EARLY INTERVENTION AND PROMPT CORRECTIVE ACTION IN EUROPE

David G Mayes*

(Bank of Finland and University of Auckland)

Paper for the CFS-IMF Conference

A FINANCIAL STABILITY FRAMEWORK FOR EUROPE

26 September 2008, Frankfurt-am-Main

The recent crisis has taught us (at least) four main lessons, all of which were known beforehand but not appreciated so graphically:

1. Banks can get into trouble extremely rapidly – the authorities therefore need to have extensive 'pre-positioning' if they are to handle the difficulty efficiently
2. Depositors need to be guaranteed almost uninterrupted access to their funds and full insurance of most deposits if bank runs are to be avoided
3. The whole system of prompt corrective action (PCA) needs to start early, before the capital triggers are reached and hence requires a basis in risk assessment and market signals
4. It is necessary to be able to step into a bank and take it over before its capital is entirely depleted

It is easy to extend the list: it is clear that the market for troubled banks is highly imperfect – no reasonable bids could be obtained for Northern Rock and the rescue of Bear Stearns involved the commitment of substantial public funding, as did that of Roskilde in Denmark. Financial stability involves more than a narrow interpretation of banks, with the perceived need to support not just investment banks but Fannie Mae, Freddie Mac and the insurer AIG. The existing regulatory system has been shown up as being even more procyclical than had been feared. There has been serious mispricing of risk and even more serious underestimation of the importance of liquidity. …

The major problems have largely occurred in 'national' banks yet the authorities had problems coping. If they were to be repeated in cross-border banks it is not clear that the authorities could cope unless the home country was to assume responsibility and get on with the job and their

* These remarks reflect my personal opinion which may not coincide with those of any of the organisations for which I work.

interests were in line with those of the other countries involved.[1] In the Nordic environment this implies that the individual authorities need to have similar powers and compulsions and be able to take into account problems in the rest of the financial group when taking action. More widely in Europe the problem is more complex as the systems in the different countries are less similar. However, large cross-border banks are not simply European and having to co-ordinate more widely, particularly with the United States widens the problem still further.[2]

This is a huge agenda even at a national level. If experience elsewhere is anything to go by, say from the United States, it could easily take six years or so to implement the changes needed *after* the decision to go ahead is made. Taking the decisions themselves is a different issue. On the whole it is easier to take them quickly while the problems are obvious and decision makers are still concerned by the problems they found themselves in. Postponing until there is adequate time for reflection can mean that the issue goes right down the order of priority and the political window of opportunity is lost. On the other hand rapid legislation can sometimes offer new problems of its own. The well-intentioned Sarbanes-Oxley Act in the US is now appearing to pose a number of difficulties. It is not clear whether a revised Act will ultimately prove the best solution or whether the initial legislation should have been allowed more time to mature. For either to be effective depends on the particular political environment at the time. Nevertheless in the aftermath of the difficulties that have assailed the world there is now an opportunity for change before the problem strikes – waiting until the crisis happens with cross-border banks and the extra losses are incurred because systems have not been adequately revised would be to use the word of Padoa-Schioppa (2007) 'irresponsible'.

This paper sets out some suggestions about helpful changes that could be made in the current environment but it also admits that some of the changes required require very fundamental reviews about how cross-border problems should be tackled, particularly within Europe.

A preliminary remark

Outside the United States and the transition countries, the financial safety net is largely untested. It can cope with small problems such as failures of fringe banks but its ability to handle larger problems is only theoretical despite simulation exercises. In most respects this is exactly as it should be. It is widely hoped that the safety net will not be used. The net performs two main functions:

[1] This fortunately appears to be the case in AIG, where many counterparties lie outside the US.

[2] There has already been a dispute over the location of assets within a week of the collapse of Lehman Brothers as those trying to realize parts of the group as going concerns seek to get rapid deals (Financial Times 20/21 September, p.1).

1. It acts as a reassurance to depositors and other creditors (and indeed to borrowers) that any problem could be successfully addressed.
2. It acts as an incentive to the private sector to find solutions well in advance because the public sector is not going to provide a bail out. The public sector solution will wipe out the shareholders, managers can expect to lose their jobs and junior debtors may well face losses.

Thus the intention on the one hand is to provide confidence to the public and on the other to try to ensure that the private sector solves its own problems. PCA in particular needs to have a sequence of increasingly harsh intervention according to timetable as the problem worsens, so that banks will have little incentive to delay and the authorities will find it difficult to forebear unduly. This process needs to start as early as possible, as exit will be very rapid if confidence is lost.

What we have seen from the Northern Rock episode in the UK is that these conditions did not apply. Action was late and there was a bank run. However, the problem was resolved without any overall financial instability in that emergency lending was provided under normal terms and the bank was nationalized while shareholder value was positive, avoiding both direct and indirect contagion of the problem to other financial institutions. Nevertheless, this was not the authorities preferred method of resolution and a comprehensive review of the safety net and how it should operate is in progress, with some changes to deposit insurance already being implemented. The Roskilde case on Denmark has similar characteristics.[3] Although the problems were identified and normal collateralized emergency lending provided by Danmarks Nationalbank on July 10, no scheme for providing recapitalization emerged and by 24 August the bank was judged to be insolvent and was swiftly resolved leaving the impaired assets and the claims of the shareholders and junior creditors in the old 'closed' bank and transferring the good assets, depositors and senior debtors to a new bank recapitalised by a combination of the central bank and a private sector consortium. There are some unusual characteristics of Danish Law that permitted this solution, while the UK had to introduce special legislation to resolve Northern Rock. Whether other countries could manage the same is more debatable.

The task ahead for Europe

The problems in the UK have prompted the authorities to embark on a wholesale reform of the safety net, revising deposit insurance, instituting a special resolution regime, ensuring earlier action and reorganizing the structure of responsibility to give a leading role to the central bank. The question at issue is what should be done more broadly in Europe, particularly for financial

[3] Roskilde was Denmarks's sixth largest bank

institutions whose activities run across borders? Even within the UK there was some debate over whether all such change was necessary and whether it should all be attempted at the same time. After all, there was no financial disaster. Creditors and depositors lost nothing. While the public sector on behalf of the taxpayer has taken on some considerable contingent liabilities these may not be realized and the assets may be disposed of at a profit. The losers have been the shareholders and to some extent the management that took the decisions that got them into the difficulty.[4]

In many respects the need for action is driven by moral hazard. If the state has been prepared to step in in this way on this occasion then it can be expected to do the same in the future. This may exacerbate the under-pricing of risk and encourage excessive risk-taking in the future. A more prosaic reason for action is that the political windows for such change tend not to be open for long. Sweden, for example, has had a proposal for extensive regulatory reform ready for submission to parliament for over 7 years but the risks were not felt large enough to move it up the legislative programme. Now, having had their own difficulties in trying to close a failed but fortunately very small bank and observing the problems of others the picture is changing and it appears that they are now proposing to introduce legislation that has a lot in common with the UK proposals.[5] If the process of change is embarked upon now it could be in place by the time of the next crisis.

