

Prompt Corrective Action & Cross-Border Supervisory Issues in Europe

Papers by:

Robert A Eisenbeis, George G Kaufman
David G Mayes, María J Nieto, Larry Wall
Rosa María Lastra, Clas Wihlborg
Thomas F Huertas
Gillian GH Garcia

Eds. Harald Benink, Charles AE Goodhart and Rosa María Lastra

SPECIAL PAPER 171

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The Financial Markets Group
Lionel Robbins Building
The London School of Economics and Political Science
Houghton Street
London WC2A 2AE
United Kingdom

Telephone: +44 (0)20 7955 7002, Fax: +44 (0)20 7852 3580
Email: fmg@lse.ac.uk

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This Special Paper is a collection of the contributions to the one day conference on **Prompt Corrective Action & Cross Border Supervisory Issues In Europe** which took place on 20 November 2006 at the Financial Markets Group, London School of Economics. This conference was part of the Regulation and Financial Stability Workshops organised with the support of the Economic and Social Research Council (RES-451-25-4005 and RES-165-25-0026). Building on the established FMG London Financial Regulation seminar series, which has run since 1999, the ultimate purpose of the workshops was to clarify the principles on which financial regulation should be based, and to advance practical proposals for improving the organisation and conduct of such regulation. In 2006 four workshops were organised in the context of this series:

- The Legal Foundations of International Monetary Stability, 27-28 April.
- Financial Stability: Theory and Applications, 18-19 May.
- Financial Regulation and Payments Systems, 28 September.
- Prompt Corrective Action & Cross Border Supervisory Issues In Europe, 20 November.

We would like to thank the Economics and Social Research Council for their support which made these events possible. For more information on these activities please visit our website: <http://fmg.lse.ac.uk>

The Financial Markets Group
The London School of Economics and Political Science

April 2007

Prompt Corrective Action and Cross-Border Supervisory Issues in Europe

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List of Contributors

Robert Eisenbeis is Executive Vice President and Director of Research at the Federal Reserve Bank of Atlanta. Dr Eisenbeis oversees the Research function and also serves as a member of the Bank's Management Committee and Discount Committees. Before joining the Atlanta Fed in May 1996, Dr Eisenbeis was the Wachovia Professor of Banking and Associate Dean for Research at the Kenan-Flagler Business School at the University of North Carolina at Chapel Hill. Dr Eisenbeis' research has focused on monetary policy and issues pertaining to credit scoring, banking and finance, banking structure and regulation. His work has appeared in the *Journal of Finance*; the *Journal of Financial Services Research*; the *Journal of Money, Credit, and Banking*; the *Journal of Banking and Finance*; *Banking Law Journal*, and the *Journal of Regulatory Economics*.

Gillian Garcia: Worked in Washington on the US banking and thrift crises at the Government Accountability Office (GAO) and the Senate Banking Committee, where she participated in the passage of the FDIC Improvement Act (FDICIA). Later at the IMF she provided technical assistance to developing countries worldwide and helped resolve the financial crises in East Asia. She has also worked in academia – at the University of California at Berkeley, the Hoover Institution at Stanford, Georgetown University, and the University of Maryland – and has been a visiting scholar at the Office of the Comptroller of the Currency, Federal Reserve Bank of Chicago, and the De Nederlandsche Bank. She has published six books and a number of articles on financial policy – especially on deposit insurance.

Thomas Huertas is the Director of Wholesale Firms Division and Banking Sector Leader at the Financial Services Authority. He has extensive practical experience in banking and finance from his career with Citigroup, joining in 1975 and holding a number of senior positions. He worked extensively on regulatory issues and corporate strategy in both the United States and Europe as the Chief of Staff for the Vice Chairman. From 2001 to 2003, Thomas was Chief Executive of Orbian, a trade finance and settlement company. More recently, Thomas was Managing Director of Citigroup Global Transaction Services. In addition, he has published and lectured extensively on financial regulation. He holds a PhD in Economics from the University of Chicago.

Professor George Kaufman has taught at Loyola University since 1981. Before teaching at Loyola, he was a Research Fellow, Economist and Research Officer at the Federal Reserve Bank of Chicago from 1959 to 1970 and has been a consultant to the Bank since 1981. From 1970 to 1980, he was the John Rogers Professor of Banking and Finance and Director of the Center for Capital Market Research in the College of Business Administration at the University of Oregon. He has been a visiting professor at the University of Southern California (1970), Stanford University (1975-76), and the University of California at Berkeley (1979), and a visiting scholar at the Federal Reserve Bank of San Francisco (1976) and the Office of the Comptroller of Currency (1978). He also served as Deputy to the Assistant Secretary for Economic Policy of the US Treasury in 1976. Kaufman received his BA from Oberlin College (1954), MA from the University of Michigan (1955), and PhD in economics from the University of Iowa (1962).

Dr Rosa Maria Lastra is Senior Lecturer in International Financial and Monetary Law at the Centre for Commercial Law Studies, Queen Mary, University of London. Prior to joining CCLS, she was Assistant Professor and Director of the International Finance and Business Program at Columbia University School of International and Public Affairs in New York. She has served as a consultant to the International Monetary Fund, the Federal Reserve Bank of New York, the World Bank, the Asian Development Bank and the UK Treasury Select Committee. She was educated at the London School of Economics (where she conducted the research for her doctoral dissertation), Harvard Law School, Universidad de Madrid and Universidad de Valladolid. She has written extensively in the areas of central banking, financial regulation and international banking. Her list of publications includes two authored books, 'Legal Foundations of International Monetary Stability' (Oxford University Press, 2006) and 'Central Banking and Banking Regulation' (1996); two edited books, 'The Reform of the International Financial Architecture' (2001) and 'Bank Failures and Bank Insolvency Law in Economies in Transition' (with Henry Schiffman 1999), and numerous articles. She is a general editor of the *Journal of Banking Regulation*. She is a founding member of the European Shadow Financial Regulatory Committee, a Senior Research Associate of the Financial Markets Group of the London School of Economics, an Affiliated Scholar of the Center for the Study of Central Banking at New York University Law School and a

member of MOCOMILA (Monetary Committee of the International Law Association).

David Mayes is currently Advisor to the Board at the Bank of Finland, Professor of Economics at London South Bank University, Adjunct Professor in the National Centre for Research on Europe at the University of Canterbury and Visiting Professor at the University of Auckland. He was previously Chief Manager and Chief Economist at the Reserve Bank of New Zealand, following posts in the National Institute of Economic and Social Research in London, the National Economic Development Office and the University of Exeter. He is a former Director of the NZ Institute of Economic Research. His work in the main has been focused on a range of aspects of economic integration particularly in Europe. His current focus is on issues of monetary and financial integration particularly with respect to banking. He is a former member of the European System of Central Bank's MPC, and is an Editor of the Economic Journal. He has published some 30 books the most recent of which is 'The Structure of Financial Regulation' and a large number of journal articles.

