First, the years before the 2007/2008 crisis witnessed a rapid internationalisation of the EU banking sector, with the development of large cross-border groups. Second, although the EU’s institutional architecture for financial crisis management was nominally based on both decentralisation and cooperation, the latter clearly relied on weak procedures if not mere declarations of intent. As summarised in Table 1, actual competence essentially rested with national authorities.

As already stated, the deficiencies of the system were well identified prior to the crisis. Frustration with the lack of progress was also clearly expressed in the literature and at policy conferences. For instance, Eisenbeis and Kaufman (2007) had “identified a number of issues and concerns about the present system design that are likely to result in higher than necessary costs of insolvencies in cross-border banking. To date, little progress appears to have been made in the EU in dealing with them. Indeed, as both cross-border branches and subsidiaries increase in importance in host EU countries, the resulting potential dangers of the current structure are likely to become large and may not only reduce aggregate welfare in the affected countries substantially when foreign banks with domestic branches or subsidiaries approach insolvency, but also threaten financial stability. Serious doubts are cast about the longer-term viability of the single passport concept for cross-border branch banking under the existing institutional environment” (Eisenbeis and Kaufman, 2007, p. 43).

The deficiencies of the system had also become known to the EFC, which in April 2006 ran a simulation exercise which took place at the ECB premises and involved the participation of banking supervisors, central banks and finance ministries from all EU-25 countries. The simulation clearly pointed to basic problems in cooperation for managing cross-border crises, a situation which prompted the ECOFIN to set up a special working group on crisis management under the auspices of the EFC.

The reason for this clearly suboptimal situation is that EU policy had been to put market integration first and to build policy integration only as a response to market integration. This strategy had been implemented with success in other fields and it was essentially replicated: the logic was to enlist market forces at the service of the integration process and to proceed with the next step of policy integration when rendered necessary by the advance of market integration and supported by participants in it.

2. The management of the crisis

So far, the crisis has gone through two phases. The first phase, starting in August 2007, started with a general liquidity strain affecting all EU countries (and nearly all other industrial countries) and gradually morphed into a crisis of securitisation and leverage. Tensions on money markets
as measured by the EURIBOR-OIS spread had ups and downs during this phase but remained consistently above pre-crisis levels (Figure 2). There were also some solvency problems affecting specific institutions, but none of them with (significant) cross-border activities. The second phase, which started in September 2008 and could be considered over by summer 2009, witnessed both a general loss of confidence and institution-specific solvency crises affecting some major cross-border banks. The EURIBOR-OIS spread jumped markedly in September 2008 and abated only gradually.

2.1 The first phase of the crisis: from August 2007 to August 2008

The first sign of a financial crisis appeared in August 2007 in the EU, when BNP Paribas froze redemption for three investment funds, citing its inability to value structured products due to the rise of delinquencies on US subprime mortgages. As a result, counterparty risk between banks increased sharply and liquidity evaporated from the interbank market, forcing central banks to provide massive liquidity to their banking systems. In the euro area, this general liquidity crisis was handled, as foreseen in the literature on financial stability (Goodhart, 2000 and Schoenmaker, 2003), by the ECB, without the need of detailed supervisory information on individual institutions.

Unlike the Federal Reserve, which had to introduce new facilities to provide liquidity to financial institutions, the ECB was able to perform this role without significant reform of its procedures and operational framework (ECB, 2009). The range of collaterals it was able to accept in repo lending was already very wide because it has been set on the basis of existing practices in euro area countries. The diversity of these practices resulted in giving considerable flexibility to the Eurosystem and this proved to be an asset. The ECB therefore essentially fine-tuned the provision of liquidity to the banking sector. In December 2007, it also entered into a swap agreement with the Federal Reserve and other major central banks in order to be able to provide foreign currency liquidity to European banks experiencing difficulty in accessing it on the markets.