However, unlike the UK, many smaller European countries, such as, Estonia and Finland do not have largely national banks; their banks are largely cross-border, headquartered in other member states (see Figure 1 for picture of the position across the EU). Unilateral action might be either confusing or ineffective. Indeed attempts to put greater constraints on banks than in partner countries might simply drive the rest of the banking system into other jurisdictions. Hence any programme of change needs to have two features built into it: first that it is consistent with what exists or is planned in the rest of the Nordic region; second, that it gives a positive incentive to the banks to adopt it. Elsewhere in Europe the problems may be more difficult as the differences between financial regulatory systems are greater and the history of joint activity much shorter.

This issue of an incentive is a potential way to deal with one large problem facing a special resolution regime for banks. Currently as a result of the Pafitis case it may well be difficult to impose one on banks for fear of violating the human rights of shareholders, although the Roskilde example in Denmark suggests that there may be ways round this.[6] In the UK it is suggested that

---

[4] Fannie Mae and Freddie Mac may be in the same position.

[5] *Dagens Industri*, 11th September 2008.

[6] There also appear to be unusual features of the treatment of Tier 2 capital in Denmark, which enable rapid resolutions. For debt to be acceptable as Tier 2 capital in Denmark it has to have provision for writing down and for deferring interest. Clearly if other countries were to switch to this requirement it might increase the cost of subordinated debt

shareholders might agree to this in return for improved deposit insurance and improved emergency lending facilities.[7] This again argues for a package approach to change if the benefits are dispensed before the costs the banks may be able to lobby successfully against the imposition of the costs.

One immediate lesson that can be learnt from the UK is that many countries' systems of deposit insurance would not be credible in the face of the possible failure of a non-trivial bank. The deposit insurer does not have the capability to provide virtually uninterrupted access to deposits. This could be changed at relatively limited cost. Also it might be worth considering a general rise in coverage so that 100% of most people's deposits are covered. Prospects for change in the EU now seem greater as the Commission has reopened the issue although the recent review of the Deposit Insurance Directive led to no substantive change. However most of the changes needed for national banks could be implemented unilaterally as the Directive does not impose upward improvements simply minimum standards.

In this paper I focus on just one aspect of the safety net – Structured Early Intervention and Resolution (SEIR), or Prompt Corrective Action as it tends to be labeled in the United States – although it only makes sense as part of an integrated safety net. The reasons for this focus are simple.[8]

- SEIR has proved credible in the US. It is readily possible to see how it was implemented in practice and there is experience with its drawbacks. Although a European version would undoubtedly be different in detail there is a working template to follow and such a system would find it relatively easy to gain credibility in Europe as well.
- It deals with several of the key points of the safety net. It is designed to cut in early. It offers strong incentives for the private sector to solve the problems first. It gives some certainty as to how problems will be resolved and it makes it clear that not only is there a timetable for solution but that should all the early stages fail the problem can be brought to a conclusion in a manner that will avoid a financial crisis, avoid any bailout of the shareholders, avoid exposing the taxpayer to direct losses and leave the creditors better off than they would be in a traditional insolvency.
- PCA can be introduced in Europe within the current supervisory structures. It does not require the creation of a grand European institution nor with one exception does it require

slightly but then this position effectively applies in the United States, Canada and other countries with a special resolution regime already so it is clearly not something prohibitive.

[7] Eisenbeis and Kaufman (2007) have argued along similar lines for the introduction of a special regime for cross-border banks; a point I return to later.

[8] Trivially, the subject of this session is crisis avoidance and another is aimed at crisis resolution so I stick to the former.

any extensive new legislation that might be difficult to agree across the member states. (The exception is the closure rule.) Its existence will make it easier for the present authorities to work together and achieve a coordinated solution.

- It does not impose any substantial new regulatory burden on banks and through harmonization will make it easier for them to operate across borders.
- Use of PCA substantial reduces the chance that there will be an awkward problem of burden sharing among the countries involved in supervising a problem bank

But it is not a panacea. As in the US, operating a complex network of supervisors is not the efficient solution for the cross-border institutions that the EU is encouraging. It is a pragmatic step forward. Ultimately offering a European level regulatory environment for European level financial institutions sounds more promising and would reflect the US experience with the Federal Reserve, the Comptroller of the Currency and the Federal Deposit Insurance Corporation.

A Little Background on SEIR[9]

SEIR was first laid out by Benston and Kaufman (1988) as a means of minimizing deposit insurance losses by requiring a series of mandatory supervisory interventions as a bank's regulatory capital ratio falls.[10] One way that this proposal could work is illustrated in table 2 of Benston and Kaufman (1988, p. 64), in which they propose that banks be placed in one of four categories or tranches:

(1) No problem,

(2) Potential problems that would be subject to more intensive supervision and regulation,

(3) Problem intensive that would face even more intensive supervision and regulation with mandatory suspension of dividends and

(4) Reorganization mandatory, with ownership of these banks automatically transferred to the deposit insurer.

Although the deposit insurer would assume control of the bank, Benston and Kaufman (1988, p. 68) ordinarily would have the bank continue in operation under the temporary control of the relevant deposit insurer, the FDIC (Federal Deposit Insurance Corporation)[11] or be sold to another bank, with liquidation only as a "last resort". The deposit insurer would remain at risk under SEIR, but only to the extent of covering losses to insured depositors. However, Benston and Kaufman did not

[9] This section draws heavily on Mayes et al. (2008).

[10] See Benston and Kaufman (1988). For a discussion of the intellectual history of PCA see Benston and Kaufman (1994).

[11] The FDIC covers the normal range of depository institutions but not all of what would be labeled 'banks' in the EU.

expect such a takeover to be necessary, except when a bank's capital was depleted before the supervisors could act, perhaps as a result of a massive undetected fraud. Because the bank's owners would realize that the supervisors were mandated to take over a bank while it was solvent (3 percent market value of capital-to-asset ratio under the SEIR proposal), the owners had strong incentives to recapitalize, sell, or liquidate the bank rather than put it to the FDIC.[12]

A version of SEIR was adopted under the title prompt corrective action (PCA) with the 1991 passage of the Federal Deposit Insurance Corporation Improvement Act (FDICIA) as shown in Table 3. PCA deals with prudential supervisors´ agency problem by first allowing and then requiring specific intervention by the supervisory authorities on a timely basis. It is worth recalling that FDICIA was enacted in the light of the savings and loans problems in the US and reflected dissatisfaction with the previous regime.