María J Nieto is Associate to the Director General of Banking Regulation at Spain's central bank (Banco de España). She has held this position since December 2000, and during this time she has represented the Banco de España at working groups of the Basel Committee of Banking Supervisors as well as the Center for European Policy Studies. She has cooperated as visiting scholar with the Federal Reserve Bank of Atlanta since 2004. She has co authored several articles on banking and regulatory issues that have been published among others by the Journal of Banking Regulation, and European Financial Management Journal. She occasionally lectures at the Bocconi University (Milan), Instituto de Empresa (Madrid) and has tenure as Professor at the CUNEF MBA program (Madrid), where she teaches a course on International Finance. Ms. Nieto has developed her career at the European Central Bank and the International Monetary Fund, which has subsequently hired her as a consultant on financial sector issues. She earned an MBA degree from the University of California, Los Angeles and a PhD from the Universidad Complutense de Madrid.

Larry D Wall is a Financial Economist and Policy Advisor in the research department of the Federal Reserve Bank of Atlanta. He joined the financial

structure team of the Bank's research department in 1982 and was promoted to his present position in 2001. Larry earned his doctorate degree in Business Administration from the University of North Carolina at Chapel Hill and his bachelor's degree in Business Administration from the University of North Dakota. Mr. Wall's research interests focus on the intersection of corporate finance and financial institutions and his research has been published in a number of professional journals and books. He currently serves on the editorial board of the Journal of Banking and Finance, the Journal of Financial Stability, the Financial Review, and the Review of Financial Economics. He has served as President of the Eastern Finance Association, as well as serving on the boards of the Financial Management Association and Southern Finance Association.

Clas Wihlborg is a Professor of Finance and Director of the Center for Law, Economics and Financial Institutions (LEFIC) at the Copenhagen Business School (CBS). Before taking up the position at CBS in 2000, he held positions at New York University and the University of Southern California in the US, and Gothenburg University in Sweden. He obtained his PhD in Economics in 1977 from Princeton University. His research and teaching activities have focused on International Finance, Corporate Finance and Financial Institutions. He has published numerous articles in scientific journals and published a number of books, most recently Corporate Performance and Exposure to Macroeconomic Fluctuations (with Lars Oxelheim). He is a member of the European Shadow Financial Regulatory Committee and the Royal Swedish Academy of Engineering Sciences (IVA).

Foreword

On November 20, 2006 the Financial Markets Group (FMG) of the London School of Economics and Political Science (LSE) organised a conference on “Prompt Corrective Action and Cross-Border Supervisory Issues in Europe”. This conference was the fourth and final in a series of events in the field of Regulation and Financial Stability that have been organised with the support of the Economic and Social Research Council. In this volume the FMG/LSE publishes a selection of the papers presented at the conference.

Prompt Corrective Action (PCA) rules classify banks based on their levels of capitalisation and they mandate supervisory action of increasing severity as the level of capitalisation falls. The supervisory actions put additional restrictions and requirements on banks, mirroring and reinforcing market discipline. This system of trigger levels for capitalisation and associated supervisory actions provides a deterrent against regulatory forbearance, limiting the degree of discretion of the supervisor. The Savings & Loan Association (S&L) debacle in the 1980s was the catalyst for the adoption of PCA rules within the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in the US in 1991. According to FDICIA, banks are classified into five capital categories from well capitalised to critically undercapitalised with a number of required corrective actions and sanctions of increasing severity for banks that do not qualify as well capitalised. An institution that reaches a ‘critical level of undercapitalisation’ defined as 2 per cent of capital to total assets (its leverage ratio) must either be recapitalised forthwith by its owners or be placed in receivership/conservatorship within 90 days. One of the major objectives of the FDICIA is to ensure the principle of least cost resolution, which requires the authorities to resolve problem banks in such a way as to minimise costs to the insurance funds.

Although the legal and institutional framework for deposit insurance and bank insolvency in Europe is different from the framework in the US, the introduction of PCA rules in Europe could be an opportunity to establish explicit objectives for prudential supervision. The potential cost of bank failures to taxpayers is one objective but it must be assessed in relation to the objectives of stability of the financial system and the maintenance of depositors’ and other creditors’ confidence in the banking system. Furthermore, PCA rules in Europe could help to prevent conflicts of interest between home and host countries of international banks in times of crisis. The papers published in this conference volume offer an interesting and useful contribution to the discussion on prompt corrective action and cross-border supervisory issues in Europe.

The first paper is by Robert Eisenbeis (Federal Reserve Bank of Atlanta) and George Kaufman (Loyola University Chicago). In their paper, entitled “Cross-Border Banking: Challenges for Deposit Insurance and Financial Stability in the European Union”, the authors argue that the EU has several features relating to cross-border banking that raise special policy issues when financial instability threatens. These features include the provision of a single banking license, reliance upon the home country as the primary provider of deposit insurance and for the application of the bankruptcy processes, and host country responsibility for financial stability and lender of last resort. As both cross-border branches and subsidiaries increase in importance in EU host countries, the resulting potential dangers inherent in the current structure are likely to become large and could threaten financial stability. To provide a more efficient arrangement, the authors propose four principles to ensure the efficient resolution of bank failures with minimum, if any, credit and liquidity losses. These include: prompt legal closure of institutions before they become economically insolvent, prompt identification of claims and assignment of losses, prompt reopening of failed institutions, and prompt recapitalising and re-privatisation of failed

institutions. Finally, the authors propose a mechanism to put such a scheme into place quickly in the circumstances where a cross-border banking organisation seeks to take advantage of the liberal cross-border branching provisions in the single banking license available to banks in the EU. In return for the privilege of such a scheme, the bank should agree to be subject to a legal closure rule at a positive capital ratio to be established by the EU or the home country.

The second paper is by David Mayes (University of Auckland and Bank of Finland), María Nieto (Bank of Spain) and Larry Wall (Federal Reserve Bank of Atlanta) and is entitled “Multiple Safety Net Regulators and Agency Problems in the EU: Is Prompt Corrective Action partly the Solution?” In their paper the authors argue that PCA was designed to improve the prudential supervision of banks in the US, 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 EU member state. However, to be as effective as possible, the EU version should address a number of cross-border issues that are compatible with the existing decentralised structure of the EU safety net. First, bank supervisors need to understand the overall financial condition of a banking group and of its various individual parts if they are to anticipate problems effectively and take appropriate corrective measures. The EU could use PCA to enhance the availability of information to prudential supervisors as well as the supervisor’s use of market information. Second, PCA reduces supervisors’ ability to exercise forbearance, but it by no means eliminates supervisory discretion. 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 in a collegial form. However, given the fact that the actual powers of supervisors in the EU are not identical and, thus, some may not be able to implement the actions others wish to vote for, effective implementation would require as a precondition that all prudential supervisors be given the same authority to take the corrective measures in PCA. Finally, should a bank that is part of an integrated cross-border banking group reach the point where PCA mandates resolution, its resolution could have implications for a number of EU member states. The timing of the resolution is unlikely to remain in the supervisor’s hands, so the process of making these decisions needs to begin before markets perceive that the bank must be resolved. The parties from each country that will play a role in the resolution (the banking prudential supervisor, the ministry of finance and the national central bank) should begin planning for the resolution with the appropriate EU institutions and the ECB no later than the time the bank first falls below the minimum capital adequacy requirements as set in the EU’s Capital Requirements Directive.