Given the propensity of general liquidity crises to turn into solvency crises for weaker institutions and given the increased risk that some of these institutions might be cross-border ones, it was timely for the EFC ad hoc group to have launched its work the previous year. By September 2007, the Economic and Financial Committee was able to issue a report containing basic principles for crisis management in the EU. Besides basic principles, the EFC called for a common analytical framework for the assessment of crisis situations and for the conclusion of a

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5 Chronologies of the crisis abound. See for example FSA (2009).
6 Through a front-loading of liquidity provision within the monthly maintenance period and the introduction of longer-term three-month refinancing operations.
7 The report (ECFIN/CEFCPE(2007)REP/53990) has not been made public.
new MoU between all relevant authorities. Crucially, the EFC report committed all member states to view a crisis of a pan-European financial institution as a “matter of common interest”. It also specified a number of practical measures to address the deficiencies in the current institutional set-up. Writing in March 2008, the Deutsche Bank Chief Economist and a collaborator commented that “the EFC report goes as far as is possible under current arrangements in trying to ensure that the crisis of a pan-European financial institution will be dealt with appropriately. It remains to be seen, though, whether these arrangements will prove sufficient – especially since they do not fundamentally change the incentive patterns for the authorities in member states” (Walter and Bergheim, 2008, p. 7).

Based on the EFC report, the ECOFIN Council of October 2007 agreed on common principles intended to be the basis for cooperation among national authorities in preserving financial stability within the EU. These principles were meant to be respected in the management of any cross-border financial crisis with potential systemic implications and to “constitute a consistent and sound basis for responding to any financial crisis situations in the EU, specifying the overarching considerations for cross-border cooperation, taking into account that quick actions may be needed to safeguard financial stability” (Council of the European Union, 2007, p. 23).

The common principles included the following:

- **The objective of crisis management** is to protect the stability of the financial system in all countries involved and in the EU as a whole. It is not to prevent bank failures.

- **Managing a cross-border crisis** is a matter of common interest for all member states affected. Where a bank group has significant cross-border activities in different member states, authorities in these countries will “carefully cooperate and prepare in normal times as much as possible for sharing a potential fiscal burden”. If public resources are involved, direct budgetary net costs are shared among affected member states on the basis of “equitable and balanced criteria”.

- **Full participation in management and resolution of a crisis** will be ensured at an early stage for those member states that may be affected through individual institutions or infrastructures, taking into account that quick actions may be needed to solve the crisis.

- **Policy actions in the context of crisis management** must comply with EU competition and state-aid rules.

Once again, however, incentives for member states to cooperate before or during a crisis were left untouched. The Commission was invited to propose ways to clarify cooperation obligations by end 2008 for adoption by the European Parliament and the Council by the end of 2009. In the meantime, member states were simply encouraged to develop and sign specific ‘voluntary
cooperation agreements’ between relevant national authorities as soon as possible. The only EU instrument for crisis management remained competition and state aid rules.

During this period, member states intervened with rescue measures aimed at preventing insolvency of several banks, none with (substantial) cross-border activities. These state measures were handled by the EU competition authority, the European Commission, on the basis of the standard rules on rescue and restructuring aid.

In June 2008, a new Memorandum of Understanding on cooperation between the banking supervisors, central banks and finance ministries of the European Union on cross-border financial stability was adopted, updating the MoU of May 2005. The new document incorporated the common principles agreed by the October 2007 ECOFIN Council and added specific procedures to improve cooperation within and between member states, by making the flow of information better and by assigning clearer responsibility for coordination within and between countries in the case of a cross-border crisis. The main innovation of the MoU was the recommendation that countries with common financial stability concerns stemming from the presence of cross-border financial institutions develop voluntary specific cooperation agreements (VSCA), including the creation of cross-border stability groups (CBSG) in charge of facilitating the management and resolution of cross-border financial crises.

Reviewing the MoU, two central bankers responsible for financial stability concluded that the crisis has “underlined the need to develop a consistent framework for the management of a crisis involving a bank with a cross-border dimension in Europe. The 2008 MoU on cooperation on cross-border financial stability not only establishes such a framework, but also clarifies the principles underlying this framework. The existence of these principles does not prevent authorities to have diverging interests in the management of the crisis. However, it sets up a common ground on which future improvements to the European crisis management framework can be built” (Praet and Nguyen, 2008, p. 375).