Whereas SEIR sketches out how supervisors would respond to a drop in capital adequacy, PCA provides a list of actions the supervisors may take and another set of actions the supervisor must take to further the goals of PCA (minimizing losses to the deposit insurance fund). While PCA reduces supervisory discretion as a bank's capital level falls, supervisors retain substantial discretion over almost all banks. Even the "mandatory provisions" often include a significant element of supervisory discretion. For example, while an undercapitalized bank must submit a capital restoration plan, the supervisors have discretion over whether the plan will be approved as "acceptable."

PCA may appear to be simply a set of supervisory corrective measures that should be taken as a bank's capital declines that any country could easily adopt. However, PCA is unlikely to work as intended if a country has not accepted PCA's underlying philosophy or lacks the necessary institutional prerequisites. There are three important aspects to the philosophy underlying PCA (Nieto and Wall, 2006):

(1) bank prudential supervisor's primary focus should be on protecting the deposit insurance fund and minimizing government losses,

(2) supervisors should have a clear set of required actions to be taken as a bank becomes progressively more undercapitalized and

(3) undercapitalized banks should be closed before the economic value of their capital becomes negative.

[12] Table 2 in Benston and Kaufman (1998) gives "Illustrative Reorganization Rules" with mandatory reorganization at a 3 percent market value of capital-to-asset ratio. However, the text talks about the possibility that this ratio should be revised upwards.

The four institutional prerequisites identified by Nieto and Wall (2006) are:

(1) supervisory independence, and accountability;

(2) adequate authority,

(3) accurate and timely information and

(4) adequate resolution procedures.

They find that European countries currently comply with these institutional requirements to varying degrees. The adoption of a version of PCA would provide the EU with a set of minimum supervisory responses to violations of the Capital Requirement Directive (CRD).[13]

The focus on PCA reflects things. First that the key concern is to deal with problems expeditiously. Hence, the focus for harmonization should be on the actions that can be taken by the various authorities and on the thresholds that trigger them. While considerable harmonization may be required for authorities in one jurisdiction to be satisfied that all that is necessary is being done to ensure prudent operation in normal times it is not necessary to eradicate all the national discrepancies to achieve this. Hence the extent of the pressure on CEBS to achieve harmonization can be more limited. Second, the national authorities must be capable of taking actions that are in the interests of the other countries involved in a cross-border banking group and not just their own. This is a very substantial requirement. It may be necessary to impose constraints on a healthy subsidiary in one country in order to assist a troubled subsidiary in another country, where it otherwise threatens to cause financial instability in that country. Nieto and Wall's last two requirements most certainly apply – information - both for the different supervisors to be able to compile an adequate picture of a cross-border bank and for a national supervisor to be able to assess the financial stability in his country where many of the banks are cross border - and adequate resolution procedures for handling cross-border banks. However, this later is the subject of a different session and a subject I have considered before (Mayes et al, 2001 and Mayes and Liuksila, 2003, for example).

A problem of triggers.

Table 1 sets out the rules of the US version of PCA in a simplified form. It is clear that this is based purely on a set of capital triggers. However, as Peek and Rosengren (1997) point out, even in the US intervention has tended to occur before the capital triggers are breached. It is information obtained in part of the normal regular assessment and in the compilation of CAMELS ratings that

[13] Directive 2006/49/EC of the European parliament and of the Council of 14 June, 2006 on the capital adequacy of investment firms and credit institutions (recast). Official Journal of the European Union L177/201 30 June, 2006.

triggers the move from the first category. Really it is categorization by Benston and Kaufman (1988) that is the more descriptive. The first category for PCA should be the onset of suspicion that something is wrong. Apparently in practice the move out of the well capitalized category in adequately capitalized is done on this basis by the FDIC (Lane, 2008).

As I suggested right at the outset, the one of the main lessons we have relearnt in the current crisis is the need to act very early. The literature on early warning indicators (see Davis and Dilruba, 2008, for example) is quite well developed. We have a fairly good idea of the sorts of macroeconomic indicators that will tell us something about the general economic cycle and CAMELS style set of indicators for the individual institution seems to work reasonably well. The problem normally is that the indications are only completely clear with the benefit of hindsight. Some banks will evade detection, while others will trigger closer investigation unnecessarily. This is a standard Type I and Type II error problem and deciding on the particular dividing line will depend on the preferences for making the two types of mistake.

In implementing PCA in a European environment it would be more helpful to acknowledge other triggers that will cut in earlier than capital triggers explicitly. The most useful additional triggers would be related to the existing supervisory process. For example, both the risk assessment under Pillar 2 of Basel 2 and the disclosures under Pillar 3 are of value. Of course one other feature of the present crisis has been that supervisors and the banks themselves have recognized rapidly that many of their stress-testing procedures are inadequate. When these are refined then detection should be somewhat easier. Pillar 3 disclosures give a better opportunity for market discipline to operate. Poor performance is likely to be reflected in the share price and substantial falls in short periods of time should trigger action. A glance at Figure 2, for example, will show that the share price of Northern Rock had fallen by a quarter during a period of four months, ending three months before the emergency measures had to be put in place.[14] For banks in Norway for example this action is triggered inside the bank itself. If the share price of the bank falls by more than 25% between AGMs an extraordinary meeting of shareholders has to be called to discuss how the bank the bank might reverse the decline. (If the share price falls by 75% a second meeting is required where this time the question is whether the bank should continue trading. The implication is that it should be closed in a orderly manner unless any capital injection can be obtained.

Nieto and Wall (2006) note that the enforcement of PCA depends on the accuracy of reported capital adequacy ratios. They survey several studies suggesting that market signals,

[14] It is also noticeable from this figure that HBOS, which is the only other bank to show a noticeable decline in share price, was showing it over a year before it ultimately had to accept a rapid merger with Lloyds TSB to ensure continuing confidence.

primarily subordinated debt spreads, provide useful information about banks' financial conditions and that in some cases these signals have proven more accurate than the banks' reported Basel I capital ratio. These studies (e.g., Sironi, 2001; Evanoff and Wall, 2002; Llewellyn and Mayes, 2004) show that the information is sufficiently reliable for use as a failsafe mechanism to identify critically undercapitalized organizations. The use of such market risk measures would provide a valuable supplemental measure for PCA.