The third paper, entitled “Law and Economics of Crisis Resolution in Cross-Border Banking”, is authored by Rosa Lastra (CCLS, Queen Mary, University of London) and Clas Wihlborg (Copenhagen Business School). They argue that, though considerable progress has been made with regard to the allocation of responsibility for banking supervision, notably via soft law rules and regional rules, the cross-border resolution of banking crises remains a matter of intense policy and legal debate. The authors emphasise the need for credible PCA procedures for banks approaching distress, and separate insolvency law for banks, as being prerequisites for effective market discipline and competition. Proposals with more, or less, direct involvement on the EU level, while retaining essential elements of national responsibility are discussed and developed. One proposal is to create a European Standing Committee for Crisis Management to alleviate the shortcomings of the status quo and make possible the vision of the EU’s Banking Directive, (i.e., competition among European banks working across borders in branches under home country control).

The fourth paper, entitled “Dealing with Distress in Financial Conglomerates”, is by Thomas Huertas (Financial Services Authority). The author argues that, in dealing with distressed

conglomerates, the less the authorities do, the better. Markets are capable of providing funds to distressed conglomerates, either after distress occurs or, on a contingent basis, before distress materialises. Both regulators and conglomerates need to factor this into their planning, and the Pillar 2 provisions of the new Basel II Framework afford an opportunity for them to do so. Furthermore, market participants need to take into account the severe legal and political constraints that public authorities now face in providing lender-of-last resort facilities to institutions, including conglomerates. Market participants also need to take into account that the financial infrastructure has become more robust. Payments, clearing and settlement systems are now built to withstand the failure of even their largest participant. Such robustness might reduce the likelihood that the public authorities would consider the failure of a financial conglomerate to be a threat to financial stability. Finally, the author recommends that public authorities need to continue to strengthen the financial infrastructure, to improve supervision, and to take full advantage of their early intervention powers to cure distress at the outset, rather than allowing problems to fester. If a conglomerate should fail, the public authorities may wish to consider whether they should use their liquidity-creating powers to prevent a second failure, but not necessarily the first.

The fifth paper, authored by Gillian Garcia (formerly International Monetary Fund), is entitled “The Politics of Prompt Corrective Action and the Leverage Ratio”. The author highlights the parallels and differences between the current debate over PCA in the EU with the US regulatory response in the late 1980s and early 1990s to the thrift failures and banking problems. In some respects the situation in Europe today is different from that in the US in the late 1980s and early 1990s. Economies are growing moderately and are not threatened with recession. There are few bank failures and little disquiet with the supervisors’ performance of their duties. There is no public outrage over taxpayer outlays to cover industry losses, so there is no political consensus in favour of PCA. However, in many other respects there are parallels in the EU today with the US two or three decades ago – in the period just before its banking and thrift debacles. The banking industry in Europe is quiescent, profitable, and liquid. It is undergoing consolidation, is utilising new products and facing competition from new institutions. The new Basel II capital standards could reduce capital levels significantly, as the Quantitative Impact Studies for the US and the EU have revealed. Analysts are concerned that there is competition in laxity between regulators and supervisors in different member states. The absence of standardised publicly available call report data places the EU in a similar information gloom that preceded the creation of the Federal Financial Institutions Examination Council (FFIEC) in the US. Finally, there are concerns that failures, particularly among large complex institutions than span national borders, could be mishandled – a prospect made more likely by the unclear and multi-party process of containing possible contagion. The author concludes that adopting PCA could reduce the chances that a crisis will occur.

The sixth and final paper is the statement “Basel II and the Scope for Prompt Corrective Action in Europe” which was issued by the European Shadow Financial Regulatory Committee (ESFRC) at the start of the conference. Harald Benink (Erasmus University Rotterdam & FMG/LSE) and Clas Wihlborg (Copenhagen Business School) discussed the main contents of the statement. The ESFRC’s starting point for analysis is that the implementation of the Basel II Capital Accord in Europe through the Capital Requirements Directive increases the need for additional safeguards for the banking system. Quantitative Impact Studies conducted by the Basel Committee show that many banks using the Internal Ratings Based approach to determine capital requirements under Basel II will be able to lower their capital requirements considerably. Reductions in required capital by this magnitude could increase the vulnerability of banks to major shocks and increase the likelihood of banking crises. PCA procedures could offer additional safeguards for the

banking system in this new regulatory environment. According to the ESFRC the details of the PCA rules must largely be left to the individual EU countries taking national legal and regulatory principles and practices into account. Minimum capital ratios for the sequence of trigger points could, however, be considered.

We would like to thank all conference participants for their active involvement in the discussions. Finally, we are indebted to the FMG/LSE's administrative staff, who provided invaluable assistance in the organisation of the conference and the publication of the volume.

Harald Benink
Charles Goodhart
Rosa Lastra

Cross Border Banking: Challenges for Deposit Insurance and Financial Stability in The European Union

Robert A. Eisenbeis*, George G. Kaufman

* Eisenbeis is Executive Vice President and Director of Research at the Federal Reserve Bank of Atlanta and Kaufman is the John Smith Professor of Banking at Loyola University Chicago and a consultant to the Federal Reserve Bank of Chicago. A shorter version under the title Challenges For Deposit Insurance And Financial Stability In Cross-Boarder Banking Environments With Emphasis On The European Union was presented at a Conference on Cross Border Banking, Federal Reserve Bank of Chicago, October 6 & 7, 2005 and is published in a book of the same name by World Scientific (forthcoming). Presented at the Third Annual DG ECFIN Research Conference: "Adjustment under monetary unions: financial market issues," September 7 & 8, 2006, Brussels, Belgium. Sponsored by European Commission Directorate General, Economic and Financial Affairs, Economic Studies and Research.

1. Introduction

It is generally argued that foreign ownership of banks increases competition and efficiency in the banking sector of the host country, reduces risk exposures through greater geographical and industrial diversification, and enlarges the aggregate quantity of capital invested in the banking sector. Indeed, foreign entry through direct investment is widely recommended by researchers and analysts as a means of strengthening weak and inefficient banking structures, particularly in emerging economies. This is because banks that are willing and able to enter a foreign country, especially developing economies, through direct investments are generally larger, in healthier financial condition, more professionally managed, and more technically advanced than the average host country banks, and may therefore be expected to raise the bar for all banks.