It is certainly true that the first phase of the crisis generated a great deal of activity within the European financial stability community. However, what is even more striking is how little progress was achieved in terms of building a European crisis management framework, despite the urgency. As a matter of fact the recommendations contained in the October 2007 ECOFIN Council conclusions and in the June 2008 MoU were almost similar to those contained in the EFC report of April 2001 on financial crisis management, the so-called ‘Brouwer Report’. At the heart of both sets of recommendations was the need to improve the cross-border exchange of

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8 IKB, Sachsen LB and WestLB in Germany; Northern Rock in the United Kingdom; and Roskilde Bank in Denmark.
9 Community Guidelines on State Aid for Rescuing and Restructuring Firms in Difficulty (‘R&R Guidelines’).
10 Contrary to earlier ones, this MoU (ECFIN/CEFCPE(2008)REP/53106 REV) was made public.
11 EFC/ECFIN/251/01-en-Final.
information. Unfortunately neither created incentives or obligations to change the behaviour of national authorities, thereby leaving the problem of information exchange unsolved.

2.2 The second phase of the crisis: since September 2008

The crisis of confidence among banks dramatically worsened in mid-September 2008 with the bankruptcy of Lehman Brothers. The insolvency of Lehman Brothers not only reduced sharply the already deficient liquidity in various markets, but unleashed serious solvency problems of several major European banks. On 27 September, the Belgo-Dutch bank Fortis became the first systemic EU ban to be rescued by governments. The intervention by the governments of Belgium, Luxembourg and the Netherlands was followed on 30 September by the intervention by the governments of Belgium, France and Luxembourg to rescue the Belgo-French bank Dexia, another major institution. The same day, the Irish Minister of Finance announced a unilateral government decision to guarantee all deposits and debts of six Irish banks and their subsidiaries located abroad. This move, which was sharply criticised in other EU countries, was just the beginning in terms of national rescue packages with cross-border implications and potential risk for the entire EU banking system.

In view of the systemic nature of the crisis and the response by national governments, it became clear that the R&R Guidelines were no more providing an appropriate framework to handle state aid to the banking sector. On 4 October 2008 a meeting of the heads of state and government of France, Germany, and Italy failed to deliver a meaningful result and at the Eurogroup and ECOFIN meetings on 6-7 October, Finance Ministers agreed that the economic situation “calls for a coordinated response at the EU level”, but apart from a decision to increase guarantees on deposits to a minimum of 50,000 euros, it failed to adopt anything beyond broad principles and a declaration of intent that “negative spillover effects should be avoided” (Council of the European Union, 2008, p. 1).

The ECB acted on its side with a change of procedure for refinancing operations. Instead of its variable rate tender, which involved both variability in the cost of liquidity and uncertainty about the amount available to individual institutions, the move to a fixed rate procedure with full allotment was announced on 8 October 2008. With this new procedure, the banks could be certain that their bids for liquidity would be satisfied in full at the rate set by the ECB. This resulted both in removing uncertainty and in lowering the cost of liquidity (since the central bank rate de facto became a ceiling for the EONIA).\textsuperscript{12} The same procedure was applied to US dollars operations, which developed significantly to reach almost USD 300bn in December 2008. Quasi-simultaneously the list of assets eligible as collateral was temporarily expanded (the rating threshold was lowered from A- to BBB- and debt instruments denominated in foreign

\textsuperscript{12} Details of the new procedure are provided by ECB (2009).
currency became eligible). In contrast with the first period, the ECB therefore went much beyond the fine-tuning of existing procedures and introduced genuinely innovative operations.¹³

At the end of the week of 6 October markets throughout the world suffered one of their worst days in history, prompting the French Presidency of the European Union to convene the first-ever meeting of the heads of state or government of the euro area. This emergency summit, held in Paris on 12 October, is generally viewed as the turning point in the efforts to bring about a concerted European response to the financial crisis.