Supervisors, though have been reluctant to use market signals to determine the capital category of banks operating under PCA. A less controversial and perhaps easier approach to implement would be to use market-risk measures as triggers for closer supervisory scrutiny of a bank. These measures could include subordinated debt spreads and other measures such as the pricing of credit derivatives, or equity based measures, such as Moody's KMV Expected Default Frequency. The measures could be used informally by individual supervisors to trigger closer scrutiny of the various parts of the group. The use of such market measures would be consistent with Pillar 2 of the new Capital Accord, which requires supervisory review of bank's reported capital adequacy and with Pillar 3, which seeks to encourage market discipline. Market risk measures could further be used to trigger a mandatory meeting of the college of supervisors to review the group's condition and, when appropriate, for triggering a coordinated special examination of the banking group.

Information

In order for bank supervisors to use their powers effectively, they must have an accurate understanding of the bank's and banking group's financial condition. A potential problem for a prudential supervisor of a cross-border banking group is that of determining the status of those parts of the group outside its supervisory control.

The need for information sharing among the supervisors is recognized in the CRD, Article 132, which establishes that:

> the competent authorities shall communicate on request all relevant information and shall communicate on their own initiative all essential information. […] Information shall be regarded as essential if it could materially influence the assessment of the financial soundness of a credit institution or financial institution in another Member State. In particular, competent authorities responsible for consolidated supervision of EU parent credit institutions and credit institutions controlled by EU parent financial holding companies shall provide the competent authorities in other Member States who supervise subsidiaries of these parents with all relevant information. In determining the extent of

relevant information, the importance of these subsidiaries within the financial system in those Member States shall be taken into account.

This obligation for information expands to encompass also:

(c) adverse developments in credit institutions or in other entities of a group, which could seriously affect the credit institutions; and (d) major sanctions and exceptional measures taken by competent authorities in accordance with this Directive, including the imposition of an additional capital charge under Article 136 … .

These provisions for information sharing have also been strengthened with the adoption of Pillar 3 of the new Capital Accord.[15] For example, banks are required to report the total and Tier 1 capital ratios for the consolidated group and for significant bank subsidiaries. In this case, the host supervisors of the subsidiaries could use this information (that would be reflected in a market indicator) as justification for triggering consultations with the home country supervisor and/or for undertaking a special examination of the banking group.[16]

While the information sharing mandated by the CRD should provide national supervisors with the information they need, ad hoc sharing on a banking-group by banking-group basis is likely to be inefficient and leave room for gaps in information sharing. The enhanced sharing of information among supervisors is aimed at reducing the incentives of supervisors of the subsidiaries or parent bank to exploit the information to their advantage and it is a precondition for the effective implementation of PCA as a mechanism aimed at resolving the cross-border agency problems that arise in supervising and resolving cross-border banking groups. Mayes (2006b) and Vesala (2005) advocate a policy of information sharing via the establishment of a common data base. At a minimum this data base should contain quarterly consolidated financial statements from all insured banks and their nonbank corporate parents (when one exists) that is available to all bank supervisors and ideally these financial statements would be publicly available.[17] Additionally, there would be

[15] Pillar 3 aims to encourage market discipline by developing a set of disclosure requirements which will allow market participants and foreign supervisors to assess relevant pieces of information on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution. Since domestic supervisors typically request additional information from the banks it is unlikely that this public disclosure will be thought sufficient.

[16] The required level of disclosure is both limited in its relevance and its timeliness (Mayes, 2004). The requirements fall well short of what has been required of banks in New Zealand since 1996, where disclosure statements are required quarterly to reveal peak exposures and where bank directors are legally liable for their accuracy.

[17] The U.S. has long required its banks and bank holding companies to file standardized reports of income and condition with their federal supervisor. These reports have been made publicly available for well over a decade, and are currently available at no charge on the Internet from the Federal Reserve Bank of Chicago. For example, the commercial bank

some merit in establishing a data base with confidential supervisory information and analysis would also be available to the appropriate national supervisory agencies to assist all prudential supervisors in understanding the condition of the group as a whole and its relationship to the bank they each supervise. The European Central Bank (ECB) or the Committee of European Banking Supervisors (CEBS) could harbour that database. In the case of the ECB, this responsibility would be consistent with article 105.5 of the EC Treaty: "the ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system." This proposal would also require modification of the professional secrecy imposed by article 44 of the Directive 2006/48/EC of the European Parliament and of the Council of 14 June, 2006 relating to the taking up and pursuit of the business of credit institutions (recast).[18]

In general there is scepticism over the effectiveness of information sharing under the current rules. Persson (2008) suggests:

> Information sharing amongst all authorities involved in a cross-border banking group is also a delicate concern. In the Nordic and Baltic countries, there are six banking groups with significant cross-border activities.[19] The regulatory contacts of these groups include seven supervisors and eight central banks.[20] It is consequently not far-fetched to argue that information sharing will be complicated and slow in such a setting.

Something more immediate and swift is required using a common basis and without the need to considered whether it should be revealed to the rest of the team.

Institutions

MoUs are important tools in establishing contact networks and a common language, which would be helpful in a crisis.[21] However, because of their lack of a binding legal status they are hardly sufficient for further development of the handling of cross-border banking. Furthermore, practical issues such as, that in the extreme, there may be up to 81 separate entities involved in

---

files (as of June 2007) are available at < http://www.chicagofed.org/economic_research_and_data/commercial_bank_data.cfm >.

[18] L 177/ 1 OJ of 30 June, 2006.

[19] These banks are: Nordea, SEB, Swedbank, SHB, Danske Bank and Kaupthing.

[20] The Bank of Lithuania also has supervisory responsibility.

[21] Mayes and Vesala (2000) argue that the sharing of home/host responsibilities during the movement toward a single market is possible partly because of MoUs on information sharing. Opinions on this matter are, however, diverging and Mayes (2006a) argues for example that predetermined responsibility and obligations in a MoU may still cause agency problems and conflicts once a cross-border crisis arrives.

agreeing a joint assessment, do not speak for the MoUs as an optimal long run solution. Instead, they should be considered as a first step, and later as a complement, in facilitating international monitoring and supervision.