Foreign ownership of banks varies greatly among countries. In the European Union, for example, Table 1 shows that foreign ownership averages 58% in the ten new EU member states as compared with a weighted average of 16% for the older EU members.¹

Despite the benefits that might accrue to foreign ownership, cross-border banking through either branching or subsidiaries raises a number of important policy issues when financial instability threatens. These concerns are particularly important with respect to the provision of deposit insurance, the effectiveness of prudential regulation, the strength of market discipline, the timing of declaring an insolvent institution officially insolvent and placing it in receivership or conservatorship, and the procedures for resolving bank insolvencies.

Because the actual or perceived adverse externalities of bank failures may be large, it is important to evaluate how banking regulatory structures are likely to function within and across countries at times of financial strain as well as at times when banks are performing well financially. An effective regulatory structure should not only foster competition and efficiency in good times, but also should aim to minimize the cost of any adverse externalities associated with insolvencies. This would include avoiding the probability of adopting hasty, *ad hoc*, automatic reflex public policy measures once a crisis emerges that protects most if not all stakeholders against loss. While expedient solutions may appear to minimize the cost of insolvencies in the short-run, they may do so only at the expense of even higher longer-term costs because the necessary actions were not taken much earlier. In addition, in the case of cross-border banking, competing interests of stakeholders in the home country versus those in the host country can raise important agency problems that may affect how financially distressed banking organizations are resolved, the incidence of possible externalities associated with failure, and both the magnitude and the distribution of the costs among affected parties when failures do occur.²

While the benefits of cross-border banking conducted through foreign-owned banking offices have been analyzed intensely, the implications that alternative regulatory structures have for resolving problems, should these institutions experience financial distress, have been analyzed far less. This paper extends the extent literature by examining these latter issues in greater depth.³

¹ See European Commission (2005).

² See Dell'Ariccia and Marquez (2001).

³ Reviews of the benefits appear in Caprio, et. al. (forthcoming), Committee on the Global Financial System (2004), Goldberg (2003) and Soussa (2004). Brief previous warnings about the unsettled state of affairs in cross-border banking appear in Goodhart (2005), Eisenbeis (2005), and Mayes (2005). See in particular the analysis of the Nordea Bank, which is headquartered in Sweden but operates in a number of other countries in the appendix to Mayes (2005).

Emphasis is on the European Union, which is both economically and financially large and has several features relating to cross-border banking in the form of direct investment that may heighten the problems we consider. These features include the provision of a single banking license, reliance upon the home country as the primary provider of deposit insurance and application of the bankruptcy processes and host country responsibility for financial stability and lender of last resort. It should be emphasized that the issues being faced by the EU are not unique and are common to most countries subject to cross-border banking. Indeed, the EU has at least attempted to harmonize policies, and for this reason may be ahead of other parts of the world in facing the problems. Nevertheless, the sooner all countries face up to the problems that crises bring, the less vulnerable their financial systems will be.

In the next section we describe the EU cross-border banking regulatory structure in greater depth to set the background for subsequent analysis. Section III discusses agency problems that may arise in the supervision and regulation of cross-border banking institutions in the EU. Section IV focuses on the problems of providing deposit insurance for institutions operating in that environment, and Section V looks at insolvency resolution. Section VI examines issues concerning the payout from deposit insurance plans and resolving large bank failures and Section VII suggests ways to solve the problems. Section VII argues for modification of the new European Company Statute as it applies to banking organizations to require agreement by banks desiring to establish branches across and over borders to be subject to both a system of prompt corrective action and be required to give up its charter at a positive capital-to-asset ratio. The last section is a summary and conclusion.

2. Key Features of EU Financial Regulatory and Deposit Guarantee Systems

The European Union is in the midst of an economic transition from a collection of separate country economies into a single economic market. As part of this integration, the Maastricht Treaty of 1992 established the ground work for introduction of the EURO in 1999 and establishment of the European Central Bank. But it left to the individual member countries responsibility for banking supervision and regulation, financial stability, lender of last resort functions, and the provision of deposit insurance guarantees.⁴

As part of an effort to encourage the development of a single economic market, the Second Banking Directive (1988) as modified in 1995 established three principles – harmonization, mutual recognition and home country control. Harmonization requires that a minimum set of uniform banking regulations be adopted across the Union. Mutual recognition means that during the transition to a single market, member countries would honor the regulations and policies of the other member states. Finally, regulation and supervision by the “home country” (country of charter) would have precedent over regulation and supervision by a “host country.” Together with the concept of a single license, these three principles mean that, once a banking institution receives a charter from an EU member state, it would be permitted to establish branches anywhere within the EU without the necessity of review by the regulators in the host countries into which it expanded. When entry takes place in a host EU country by way of a separately chartered subsidiary, rather than through a branch office, the host country is responsible for supervision and regulation of that entity, since it is the home country for that subsidiary. At the same time, supervision of the consolidated entity remains the responsibility of the home country.

⁴ See Mayes and Vesala (2005)

While establishing minimum prudential standards and providing for roughly comparable rules, substantial latitude on numerous dimensions for regulatory differences continues to exist. For example in the proposed implementation of Basle II, numerous national discretions exist in how Basle II will be applied.⁵ This raises concerns about incentives to engage in regulatory arbitrage on the part of the regulated institutions and in regulatory competition by country regulators. One logical implication of the home country approach is that over time, as the competitive climate increases and more and more cross-border banking evolves regulatory competition becomes more likely, which in turn should facilitate and drive Europe toward a truly single market environment. To the extent that it does, regulatory competition and the market place may serve as a lever in achieving the EU's objective of a single market. Individual country self interest in promoting their own institutions will also be an inducement to compete through deregulation of financial services. Countries offering more attractive charter options or accommodative regulatory regimes would expect to see domestically chartered institutions gain market share in the EU. The logical consequence of allowing home country regulation would, as the result of regulatory competition, be a less regulated and homogeneous market place.

Mayes and Vesala (2005) argue that the sharing of responsibilities between home and host country regulators during the movement toward a single market objective is a viable policy precisely because harmonization of regulation and supervisory policies have taken place and official Memoranda of Understanding (MOUs) between and among the individual country regulators have been put in place to share information.⁶ However, others have argued, as will be seen in the next section, that such a structure is fraught with problems and conflicts that may erupt when significant institutions experience financial difficulties. Indeed, Mayes (2006) suggests it is just these concerns that have prompted the Nordic countries to layout specific responsibilities in the advance of the onset of a financial crisis, should the dominant institution in those countries – Nordia Bank – get into financial difficulties.

Putting these issues aside for the moment, the EU regulatory structure anticipates the need for supervisory efforts to head off the insolvency of a “systemically important” bank. Should a institution experience financial difficulties requiring lender-of-last resort assistance in amounts greater than a given, but confidential, threshold, then approval is required by the Governing Council of the ECB.⁷ While the ECB does not presently have formal lender of last resort authority, Gulde and Wolff (2005) suggest that there is a window of opportunity through the ECB's payments system responsibilities to provide such funding.