The Paris Declaration¹⁴ on ‘A concerted European action plan for the euro area countries’, endorsed by all EU countries at the European Council meeting of 15-16 October, provided an plan for concerted action. On substance, it was largely inspired by the British plan of 8 October 2008,¹⁵ and included the same ingredients: a commitment to further liquidity provision by the central bank; a commitment to the public recapitalisation of banking institutions in need for capital; and public guarantees for bank borrowing. It also committed signatories to enhanced cooperation.

The Paris Declaration paved the way for three important Commission documents that provided a consistent framework for the rescue and restructuring of EU banks aimed at minimising negative spillover effects:

- The ‘Banking Communication’ of 13 October 2008 focused mainly on conditions that national guarantees covering bank liabilities have to fulfil to be in compliance with EU state aid rules.¹⁶ The main purpose of these conditions was to cut the danger of large amounts of funds flowing between member states in search for the highest level of protection and to avoid massive distortions to competition. The Banking Communication was accompanied by ECB recommendations on the pricing of guarantees¹⁷, also with the aim of avoiding competition distortions resulting from different pricing practices across member states.

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¹³ Further innovations were introduced in June 2009 with the creation of 12-months fixed-rate, full allotment refinancing operations.
• The ‘Recapitalisation Communication’ of 5 December 2008 provided the set of conditions relative national funds to recapitalise banks in order to ensure adequate levels of lending to the economy.\footnote{Communication from the Commission on ‘The recapitalisation of financial institutions in the current financial crisis: limitation of the aid to the minimum necessary and safeguards against undue distortions of competition’, OJ C 10, 15.1.2009.}

• Finally, the 'Impaired Assets Communication' of 25 February 2009 provided the framework for the clean-up phase of financial institutions' balance sheets by removing toxic assets and underperforming loans.\footnote{Communication from the Commission on ‘The treatment of impaired assets in the Community banking sector’, OJ C 72, 26.3.2009.}

Furthermore, the Commission call of October 2008 to lift the minimum level of deposit guarantees was followed on 11 March 2009 by a Directive setting a new minimum level at 100,000 euros and shortening the maximum payout delay from nine months to twenty working days (with a view to shortening it further to ten working days).\footnote{Directive 2009/14/EC of 11 March 2009 amending Directive 94/19/EC.}

In summary, EU authorities moved swiftly during the fourth quarter of 2008 and in 2009 to put in place a framework to respond to the crisis.

Implementation was also swift. During the period from October 2008 to July 2009, the Commission approved a total of over three and a half trillion euros of state aid to financial institutions, of which one and half trillion had effectively been used. The support measures fall under four main headings: capital injections (recapitalisation); guarantees on bank liabilities; relief of impaired assets; and liquidity and bank funding support. Table 2 reproduced from European Commission (2009) provides the details of both approved and actual state interventions for the EU, the euro area and individual member states by type of support measure.

The total of all approved measures amounts to nearly 44 percent of GDP for the entire EU, with figures ranging from more than 200 percent in Denmark and Ireland to zero in several new member states (Figures 3 and 4). In general approved support measures are low in NMS owing to both the fact that the banking sector in these countries is largely controlled by foreign banks and to the home country principle. By contrast they are high in small EU-15 countries with large exposure to the NMS, such as Austria, Belgium, Netherlands and Sweden.

The total of all effectively used measures amounts to nearly 12 percent of GDP for the entire EU. Individual member states fall into four groups: those with support measures amounting to more than 10 percent of their GDP (Ireland, Belgium, the UK, Netherlands and Luxembourg),
those with measures ranging between 5 and 10 percent of GDP (Sweden, Latvia, Austria and Germany), those with measures ranging between 1 and 5 percent of GDP (Germany, Spain, France, Portugal and Greece) and the others. The remark concerning the NMS and the small EU-15 countries with large exposure to the NMS applies here as well.