Although PCA reduces supervisory discretion, some element of discretion is inevitable. While a supervisor can be compelled to employ some measures, the choice of what limits the risk best and reduces any impending loss is bound to be substantially case specific. For example replacing existing management, might be essential to restore the banks´ financial health in some cases, but counterproductive in other cases.[22]

The existence of supervisory discretion raises the possibility of a supervisor taking or failing to take a variety of actions that are harmful to the overall banking group but which yield net benefits to the supervisor's particular country. For example, a supervisor could impose draconian limitations on a bank that is small relative to its financial system, even though the bank provides valuable services to the rest of the group elsewhere. Alternatively, a supervisor may forbear from disciplining or closing a bank that has a large presence in its country. Such forbearance could take the form of a supervisor accepting inadequate capital restoration plans and imposing only the minimum disciplinary measures required under PCA, even though additional measures are likely to be necessary to rebuild the bank's capital. The consequences could be that weakness at the group level that would adversely impact subsidiaries (even the banking systems) in other countries and may substantially raise the cost of resolving the group should it become insolvent.

The EU has some mechanisms that could be extended to provide an element of coordination in the use of discretionary measures. The CRD provides for some coordination of banks supervision and allows for the delegation of some supervisory responsibilities to another Member State's prudential supervisor. Article 131 establishes that:

> in order to facilitate and establish effective supervision, the competent authority responsible for supervision on a consolidated basis and the other competent authorities shall have written coordination and cooperation arrangements in place. Under these arrangements additional tasks may be entrusted to the competent authority responsible for supervision on a consolidated basis and procedures for the decision-making process and for cooperation with other competent authorities, may be specified. The competent authorities responsible for

[22] As noted above, this analysis assumes the adoption of a uniform system of PCA by all EU countries so that the authorities in each of the EU countries would have a similar if not identical range of powers. Currently this is far from the case and, although the toolkit may be similar, what can or must be done in each circumstance varies considerably.

authorizing the subsidiary of a parent undertaking which is a credit institution may, by bilateral agreement, delegate their responsibility for supervision to the competent authorities which authorized and supervise the parent undertaking so that they assume responsibility for supervising the subsidiary in accordance with this Directive.

Thus, the CRD provides for a general mechanism of coordination and cooperation among supervisors and it also envisages a stronger form of coordination, which is the possibility that the host supervisor of a subsidiary may delegate its responsibility to the home country prudential supervisor of the subsidiary's parent.

The primary problem with using the authority provided by the CRD is that delegating supervisory responsibility to the home country supervisor of the parent bank is likely to worsen the principal-agent conflict between the parent's supervisor as agent, and the subsidiary's country's taxpayers and voters, as principal. The parent's supervisor would be responsible for the impact of its supervisory action on the deposit insurance fund and possibly the financial stability of the host country of the subsidiary, but the parent's supervisor would not be directly accountable to the host country government and the taxpayers, thus increasing the agency problem.

Another mechanism for coordinating discretionary PCA actions would be the creation of a 'college' of the prudential supervisors of the banks in the group.[23] The college would be fully compatible with Article 129 of the Directive 2006/48/EC of the European Parliament and of the Council of 14 June, 2006 relating to the pursuit of the business of credit institutions (recast), which envisages the cooperation of the consolidating supervisor with the competent authorities of the subsidiaries.[24] The coordination mechanisms could be merely advisory, leaving the final decision up to the national supervisors of each bank, or it could be binding upon the members. In some cases allowing each supervisor to take disciplinary action would likely be acceptable, especially if the action would be unlikely to have adverse consequences on other group members. However, leaving the final decision in the hands of each bank's national supervisor would likely not result in effective coordination to the extent that different supervisors reach different conclusions about the appropriate actions either because they have different incentives or because they have reached different judgments. Thus, for an effective implementation of a PCA policy as a coordination mechanism between supervisors, a better solution would be to give the authority to take discretionary actions that will be binding on all prudential supervisors in the college. The idea

[23] This would effectively be an extension of the role the groups of supervisors that have had to be set up to see through the requirements of the CRD for each individual bank.

[24] L 177/48 Official Journal of the European Union of 30 June, 2006.

behind such a grouping is that the supervisors can become in some sense jointly responsible for the actions the group takes. In such a case it may then be easier to agree to remedial actions.

Ideally, a college of supervisors for each cross-border banking group should be formed before the need arises to invoke PCA's disciplinary provisions. However, the formation of a college with authority to make discretionary decisions within the PCA policy framework should be mandatory as soon as a bank owned by a cross-border banking group falls below the capital standard or other threshold.[25] The formation of the college does not mean that decisions will always be made in a timely and harmonious fashion. Even the best of colleges is likely to be an inefficient mechanism for addressing most issues that require consultation or negotiation with the banking group. For example, if a cross-border banking group with capital below the minimum capital requirements is required to develop a capital restoration plan that is acceptable to its supervisors, having the bank negotiate the plan with each of the college members would be slow and inefficient. Where such consultation or negotiation is required, a better alternative would be for the committee to select one supervisor as the primary contact with the bank.[26] The role of the college would then be to review and approve the contact supervisor's agreement with the bank.

For a variety of reasons, a college of supervisors may at times find reaching a decision difficult. One way of forcing timely action would be for PCA to establish a presumption that a certain action will automatically be effective say 30 days after a bank violates one of the PCA triggers, unless the college determines that taking the action will not further the purposes of PCA. Similar provision is envisaged in Article 129 of the Directive 2006/48/EC of the European Parliament and of the Council of 14 June, 2006 relating to the pursuit of the business of credit institutions (recast), which foresees that the consolidating supervisor will decide in a time framework in the absence of a joint decision. This would prevent a subset of the college from using committee deliberations to stall effective action. Additionally, the colleges may somewhat reduce the scope for relatively unimportant disagreements to stall decision making by specifying in advance that the college will follow decision rules that give greater weight to the judgments of supervisors of the larger banks in the group and the supervisors from countries where the banking group is systemically important.

Although a college provides a mechanism for all affected countries to have a voice in the corrective measures´ decision taken under PCA, the college does not solve the agency problem

[25] There is a clear complexity if responsibility for ongoing supervision and resolution (whether or not least cost) belong to different agencies.

[26] Ordinarily the contact would be the parent's supervisor unless the problems are focused in particular subsidiaries or markets.

caused by the mismatch between supervisory powers and supervisory accountability to voters. Giving each country's supervisor a say in a coordinating college is not equivalent to the power that the supervisor would have to protect its country's interests as it could with a purely domestic bank. However, the inability of supervisors in each country to have the same control as they would over a purely domestic group is an unavoidable consequence of groups operating as integrated entities in more than one Member State. Corrective measures taken (or left untaken) will have sometimes different consequences for different countries.[27] The best that can be said is that a college structure will typically provide better representation of each of the affected countries than would a system that gives all of the power to a single supervisor, hence, reducing the agency problem by increasing supervisor's accountability to the government and the tax payer.