The EU regulatory system relies on common principles and coordinated approaches that would be followed when institutions experience financial difficulties. Within this general framework, however, substantial differences exist in terms of the details of how the safety net is structured across countries as well in terms of the types of deposits and amounts that would be insured. These differences contain substantial incentives for institutions to engage in regulatory arbitrage, and create important differences in how nations might respond should substantial institutions get into financial difficulty. These will be detailed in the next sections.

⁵ Regardless, of the form of entry, however, the Core Principles for Effective Banking Supervision (Basle Committee on Banking Supervision (1997)) clearly indicates that supervision is to be “effective” within the EU, regardless of whether it is provided under the auspices of the home or host country

⁶ Others argue vigorously that only a single regulator at the EU level like the ECB is situated for monetary policy will be effective (see Walter (2001), Di Giorio (2000)).

⁷ See Gulde and Wolf (2005) for a review of the financial stability responsibilities in Europe.

3. Agency Problems and Conflicts

Cross-border banking through foreign-owned branches or subsidiaries can subject the entering institutions to multiple regulatory jurisdictions and regulators, as well as to many different legal systems. As a consequence, operating across borders presents potential problems for such banks beyond the fact that there are just more regulations to follow or regulators who may have different incentives.⁸ Bank laws can differ greatly and may even be conflicting across the different countries. Therefore, regulatory compliance may be uncertain and difficult for banking organizations with multiple country operations. Furthermore, bank supervisors and regulators in both home and host countries typically operate in what they consider is the best interest of their country, however defined or perceived (Bollard, 2005).⁹ This may lead to agency problem to the extent that the incentives of the regulators, deposit insurance provider and/or failure resolution entity are typically aligned with the residents of the regulators' home or host country rather than with the interests of all customers in the whole market or geographic area within which the institution operates.

Schüler (2003) points out that the incentive conflicts actually have two dimensions – a home country dimension and an international or cross-border dimension. First, with respect to the home country issues, self interest and incentive problems of the classical principle/agent type exist between the banking supervisors and taxpayers. Regulators have incentives to pursue policies that preserve their agencies. In addition, they also to pursue their own private self-interest to ensure both their jobs and their future marketability and employment in the banking industry (see Kane (1991, 1989), Schüler (2003), and Lewis (1997)). These conflicts may lead to more accommodating policies in the form of lower than appropriate capital requirements and to regulatory forbearance when institutions get in trouble, thereby shifting risk and any associated costs to taxpayers as regulators attempt to ingratiate themselves with constituent banks.

Second, with respect to cross-border banking, in areas such as the European Union, as foreign banking organizations begin to increase their market share and dominance through the establishment of branches (as distinct from expansion via subsidiaries) in the host country, host country regulators face a loss of constituents to supervise and regulate. As noted, EU policy, specifies that home country regulators are responsible for supervision and regulation of institutions chartered in their country regardless of the location of their branches. At the same time, the host country is responsible for financial stability within its boundaries.. One consequence of this structure is that individual country regulators have a country centric focus which may be manifested in several dimensions. As noted, nationalistic concerns, may lead to a home country bias. They may favor domestic over foreign institutions and attempt to limit the acquisitions of indigenous banks, or move to create “national” champions which would be protected from outside takeover.¹⁰ Over time institutions with the more favorable home country regulatory environment will likely expand at the expense of those institutions with more stringent operating

⁸ See Eisenbeis and Kaufman (2005) for a detailed discussion of these issues.

⁹ This problem has arisen in France with the country's attempt to preserve Credit Lyonnais with injections of governmental funds in more than three separate instances in the past several years. More recently, an editorial in the Wall Street Journal Europe (2005) entitled “Spaghetti Banking” pointed out that the governor of the Bank of Italy had refused to approve the acquisition of a single Italian bank by a foreign institution for the last 12 years. The governor indicate his desire to “... preserve the banks' Italianness also in the future” This protectionism was challenged by the European Union's Internal Market Commission in connection with the proposed acquisitions of two Italian banks by ABN Amro and Banco Bilbao Vizcaya Argentina, and the governor of the central bank was ultimately forced out amid criminal investigations associated with the blockage of the proposed transactions.

¹⁰ The French and Italian authorities have, in the past, attempted to limit acquisitions of their large institutions.

environments, especially when the restrictions impose costs rather than lead to healthier institutions. Thus, different regulatory and supervisory regimes, whether de jure or defacto, create regulatory arbitrage opportunities.¹¹

Adding to the problem is that the quality of host country monitoring and supervision may be reduced with the entry by foreign branches or subsidiaries. Both, host country regulators and the markets in these countries are generally less able to obtain useful financial information from foreign-owned institutions than they are from domestic domestically-owned banks (Committee on the Global Financial System, 2004).¹² This concern is especially acute for foreign branches which do not have meaningful balance sheets or income statements separate from the bank as a whole. This makes monitoring difficult for the host country regulator. Such information is critical when foreign branches come to control a large share of the host country's deposits, as is the case for many of the accession countries, because the host country is still responsible for financial stability and the lender of last resort function. In the case of subsidiaries, since they are separate legal entities, they would have balance sheets and income statements that would be available to the regulator in the country in which they were chartered. However, in the EU, because the home country is responsible for the consolidated supervision of the parent banking entity, the chartering agency for the subsidiary will still experience information problems to the extent that it may be unaware of, or have difficulty in obtaining information on, problems in other parts of the banking organization that may have implications for the viability of either the parent or its subsidiary.

Schüler (2003) argues that this problem of information access issue constitutes a form of agency problem between the home and host country regulator. The home country regulator, particularly if its monitoring and performance is weak, may be incented to disguise its poor performance by either producing disinformation on the performance of foreign branches or be less than diligent in supplying the host country regulator with timely information. Without adequate and timely information, the host country may be in a poor position to assess the potential risks or externalities its citizens and economy may be exposed to from its foreign branches. These incentive conflicts may be especially acute in host countries with a large foreign banking presence. This is an especially important issue in small economies where a foreign bank may be a significant player, but where those operations are relatively small compared to those in either its home country or elsewhere. Many of the new EU entrants face this problem since they have a very large proportion of foreign banks, as Table 1 shows.

The information problems are likely to become increasingly significant as banking organization expand and consolidate many of their management and record keeping functions to achieve cost efficiencies. In the electronic age, institutions are increasingly being managed on a consolidated or integrated basis from the home country. Niemeyer(2006) noted recently that “...banks are progressively concentrating various functions, such as funding, liquidity management, risk management and credit decision-making, to specific centres of competence in order to reap the benefits of specialization and economies of scale.” Furthermore, data and records are usually kept centrally at the home offices or at sites not necessarily in the host country. Large complex banking organizations in particular are actively centralizing activities and either outsourcing or

¹¹ Kane (1977).