In terms of category of support measures, guarantees constitute the most important category the EU, with a share of more than 50 percent of approved interventions and two-thirds of effective ones at the EU level. However there are important differences across member states. Concentrating on the five countries with the highest effective measures relative to GDP, one observes that Ireland has focused almost exclusively on state guarantees and that the UK has used mainly liquidity and bank funding support. In Luxembourg, like in Ireland, guarantees played an important role, but so did recapitalisation. By contrast Belgium and Netherlands made use of all four types of measures – recapitalisation, guarantees, impaired assets relief and bank funding support.

The conclusion one draws from this is that member states have made extensive use of various forms of national support to their banking sector. At the same time, the ability of the Commission to rapidly adapt its R&R Guidelines to the peculiarities of the second phase of the financial crisis has probably prevented the worst excesses in terms of negative spillovers. So far, we have witnessed national banking crises in countries such as Ireland, Belgium, the UK and the Netherlands, but no veritable EU banking crisis.

3. Assessment and key questions

Having described the existing policy architecture and how the EU responded to the main phases of the crisis, we now move to addressing our initial questions: Have the shortcomings identified before the crisis hampered effective crisis management? If not, how have problems been circumvented? What instruments have policymakers relied on? And, on the whole, how has the EU policy system performed in view of its well-known shortcomings and taking as benchmark assessments made before the crisis.

In what follows we start with a discussion of the role of information asymmetries in the European context and continue with a discussion of the way the main externalities were managed during the crisis: we address in turn liquidity support, deposit guarantees, the support to individual banks, and the treatment of pan-European banks. We leave aside the important case of the new member states because it is specific and would deserve a lengthy discussion.

3.1 Information sharing

The policymakers’ primary responsibility in a financial crisis is to determine whether and how to provide assistance to institutions in distress. This is first and foremost a matter of information
on the nature of the problem a particular institution and possibly the financial system as a whole are facing. As illustrated by the sequence of events in 2007-2008 worldwide, effective crisis management requires that authorities in charge have as accurate as possible information on (a) whether a particular institution, and the banking system in general, faces liquidity shortages or solvency strains, and (b) what would be the systemic implications of the failure of a particular institution. For such an assessment, however, publicly available information is both insufficient and distorted, as market-based asset valuation is impaired by panic and financial institutions end up valuing the same asset differently. Even in a centralised system the information available to policymaker is therefore partial and imperfect at best and decision is a judgment call, as illustrated by about-turns in the management of the Northern Rock crisis in the UK and of the broker-dealers crisis in the US. But at least there is supposed to be information-sharing among policy institutions.

Throughout the period 2007-2009 the situation in the EU has been characterised by a lingering lack of transparency, not only vis-à-vis market participants and the public, but also among policy institutions:

- Supervisors did not have adequate enough information. According to the De Larosières (2009) report, they “did not seem to share their information properly with their counterparts in other Member States or with the US”. Furthermore, the report points out that “in too many instances supervisors in Member States were not prepared to discuss with appropriate frankness and at an early stage the vulnerabilities of financial institutions which they supervised. Information flow among supervisors was far from being optimal, especially in the build-up phase of the crisis. This has led to an erosion of mutual confidence among supervisors”.

- From July 2007 on, the ECB had to take real-time decisions of liquidity assistance to financial institutions without having any privileged access to the supervisors’ assessment of these institutions’ health. Even vis-à-vis the market, central bank officials more than occasionally felt informationally disadvantaged. And in autumn 2009 the ECB did not know with any precision whether the withdrawal of exceptional liquidity support would involve the risk that some banks would be unable to finance themselves on the market.

- Governments planning for or negotiating over the rescue of cross-border banks did not have access to the same, comprehensive information set.