The current presupposition in the EU is that the safety net can be maintained adequately even for cross-border banks while using the existing institutions. Thus there is no need to contemplate assigning the ECB some responsibility as is possible under the Treaty[28] nor is it necessary to create a new institution, such as European System of Financial Supervisors (matching the European System of Central Banks) as advocated by Schoenmaker and Oosterloo (2006) or a European Organisation for Financial Supervision as suggested by Ingves (2007) and Persson (2008). These latter two organizations are designed to coordinate existing supervisors for significant cross-border banks while permitting existing national supervisory arrangements for the remainder.

What might prove rather easier would be to follow the suggestion of Čihák and Decressin (2007) and introduce a separate European level of supervision for which banks could opt if they chose to use the European Company Statute as their form of incorporation. As suggested by Eisenbeis and Kaufman (2007), there could be some financial incentive for them to adopt this, say in the form of a reduced deposit insurance premium as the risks involved are lower. As this regime would be new it could incorporate a PCA approach and the ability to close banks while they still had positive capital as in the US system, since this would not involve taking any rights away from existing shareholders.

If one followed the US example more closely then in many respects it is a version of the FDIC, perhaps labeled a European Deposit Insurance Corporation (EDIC) that would be the most important institution to create. Thus colleges of supervisors could cover the group in normal times

[27] Giving every supervisor a veto over taking an action would not prevent problems if failure to act would have large adverse consequences for some country. Similarly, giving every supervisor a veto over failing to act would not help if taking a given action would have large adverse consequences for some countries.

[28] Article 127§6.

but as soon as any problem was thought imminent a single authority would take over to ensure the necessary speedy action.

Prepositioning

Probably the most important element of being able to act rapidly and avoid getting into a serious crisis is being fully prepared beforehand. With large and complex financial institutions running across borders this is no mean task, although not necessarily a particularly costly one. The FDIC has realized that is existing powers and provisions are insufficient and has set out proposals as to how it should proceed (FDIC, 2008). The primary ingredient is that it needs extensive understanding of the bank's computer systems and the detailed structure of its deposits, so if something went wrong it could act rapidly, either to transfer the insured deposits to a bridge bank or to another institution.

If depositors are to remain assured that they will not suffer a material break in their access to their funds the practical ability of the authorities to ensure this must be obvious. In most European countries on the other hand the practical implication is that no such assurance can be made, therefore, if a bank gets in difficulty it will be rational for there to be a run and the authorities will be precipitated into drastic action such as a blanket guarantee, as observed with Northern Rock, thereby destroying the ability of the safety net to head off severe problems. While it normally problems with wholesale financing that will project banks into the arms of the authorities, because those lenders are better informed, it is usually a retail run that will end the viability of the bank. Wholesale failures or 'silent runs' as Kane (2008) describes them can usually be countered by emergency collateralized lending by the central bank on previously laid down terms (at a margin over the market rate and with haircuts sufficient to avoid loss).[29]

However, such prepositioning needs to be much more extensive than simply being able to organize deposit insurance. Labrosse and Walker (2007) point out that the deposit insurer itself needs to be carefully structured to ensure that it can cope with a rapid resolution. This not only entails a range of procedures that need to be in place but also access to funding, appropriate skilled staff and access to specialist advice. (Handling a problem bank not only requires a senior commercial banker with experience in turn rounds as CEO but a well connected merchant banker to organize the resale to the private sector.) In many countries even if insolvency is followed there is a lack of skilled receivers to organize a rapid solution and initial payout to creditors (Choi and Kim,

[29] Highly leveraged institutions will be less able to withstand the silent run and we can therefore expect in the light of this experience that supervisors will increase the capital requirements for such leveraged institutions and will in particular focus on liquidity and the coverage ratio in the fairly short run.

2007) The most comprehensive version of prepositioning in place is probably that of New Zealand. Here the onus is primarily on the bank itself. Earthquakes are quite common in New Zealand and most of the main banks (and the central bank) have their headquarters on or near the fault line in the capital Wellington. It is therefore essential that they have in place extensive plans to keep operating in the event of a disaster (the core of the financial system can be recreated and opened again within a day in Australia, for example, if needed). However, this approach has been extended explicitly to banks, because all the main banks are foreign (Australian) owned[30] and is thus highly relevant for cross-border concerns in Europe. These banks first of all have to be locally incorporated, and be capable of being free-standing within the value day (RBNZ, 2006).

As thing stands in Europe there is no requirement that banks operating in host countries have any self-sustainable structure whether they are locally incorporated subsidiaries or just branches. Indeed the logic of European integration suggests that they should not be free-standing so that the group can reap the efficiencies of economies of scale, pooling reserves etc. While initially cross-border arrangements may have taken the form of a holding company with separately operating subsidiaries in other countries this becoming increasing less the pattern.

This idea of being free-standing (labeled 'outsourcing' policy) means that the bank can keep vital functions going in the event of the failure of any of its important suppliers and counterparties. This includes the parent. Thus if the Australian parent were to fail the New Zealand authorities need to be able to step in to the New Zealand subsidiary, ring fence and ensure that it is adequately capitalized in a manner that it can continue operating without any loss of confidence (or indeed down rating). Doing this requires considerable prepositioning, as the statutory manager, appointed by the courts on the advice of the supervisor, the Reserve Bank of New Zealand (RBNZ), has to be able to identify the claims on the bank, value them sufficiently accurately that they can be written down and the bank reopen without any material break. This requires substantial prior information. Normally in the event of bank failure it is not a complete surprise and there would be some time to activate the systems and cooperation with the Reserve Bank before the drastic need for action arose. In the event of an earthquake or similar natural disaster there is likely to be no warning at all, so the recovery systems have to be able to operate immediately and rapidly.

Since Europe is not so exposed to natural disasters such prepositioning is not normal practice but the Roskilde case shows the advantages of being able to act in that way. It would not have been possible to transfer the insured deposits or payout the insured depositors in such a way

[30] Until recently the only New Zealand owned bank was the Taranaki Savings Bank with about 1% of the market but the government has established Kiwi Bank, which is a narrow bank operated from post offices, and this has been very successful and is rapidly gaining market share.

that they would not have had a material break in their funds without keeping the core of the organization going. There was no way in which the deposits could be divided up into the insured and the uninsured immediately so the division of the bank into the old failed shell and the new surviving bank meant that the division had to be crude, with a write down of the junior creditors, a write off of the shareholders and the rest of the bank continuing in existing premises. In some countries such as the UK the ability to make such a rapid division is even less plausible as deposit insurance is a net concept. A borrower from the bank has his deposit offset against the loan before any payout is attempted. Such complex arrangements would make very rapid solutions almost impossible – there are limits as to how far prepositioning can go.