¹² Differences in quality can exist simply because countries fund their banking regulators differently or because they have had only limited experience in supervising market entities.

maintaining separate operating subsidiaries whose functions are to provide critical infrastructure or other functions to their bank subsidiaries.¹³

The logistics and costs to host country regulators of quickly accessing information on these arrangements, or even finding it, can be daunting, even when the foreign banking organization enters by way of a bank subsidiary rather than a branch. Should a foreign-owned institution become insolvent and be legally closed, it may not be possible to keep those portions of the institution's operations in the host country physically open and operating seamlessly during the resolution process in an attempt to limit any adverse consequences that may accrue to deposit and loan customers. The necessary senior management, operating records, and computer facilities may be physically located in the home rather than in the host countries or in separately owned and operated affiliates and subsidiaries in third countries. For these reasons, regulatory oversight and discipline is likely to be more difficult and less effective in host countries with a substantial foreign bank presence than in countries without this presence. The resolution process is also less effective. Perception of these problems is likely to heighten incentives on the part of host country regulators to seek to protect their own citizens, even at the expense of home country or other host country citizens.¹⁴

With respect to the international dimension to the agency problem, home country regulators may take insufficient account of how the externalities that a failure, and the way that it is resolved, may affect the host country. That is, because all the regulators in countries in which a banking organization operates may have different objective functions and incentives, they may not all be pulling in the same direction at the same time with respect to prudential supervision and regulation. And these conflicts may be important, even when there exist coordinating bodies or agreements and understandings as to principles, such as in the European Union. As noted earlier, the home country is responsible for monitoring the performance of its chartered institutions, including the foreign branches of those institutions operating in other countries, but the host country is responsible for financial stability.¹⁵ When a crisis arises, responsible parties may not have had a clear delineation ex ante of responsibilities between the home and host country nor anyway of enforcing those agreements that may have been made ex ante. EU MOAs are merely agreements and lack enforceability under law. Regulators may take conflicting actions to benefit their own country's residents or institutions, say, with respect to the nature and timing of any sanctions imposed on a bank for poor performance, the timing of any official declaration of insolvency and the associated legal closing of the bank, the resolution of the insolvency, or the timing and amount of payment to insured and uninsured depositors.^{16 17}

¹³ Schoenmaker and Oosterloo(2006) and Goodhart and Schoenmaker(2006) make similar observations about this centralization trend and include, in addition to functions mentioned above, internal controls treasury operations, compliance and auditing.

¹⁴ New Zealand addressed this problem by requiring subsidiaries to be structured in such a way that if the parent becomes insolvent, solvent subsidiaries can be operated effectively without interruption in terms of capabilities and management. This may deny them the full benefits of economies of scale, scope and risk management.

¹⁵ The Sveriges Riksbank (Bank of Sweden) recently raised the question "How much responsibility home countries are willing to take for financial stability in other countries where a bank operates. For example, the Nordea Group is a Swedish bank that has its largest market share in Finland. Would the Swedish authorities be willing an able to judge Noreda's impact on stability in Finland? And would the Finnish authorities be prepared to transfer responsibility for a considerable part of its financial system to Sweden? Similar problems exist in other countries. "(Sveriges Riskbank (2003), pg. 2.

¹⁶ A classic case of just such a decision occurred in the Herstadt Bank failure in which German authorities closed the institution at the end of the business day in Germany, but before all the bank's foreign exchange transactions had settled with counter parties in other time zones. While not affecting the total amount of loss, the timing of the legal closure did shift losses, either intentionally or not, from holders of mark claims on the bank, primarily German depositors, to those expecting to receive dollars from the bank, primarily US and UK banks later in the day.

We would expect that the incentives are for a host-country regulator to favor indigenous institutions and customers. Hence the potential agency problems are likely to become more significant in markets and economic areas that are becoming increasingly integrated, as in the European Union, or that may be experiencing an influx of outside entry. Indeed, the incentives may also vary depending upon simply the differing degree of cross border activities that may exist, as between the new and original members of the European Union.

Until recently, cross-border banking has proceeded at a rather slow pace, especially within the EU, but as financial integration accelerates, more cross-border mergers are likely to take place, and many institutions will be bought by institutions from other countries.¹⁸ To date, Table 1 shows that the degree of cross-border penetration within the EU rose at a modest pace from an average of 13% of banking assets in the 15 old member states in 1997 to only about 16% in 2004. Penetration varied significantly from a high of 89% in 2004 for Luxembourg to a low of 5% for Germany. The admission of 10 new countries changes the landscape, and potential cross-border issues significantly, since the degree of foreign penetration is much greater on average for the new members states. Table 1 shows that foreign ownership in the accession countries averaged 58% of assets in 2004, with a high of 98% for Estonia and a low of 23% for Cyprus. These countries are typically small in terms of GDP relative to the original EU countries (Table 2). The largest of these new entrants is Poland, which accounts for only 4% of the EU's GDP. Of course, several of the older EU members are relatively small as well – seven have less than a 2% GDP share each. Because of the relative importance of cross-border banking to the accession economies, and the relatively smaller size of their economies, compared to the rest of the EU, the potential externalities of the failure of large banks operating within these host countries could be very significant.

From the home country perspective, the incentives are not only to pay less attention to the externalities that failure may impose on host countries, but also to protect home country residents from possible costs of failure. These incentives may be especially significant with respect to the provision of deposit insurance, which in the European case is primarily the responsibility of the home country. These issues are considered in the next section.

4. Deposit Insurance

In the European Union the Deposit Guarantee Schemes Directive (DGD) (94/19/EC) provides the basic framework for the structure of how deposit insurance guarantees will be provided. The DGD endorsed a decentralized approach to deposit insurance, despite the fact that depository institutions are authorized to operate within any of the member countries. The design leaves the responsibility of providing coverage to depositors and the particulars of the scheme adopted at all branches domestically and foreign to the member home countries where a bank is chartered. The DGD specifies the basic features that an acceptable deposit insurance should have. Most specifically, the system should provide deposit insurance coverage of 20 thousand Euros, should exclude coverage of inter-bank deposits, and may exclude other liabilities at the discretion of the national government. Co-insurance of liabilities is permitted but not required. Coverage of depositors in branches in countries other than the home country is the responsibility of the home country, but these can also be covered by the host country at its option. Additionally, should the host country account coverage be greater than that available to a branch thorough its home

¹⁷ In the US, such conflicts have existed among state regulators and among federal banking regulators despite a national mandate to coordinate regulatory and supervisory policies and the existence of the Federal Financial Institutions Examination Council.