- Following the success of the US stress test in restoring a degree of comparability across major banks in May 2009, European supervisors decided to conduct a similar exercise, while emphasising that their aim was not “to identify individual banks that may need recapitalisation, as the assessment of specific institutions’ needs for recapitalisation
remains a responsibility of national authorities. Results from a stress test based on a sample of 22 major European was presented to the informal ECOFIN Council in early October 2009, but they only included aggregate information. Neither individual information nor information by country nor indications on the distribution of outcomes was made available. Furthermore, the tests were conducted independently by national supervisors on the basis of common guidelines and there is no guarantee that they ensure a sufficient degree of comparability across countries.

- The International Monetary Fund published in April 2009 a simulation-based assessment of the potential write-downs of European banks as a consequence of both losses on US-originated MBS and credit delinquencies on the banks’ loan portfolios (IMF, 2009a). However the assessment was challenged by European officials, with the ECB later publishing its own assessment, again based on top-down simulations (ECB, 2009). Disagreements resulted in a new evaluation by the IMF in September (IMF, 2009b).

This situation involves significant risks. As indicated, inaccurate information can lead to faulty decisions at EU, euro area or national level. Information is also likely to have been used strategically: national authorities are likely to have been facing incentives, either not to recognise the fragility of some home-based institutions in the hope that massive provision of liquidity by the ECB at near-zero interest rate will help rebuild the banks’ capital base, effectively using ECB liquidity assistance as a form of hidden subsidy; or they may have faced incentives to provide capital and guarantees to healthy institutions in order to help them proceed with acquisitions, effectively distorting competition. Lack of information does not allow EU authorities to find out whether governments have actually behaved in either of these ways.

Following the De Larosière report, the planned creation of a European Systemic Risk Board (ESRB) in charge of macro-prudential supervision and the reform of the committee structure of micro-prudential supervision are an opportunity to revisit the information issue. The questions here are twofold: whether the new European System of Financial Supervisors will receive from national supervisors relevant information on cross-border institutions, in accordance with the recommendations of the De Larosière report; and whether the ESRB will receive the aggregate information necessary to assess overall risks to financial stability in the EU.

On the first question the Commission proposal of September 2009 for the creation of a European Banking Authority states that the Authority will have the power to obtain from national supervisory authorities “all the necessary information to carry out [its] duties” and that

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22 Press release of CEBS of 1st October 2009.
it will establish and manage a central database accessible to colleges of supervisors. On the second question, the Commission proposal for the establishment of the ESRB states that it should have access to all necessary information “while preserving the confidentiality of these data”. In case this information would not be made available, the ESRB would even be entrusted with the right to “request data directly from national supervisory authorities, national central banks or other authorities of Member States”. Implementation of this legislation would be a significant step forward in access to information.

3.2 Liquidity support

As indicated in Section 1, there was concern among scholars and practitioners that the Eurosystem would not be able to provide effective liquidity support in time of crisis. The fear was that the absence of a strong, explicit lender of last resort mandate for the ECB, information asymmetries between the ECB and the national central banks of the Eurosystem, and the resulting coordination problems would hamper swift and sufficient liquidity provision.

Those fears proved unfounded. As indicated the ECB was in fact the first central bank to act on the evidence of a drying-up of liquidity on the interbank market and throughout the crisis there has been no evidence of coordination difficulties between the ECB and the national banks belonging to the Eurosystem. Furthermore, there has been close coordination with major central banks – especially but not only with the Federal Reserve – resulting in the extraordinary innovation of liquidity provision in another currency and the acceptance as collateral of assets denominated in another currency.

This achievement is to be compared to prior assessments. Writing in 1999 on the basis of the provisions of the treaty and secondary legislation, Prati and Schinaisi found that “there [was] uncertainty about whether, in the event of a banking crisis across pan-European markets, there will be a central provider or coordinator of emergency liquidity” and that it was “unclear how a fast-breaking liquidity crisis will be handled”. The ability of European central banks to distribute tasks within the Eurosystem in spite of unclear treaty provision and to coordinate across currency zones in spite of the absence of any preexisting formal agreement must be considered a significant achievement.

The only caveat – an important, but specific one – concerns the handling of cross-border externalities vis-à-vis the new member states. As already indicated we do not address the issue in this paper, but it deserves to be mentioned.