Concluding remarks

PCA was designed to improve the prudential supervision of banks in the U.S., most of which operate in a single market. An EU version of PCA could also improve the prudential supervision of banks operating in more than one Member State. However, to be as effective as possible, the EU version should address a number of cross-border issues that are incompatible with the existing decentralized structure of the EU safety net.

The proposal made here facilitates the resolution of conflicts among supervisors of different countries so that the cost of reconciling the conflicts is less than the cost of going it alone. In this respect, PCA is a critical element of the proposal.

Bank supervisors need to understand the overall financial condition of a banking group and its various individual banks if they are to effectively anticipate problems and take appropriate corrective measures. The effectiveness of PCA as a mechanism to reduce agency problems among supervisors would rely on the availability of information to prudential supervisors as well as supervisor's use of market information. Availability could be improved by reducing information asymmetries among supervisors on individual bank's financial condition. The use of market based risk measures could be mandated in the supervisory process. At a minimum, this would include requiring additional examinations of banking groups whose reported capital exceeds minimum required levels but which are identified as high risk by financial markets and mandating that the relevant banking supervisors meet to share their evaluations of the group.

PCA reduces supervisors’ ability to exercise forbearance, but it by no means eliminates supervisory discretion. Supervisors retain substantial discretion in their implementation of PCA so long as a bank’s regulatory capital exceeds the critical level at which it is forced into resolution. If the consequences of bank supervision in one country can have large consequences for the group’s banks in other countries, then deciding how best to exercise this discretion should be decided by the supervisors of all the banks (or at least all of the significant banks) in a collegial format. However, even if a satisfactory means of deciding what to do can be implemented, the actual powers of supervisors in the EU are not identical. Some may not be able to implement the actions others wish to vote for. Hence, effective implementation would require as a precondition that prudential supervisors be given the same and comprehensive authority to take the corrective measures in PCA (Nieto and Wall, 2006).

The recent financial instability makes it clear that a European version of PCA would need to incorporate new triggers for early intervention relating to risk assessment and market information in addition to those on capital adequacy if intervention is to start early enough. The rapidity with which problems have emerged suggests that the time constraints under which PCA operates would need to be shorter.

Furthermore for PCA to operate in a complex cross-border institution, there would need to be considerable prepositioning by the supervisory/resolution authority to ensure that claims, especially insured deposits, could be identified rapidly so that the resolution procedures are credible and depositors do not expect there to be any material break in access to their funds.

All this could be achieved within existing supervisory and resolution structures, although some changes will be necessary in some countries to ensure that banks can be reorganized before they run out of capital. However, US experience suggests that in due course it will be found necessary to have a Europe level institution. There is probably a greater need to have a European resolution agency that a European supervisor but if a new single regime for cross-border banks were implemented, as suggested by Čihák and Decressin (2007) for example this might provide an easier solution than inter-agency cooperation.

References

Benston, G., and Kaufman, G. (1994) *The Intellectual History of the Federal Deposit Insurance Corporation Improvement Act of 1991*. In G. G. Kaufman (ed.) Reforming Financial Institutions and Markets in the United States, p 1-17. Boston: Kluwer.

Benston, G. J. and Kaufman, G. (1998) *Risk and Solvency Regulation of Depositor Institutions: Past Policies and Current Options*. New York: Salomon Brothers Center, Graduate School of Business, New York University.

Choi, P and Kim, D. (2007). 'Economic performance of KDIC's resolution system', ch. 13 in (A.Campbell, R LaBrosse, D Mayes and D Singh) *Deposit Insurance*, Basingstoke: Palgrave-Macmillan.

Čihák, M and Decressin, J. (2007) ‘The case for a European Banking License’, IMF Working Paper/07/73.

Davis, E. P. and Dilruba, K. (2008). ‘Comparing early warning systems for banking crises’, *Journal of Financial Stability*, vol. 4(2), pp. 89-120.

Eisenbeis, Robert A. and Kaufman, George G., (2007) ‘Cross-Border Banking: Challenges for Deposit Insurance and Financial Stability in the European Union’ in D. Evanoff and G Kaufman, *Challenges For Deposit Insurance And Financial Stability In Cross-Border Banking Environments With Emphasis On The European Union*, Singapore: World Scientific.

Evanoff, Douglas D. and Larry D. Wall, (2002) ‘Subordinated Debt and Prompt Corrective Regulatory Action’ in (G. Kaufman, ed.) *Prompt Corrective Action in Banking: 10 Years Later*, pp. 53-119, vol. 14 of *Research in Financial Services: Private and Public Policy*, Amsterdam: JAI.

FDIC (2008) ‘Processing Deposit Accounts in a Bank Failure; Modernizing Large-Bank Insurance Determinations Notice of Proposed Rulemaking’, January 14, available at http://www.fdic.gov/news/news/financial/2008/fil08002.html#body

Harrison, I:G:, Anderson, A. and Twaddle, J. (2007). ‘Pre-positioning for Effective Resolution of Bank Failures’, *Journal of Financial Stability*, vol.3(4), pp.324-341.

Ingves, S (2006). ‘Cross-border banking regulation – a way forward: the European case’, Federal Reserve Bank of Chicago, Conference on International Financial Instability: Cross-Border Banking and National Regulation, 16 October, available at http://www.riksbank.com/templates/Page.aspx?id=22795.

Kane, E. (2008) ‘Regulation and supervision: an ethical perspective’, Conference on Principles v. Rules in Financial Regulation University of Cambridge Judge Business School, April 11

LaBrosse, R and Walker, D. (2007) in Campbell, A., Labrosse, R., Mayes, D.G. and Singh, D. (2007) *Deposit Insurance*, Basingstoke: Palgrave-Macmillan.

Lane, J (2008) ‘A view from the FDIC’, Norges Bank Workshop on Prompt Corrective Action, March.

Llewellyn, D and Mayes, D G (2004) 'The role of market discipline in handling problem banks', pp. 183-210 in G. G. Kaufman ed., *Market Discipline in Banking: Theory and Evidence*, Amsterdam: Elsevier

Mayes, D.G. (2004) ‘Getting the best out of Basel II for the European banking system’, in *The New Basel Accord and the Future of the European Financial System,* CEPS Task Force Report no. 51, pp.64-70, Brussels: CEPS.