¹⁸ In New Zealand, for example, there are effectively no indigenous banks at all.

country deposit insurance scheme, the foreign branch may purchase top-off coverage to match that available to competing host country-chartered institutions.¹⁹ There may be more than one scheme for different types of institutions. But most terms of the deposit insurance structure are not prescribed, and the details of the schemes are left to the discretion of the individual member countries.²⁰ These include the funding of the plans, pricing of coverage, who should operate the plan (the private sector or public sector), how troubled institutions should be handled, what too-big-to-fail policies in terms of protecting de-jure uninsured claimants might or might not be pursued, or how conflicts would be resolved where two deposit insurance funds might be affected by failure of an institution with top up coverage (See Dale (2000) and Garcia and Nieto (2005) for descriptions of the existing arrangements in the EU).

Additionally, it is the responsibility of the home country's central bank to serve as the lender of last resort. However, little attention has been paid to how the responsible agencies decide whether a problem is a limited micro or broader systemic risk problem, although the EU's Council of Economic and Financial Affairs, has recently promulgated a structure for coordination of financial stability efforts for banking supervisors and central banks within the EU. Banking supervisors have also embarked upon a series of crisis simulations to identify issues and problems that may arise.²¹

In establishing the minimal requirements for deposit insurance schemes, the attempt was obviously to balance the fact that most but not all original EU members already had deposit insurance plans in place and that many of the key provisions and features of these programs were different. Presumably, the best that could be hoped for was that the schemes would be harmonized over time. The potential for cross-boarder problems, at least in the short-run, appeared minimal because there were few truly multinational institutions in the EU. The plans that were put in place by individual countries in order to comply with the DGD varied substantially from those already in place. Finally, responsibility for supervision and risk monitoring is apportioned differently across the system and within the different countries.

Whatever the differences, it was not intended that institutional detail and plan features would serve as a source of competitive advantage within host or home countries. However, Huizinga and Nicodeme (2002) demonstrate that within the guidelines established by the EU, the discretionary differences in insurance system design have affected international depositor decisions as to the placement of their funds. In particular, countries with schemes with low premiums, co-insurance and private administration are more attractive to international depositors. But more relevant to this study, they also suggest that "... countries can in principle tailor their deposit insurance systems to allow their banks to capture a larger market share in the international deposit market. This could lead to international regulatory competition in the area of deposit insurance policies."²²

Hence it is reasonable to be concerned that the structure of these systems, including their financing and the way that claims will be settled create agency problems between host and home country citizens and the management of deposit guarantee schemes that may significantly impact the efficiency of resolving insolvent banks at minimum cost to the host country. Going forward the patchwork set of deposit insurance schemes, when coupled with the bifurcated approach to

¹⁹ This also means that if home country insurance is superior in other features to that provided generally in the host country, then the branch would have a competitive advantage relative to institutions chartered in the host country.

²⁰ For a brief review see European Commission (2005) and European Parliament (1994).

²¹ Nieto and Penalosa (2004) describe the proposed structure in great detail and discuss recent efforts to deal with the problems of coordination.

²² Huizinga and Nicodeme (2002), pg. 15.

controlling systemic risk, seems fraught with the potential for agency and conflicts of interest problems (see Kane (2003b)). These arise from several sources including:

1. Uncertainties about the funding of the deposit insurance plans,
2. Differences in deposit insurance coverage and pricing of coverage,
3. Reliance upon the home country, as opposed to the host country, should institutions get into financial difficulties,
4. Differences in treatment with respect to the lender-of-last-resort function,
5. Differences in approaches to bankruptcy resolution and priority of claims in troubled institutions and
6. Differences in EMU vs non-EMU participants

EU countries must establish policies for how foreign banks operating in the country will be treated. In addition, EU directives require that host country chartered or licensed subsidiary banks of foreign parents receive treatment equal to that accorded chartered domestic banks in the country. But Eisenbeis and Kaufman (2005) suggest that it may not be appropriate to provide the same treatment for branch offices of foreign banks as for subsidiaries, especially when top-off insurance is provided or the branches themselves are also insured in the host country.²³ Host country monitoring, for reasons discussed earlier, is not likely to be as effective as home country monitoring, because less meaningful financial reporting information from domestic branches of foreign banks is available. Even if information from the home country about the entire legal entity were available, host countries are unlikely to be able to take actions against any banks outside their own jurisdiction. Finally, the potential losses to uninsured creditors and to the deposit guarantee fund depend as much upon the home country closure and resolution policies as on the financial condition of the institution.

The more insolvent an institution is before it is legally closed, the greater are the losses to the insurance funds and possibly taxpayers. For this reason, host countries may become more reluctant to provide insurance for foreign branches. Despite this, several EU countries not only have either an insurance option for EU and/or branches of institutions chartered in non-EU member countries but also offer topping off options when the home country deposit guarantee plan is less than in the host country. This exposes host country insurance funds to “regulatory risk” because the closure decision and any losses to the host country insurance fund depend upon actions of the home country regulator.

Table 3 suggests that while there are some differences across EU countries in their insurance treatment of foreign branches and deposits, most countries do enable foreign branches to elect to be insured by their deposit insurance funds, and some provide insurance of foreign deposits as well, with most, but not all, being limited to foreign currency deposits of other EU member countries. Some countries also permit foreign operated branches to purchase additional insurance, when insured in their home country, if the host country’s insurance scheme is more generous. Table 4 details the differences that exist in insurance coverage across the Euro area. Several countries, including France, Italy and Germany, are substantially more generous in their coverage than the minimum coverage of 20 thousand EURO, Tables 5 & 6 also suggest that many of the attributes that Huizinga and Nicodeme (2002) found to be important to international depositors, such as private administration and co-insurance, do vary substantially across EU countries.

²³ Eisenbeis and Kaufman (2005) discuss in detail differences in the implications of entry by branches as opposed through establishing subsidiaries

Table 7 shows that there are substantial differences not only in the legal requirements for when depositors are to be paid but also when they have actually been paid.^{24 25} But even if the countries use the same currency, e.g., Euros by Euroland countries, if taxpayers in the home country are required to fund some or all of the insurance, they may be reluctant to make payments to depositors in foreign countries. Despite EU directives which require universality in the treatment of all EU citizens, the Sveriges Riksbank (2003, p.87) noted recently that:

... if a cross-border [branch bank] were to fail, it is improbable that either politicians or authorities in the respective countries would be willing to risk taxpayers' money to guarantee stability in countries other than their own. This could prompt the concerned countries to try to ring-fence the bank's assets in their own country with a view to minimizing the costs to the domestic economy, or not to intervene at all in the hope that other countries in which the bank has a bigger presence feel forced to act. The result could be a suboptimal resolution of the crisis that proves more costly or that produces greater adverse effects for all the countries involved.

When a large number of foreign branches from different home countries coexist in a host country, bank customers in that country may encounter a wide variety of different insurance plans. These plans are likely to differ, at times significantly, in terms of account coverage, premiums, insurance agency ownership (private vs. government) and operation, ex ante funding and credibility.²⁶ Table 8 provides a general tabulation of the kinds of differences that can and do exist within the EU, despite the attempts to ensure uniformity. At the same time, host country regulators encounter banks operating under a wide array of different foreign banks and different rules and regulations.