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3.3 Deposit guarantees

As already mentioned in Section 1, deposit guarantee schemes are national in scope and were loosely harmonised as regards levels, payout delays and procedures to ensure the continuity of banking services. Lack of coordination in this regard involved two potential spillover effects:

- Possible deposit flows across countries in search of better guarantees.
- Possible deposit flows within countries from banks headquartered in countries with insufficient or not adequately funded guarantee schemes to banks headquartered in countries with better guarantee schemes.

The Irish government’s unilateral decision on 30 September 2009 to guarantee all deposits to the country’s major banks was perfectly legal as EU legislation provided for minimum guarantees only. It was nevertheless regarded as unfair and the risk of deposit outflows was assessed significant enough to lead other governments to hint at similar responses, which resulted in the fast adoption of a new, higher guarantee floor across the EU. As could have been expected there was thus a race to the top followed by closer harmonisation at higher level. What is interesting here is that there were only three working days between the Irish decision and the ECOFIN Council response. The coordination failure was therefore resolved swiftly enough to prevent any possible run on the banks in countries with weaker protection.

3.4 Bank rescue and restructuring

Prior to the crisis there were no ex ante provisions for the coordination of bank rescue and restructuring if one excludes the general competition policy provisions for state aids to individual companies, which were not designed for dealing with threats to financial stability. As already indicated, financial stability was regarded as a national competence and there was no common framework to provide even loose guidance to government action. There were therefore two significant risks:

- First, that insufficient or uncoordinated national action would compound financial instability. Disparate, unsynchronised introduction of guarantee or rescue schemes would have created uncertainty and confusion in time of panic and would have most certainly aggravated it. Market reactions to failed coordination attempts like the mini-summit meeting between France, Germany and Italy on 4 October 2008 suggest this was a real threat.

- Second, that legitimate national action to safeguard stability would result in a rush to subsidy leading to major competitive distortions and a possible fragmentation of the Single Market.
As the EU had no legal power to foster a coordinated response, its definition and the Member States’ commitment to implement it were entirely an exercise in ad-hoc coordination. The Paris Declaration was a declaration of intent, only precise enough to elicit market confidence until it started to be followed up by national action plans, and whose principles were only endorsed by the European Council. Even the ECB recommendation on the pricing of guarantees was a purely ad-hoc advice by the Governing Council, without a defined legal basis. This was the triumph of discretion over rules.

At implementation stage, the monitoring of national actions – whose main pranks were to be regarded as state aids – could rely on a provision of the Treaty stating that aids introduced to “remedy a serious disturbance in the economy of a Member State” can be considered compatible with the common market (Art 87-3(b)). This provision provided a legal support for a temporary weakening of state aid rule and the monitoring of aids by the European Commission within the framework of competition policy provisions. In the Banking Communication of 13 October the Commission indicated that Member States would “have to show that the State aid measures notified to the Commission under this framework are necessary, appropriate and proportionate to remedy a serious disturbance in the economy of a Member State” and set precise criteria for assessing various forms of assistance to banks. This was the revenge of rules over discretion.

Coordination thus interestingly relied on a combination of a purely ad-hoc, non-legally grounded but politically binding plans and treaty-based monitoring by the Comission.

There is no comprehensive evidence on the basis of which the effectiveness of this monitoring mechanism can be assessed. DG Competition’s self-assessment, published in August 2009\textsuperscript{25}, indicates that the set objectives have on the whole been met. However, it also echoes concerns over cross-country differences in pricing of guarantees (in spite of common principles) and about the fact that national support was (sometimes explicitly, but also implicitly) been made conditional on extending credit to \textit{domestic} customers, thereby leading to Single Market fragmentation.

Outside observers have also voiced concerns over the lack of sufficient recapitalisation and restructuring of the banking sector (see IMF, 2009b). The IMF assesses that Europe trails the US as regards the absorption of bank losses.