Mayes, D.G. (2006a) 'Cross-border financial supervision in Europe: goals and transition paths', *Sveriges Riksbank Economic Review*, no.2, pp.58-89.

Mayes, D.G. (2006b) 'Financial stability in a world of cross-border banking: Nordic and Antipodean solutions to the problem of responsibility without power', *Journal of Banking Regulation*, vol. 8(1), pp.20-39.

Mayes, D.G., Halme, L and Liuksila, A. (2001) *Improving Banking Supervision*, Basingstoke: Palgrave.

Mayes, D.G. and Liuksila, A. (2003) *Who Pays for Bank Insolvency?*, Basingstoke: Palgrave-Macmillan.

Mayes, D.G., Nieto, M. and Wall, L. (2008) 'Multiple Safety Net Regulators and Agency Problems in the EU: Is Prompt Corrective Action Partly the Solution?, *Journal of Financial Stability*, vol.4, pp.232-57.

Mayes, D.G. and Vesala, J (2000) 'On the Problems of Home Country Control', *Current Economics and Politics of Europe,* vol 10 (1), pp.1-25, 2000.

Nieto, M. J. and Wall, L.D. (2006) *Preconditions for a successful implementation of supervisors´ Prompt Corrective Action: Is there a case for a banking standard in the EU?* LSE Financial Markets Group Special Paper Series No 165 March.

Padoa-Schioppa, T (2007). 'Europe needs a single financial rule book' *Financial Times*, December 10.

Peek, J and Rosengren, E (1997). 'Will Legislated Early Intervention Prevent the Next Banking Crisis?', *Southern Economic Journal*. vol. 64, no. 1 (July 1997), pp. 268-280.

Persson. M. (2008). 'Achieving Financial Stability with Cross-Border Banking in an EU Perspective', chapter 9 in (D.G.Mayes and G.E:Wood, eds.), *Designing Central Banks*, Abingdon: Routledge, forthcoming.

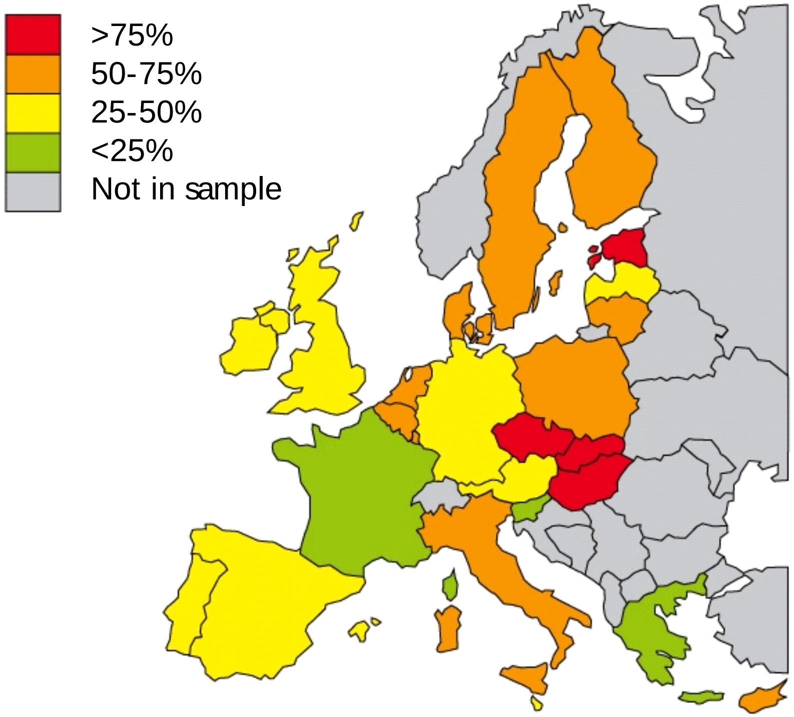
Reserve Bank of New Zealand, (2006), *Outsourcing Policy*, Document BS11, January.

Sironi, A. (2001) 'Testing for Market Discipline in the European Banking Industry: Evidence from Subordinated Debt' in *The Financial Safety Net: Costs, Benefits, and Implications for Regulation,* the 37th Annual Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago, pp. 366 - 384.

Vesala, J. (2005) 'Prudential supervision and deposit insurance issues raised by the European Company Statute', ECB, Frankfurt, 23 February.

			Capital Ratios		
			Risk-Based Capital		Leverage
Category	Mandatory Provisions	Discretionary Provisions	Total	Tier 1	Ratio
Well Capitalized	No capital distribution or payment of management fees that would cause the bank to become undercapitalized		>10%	>6%	>5%
Adequately capitalized	1. Same as well capitalized		>8%	>4%	>4%
Undercapitalized	1. Capital distributions and management fees suspended	1. Require recapitalization by issuing capital or selling to another firm	<8%	<4%	<4%
	2. Capital restoration plan	2. Restricting transactions with affiliates			
	3. Asset growth restricted	3. Restricting rates on new deposits			
	4. Prior approval for branching, acquisitions, and new lines of business	4. Restricting asset growth			
	5. No brokered deposits	5. Restricting Activities			
		6. Improving management by replacing directors or managers			
		7. Prohibit deposits from Correspondent banks			
		8. Requiring prior approval for capital distribution by bank holding company			
		9. Requiring Divestiture			
Significantly Undercapitalized	1. Same as Undercapitalized		<6%	<3%	<3%
	2. At least one of the 9 discretionary provisions under Undercapitalized. Presumption in favour of (1) (required capital issuance only), (2), and (3).				
	3. Senior officer compensation restricted				
Critically Undercapitalized	1. Any action authorized for significantly undercapitalized banks				<2%**
	2. Payments on subordinated debt prohibited*				
	3. Conservatorship or receivership within 90 days*				
* Not required if certain conditions are met					
** Tangible equity only					
Note, this is a general summary of PCA only. Other parts of the U.S. Code may also impose limits based on a bank's capital category.					

Figure 1. Cross-border integration of the banking sector, EU25 countries, year-end 2005*



*) **Cross-border Index** = outward integration + inward integration

Outward integration = The share of domestic banks' total assets held in EU25 countries outside the home country

Inward integration = Foreign banks' share of domestic banking market

Source: ECB/BSC, Working Group on Banking Development, November 2006.

Figure 2. The Performance of the Northern Rock Share Price Compared to Those of Other Large Mortgage Lenders in the UK