\textit{3.5 The treatment of pan-European banks}

\textsuperscript{25} DG Competition’s review of guarantee and recapitalisation schemes in the financial sector in the current crisis, 7 August 2009.
As indicated in the Introduction, the absence of a framework for dealing with the possible failure of a cross-border institution was identified before the crisis as a major shortcoming of the EU architecture. Concerns were raised both about the lack of incentives to information-sharing and the lack of provisions for \textit{ex ante} burden-sharing (see for example Freixas, 2003 and Véron, 2007). When the crisis developed, there was no shortage of call for concerted action that hinted at, or explicitly called for, a European solution to the crisis of pan-European institutions (see Alesina \textit{et al.}, 2008, and Gros and Micossi, 2008).

In the event, however, calls for \textit{ex ante} burden-sharing were consistently rejected by the authorities and even the suggestion of a compartmented fund to which member states would all contribute without exercising joint responsibility fell on deaf ears. In spite of the exceptional severity of the crisis and the high risks involved in the failure of a large cross-border financial institution, governments never departed from the position that there is no European taxpayer and that all support to the banking sector has to be national.

This however did not prevent the bail-out of two large institutions with significant cross-border operations, Fortis and Dexia. Asymmetric information, incentives to cheat and disagreements over burden-sharing did not prevent international cooperation on their rescue. Fortis was broken up along national lines, at a cost for its (private) shareholders but at no systemic cost, whereas Dexia was jointly rescued by three EU member states in which public entities were among the shareholders prior to the crisis.

\textbf{4. Conclusions}

The purpose of this paper was to assess the management of the 2007/2008 banking crisis in the EU against the backdrop of pre-crisis institutional arrangements that were found clearly sub-optimal. Three conclusions emerge from our assessment.

First, the management of the crisis has taken place according to the assignment of competences that exists in the EU: the ECB and national central banks outside the euro area have acted as liquidity providers, national governments have dealt with financial stability, and the European Commission has enforced competition disciplines. Although some of these players, notably the ECB, have gone beyond the pre-existing script, none has gone beyond its pre-existing role. Especially, there has been no EU-financed bail-out of ailing transnational institutions.

Second, coordination problems have been dealt through a combination of ad-hoc, discretionary cooperation and reliance on existing instruments, notably those of competition policy. Remarkably, the separation between the main currency zone, the euro area, and the main financial centre, London, has not been a major obstacle to coordination.
Third, the better-than expected performance of the EU, so far, ought to give rise to no illusion. It is only because EU financial stability arrangements are so sub-optimal that a rather positive assessment of their functioning can be provided.
References


International Monetary Fund (2009a), Global Financial Stability Report, April

International Monetary Fund (2009b), Global Financial Stability Report, September

Kleimeier, Stefanie and Harald Sandler (2007)

Mayes, David G., Maria J. Nieto and Larry Wall (2007).

Nieto, Maria J. and Gary Schinasi (2007).


Posen, Adam and Nicolas Véron (2009).


Prati, Alessandro and Garry G. Schinasi (1999).


Figure 1: Comparative internationalisation of large banks

![Graph showing comparative internationalisation of large banks]

Source: Forbes 2000 ranking (Apr. 2009), Worldscope, company reports, SEC filings, authors’ assumptions. Rankings based on total 2008 assets; right-hand bars weighted by assets.

With special thanks to Martín Salíñas Zambrana for great research assistance.

Source: Bruegel research by N. Véron

Figure 2: Two phases of the crisis
Spread 3-month Euribor-EONIA Swap Index, January 2007 to August 2009

Source: Datastream
Figure 3: Public capital injections into the banking sector, Oct. 2008 to June 2009

Figure 4: Public guarantees on bank liabilities, Oct. 2008 to June 2009
Guarantees on bank liabilities (percent of GDP)

Source: European Commission, EFC, US Congress, Bruegel calculations
### Table 1: Essential features of the pre-crisis state of play

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### Table 2: State aid in the banking sector (October 2008-July 2009)
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Source: European Commission (2009)