If the home country provides the insurance and pays the losses in branches operating in other countries, it is likely to demand at least some prudential regulatory jurisdiction over the activities of those branches in host countries, regardless of what may or may not be permitted in the host country. If this authority is exercised, this may imply different regulatory regimes with different sanction schedules coexisting for a branch in a host country. Moreover, if a branch has topping-up insurance, then depositors of the branch will face potentially different rules and availability for those portions of their deposits covered by the home country deposit guarantee scheme than for those deposits covered by the host country scheme. In the EU, many but not all members require or permit topping off. But even here, provisions differ. Some countries, such as Malta only cover the difference between coverage provided in the home country, while others provide duplicate insurance.

The situation becomes more complex and confusing as the number of countries with banks operating branches in a host country increases. Host countries may face quite different situations if home country A bank failed versus home country B bank.

5. Insolvency Resolution

As financial integration proceeds, and in particular as cross border-bank expansion increases, even what may appear to be small differences between schemes may be magnified. Equally important, differences in the guarantee arrangements may generate significant cost shifting when

²⁴ Because many countries permit several extensions of the payment deadlines, this probably explains the difference between the legal payout requirements and actual performance.

²⁵ Within the European Union, of course, there are countries that have the Euro but others that aren't part of the European Monetary Union and have their own currencies.

²⁶ Many of the specific differences have already been detailed in Tables 3-6.

a troubled institution needs to be closed or resolved. There are generally two different models for dealing with banking insolvency, and these hinge generally on the special role that deposit insurance and banking supervisors play and the supervisor's ability to intervene in a bank's activities before failure occurs. In the US, special bankruptcy laws apply, whereas in Europe, the general bankruptcy statutes apply. The EC Directive 2001/24/EC of April 4, sets forth EU policy for how failed banks (credit institutions) are to be resolved.²⁷ The intent is to create a common approach to insolvency resolution. It leaves the actual closure decision to each home country, and its applicable bankruptcy procedures, but attempts to promote equal treatment for creditors, regardless of where they are located. Harmony is to be achieved through mutual recognition of both home and host country bankruptcy procedures and coordination among authorities. Krimminger1(2004) indicates that conflicts are supposed to be resolved through a mediation process that conveys that responsibility to the home country. As for differences in treatment of financial institutions, Hupkis (2003) indicates that in most countries in the EU bank insolvencies are covered under the general bankruptcy statutes, but several countries provide exceptions. Some authorize the banking supervisory agency the right to petition for bankruptcy. A few EU countries have separate bankruptcy statutes for banks.

A number of questions arise concerning cross-border insolvencies. Because both the timing of the official declaration of insolvency and the process by which an insolvency is resolved have important effects on the host country of a branch or subsidiary, should the host country share in the prudential regulation with the home country and, if so, in what way? In the EU, the home country is responsible for a foreign branch but the host country is responsible for any subsidiaries chartered therein.

How far can and does inter-country regulatory cooperation go? Inter-country cooperation tends to operate best when things are going well but deteriorates rapidly as conditions in the countries involved deteriorate and generate conflicts arising from an incentive for a home country regulator to give preference to its own citizens even at the expense of host country residents or other host country citizens. In the EU, substantial efforts have been devoted to cooperative arrangements and understandings about information sharing. In addition, crisis simulations have been undertaken and memoranda of understandings have been struck in many instances. However, cooperation works best when there is no crisis, nor do simulations involve the same cost-benefit calculations that real crises entail.

Does it matter whether the absolute or relative size of the branches or subsidiary are much larger in the host country than in the home country? Would home countries be more or less likely to declare a bank insolvent sooner or later given that this decision may impact the home and host countries differently? Would host countries permit home countries, whose branch banks comprise a large percentage of the banking assets in that country, to be the final determiner of the insolvency decision or "pull the plug" on their banks in the host countries when the host country has to suffer any excess damage from either overly hasty or overly slow action? In the EU, systemic risk resolution is the responsibility of the local supervisory agencies and central banks. However, in the case of use of the lender of last resort function, large transactions (at present unspecified or at least not publicly available) must be approved by the Governing Council of the European Central Bank. The specifics, however, of the home country treatment of banks whose failure might present systemically important implications for a host country are not explicitly addressed in EU directives. Indeed, it is for this very reason, that Nordic countries have structured their own arrangements specifically designed to deal with Nordea bank, should it experience financial difficulties.

²⁷ Krimminger1 (2004)

Should countries be able to impose depositor preferences in favor of deposits at their own home office relative to deposits at foreign host offices, as the United States and Australia do? In Europe, EU directives specifically require that EU citizens and claims be treated equally in the event of a bank failure.

Accounting rules are also likely to differ among countries. Thus, the timing of when accounting insolvency occurs is likely to differ in different countries. Solvency in one country may be recorded as insolvency in another and vice-versa. This alone, even if the regulators in different countries move to resolve official insolvencies at the same speed, will result in different timing of resolutions. Accounting for profitability is also likely to differ among countries. This is likely to result in the transfer of activities within a banking organization and across subsidiaries to countries where the activity receives the most favorable accounting treatment (Cardenas, 2003). To the extent that such shifts may not only interfere with the efficient allocation of resources in the host country branches, but also adversely affect the financial condition of subsidiaries in particular countries, they are of concern to the prudential regulators in those countries. Some analysts have argued that requiring foreign bank subsidiaries to have equity outstanding and minority (independent) directors may lessen the likelihood of shifts that impact the host country adversely, in addition to providing additional signals about significant changes in the financial health of the subsidiary or organization as a whole. Despite these concerns, the fact that all EU firms must abide by the International Financial Reporting Standards should serve to at least constrain countries from applying different valuation procedures to some degree.

The effectiveness of home country prudential regulation of its foreign branches and subsidiaries in most countries depends on a number of factors, including the strength and credibility of the home country's deposit insurance scheme and the relative and absolute sizes of the banks in each country (Mayes, 2004 and Eisenbeis 2004). Host countries would prefer home country prudential regulation of foreign branches particularly when the home country deposit insurance scheme is strong and host country branches are large. Home country regulation is least satisfactory to host countries when its deposit insurance scheme is weak and branches in the host country large.

As earlier noted, for subsidiary banks in financial difficulties, host country regulators need to be concerned whether the parent will or will not rescue the sub, and for solvent subsidiary banks of troubled foreign parents, whether or not the parent will attempt to strip assets from the sub, whether the sub's solvency is threatened through reputation risk from the parent's insolvency or whether the parent could continue to supply important services.²⁸ The table 9 suggests that the severity of the agency problems are dependent on a number of factors, including the absolute and relative sizes of the parent and subsidiary and of the countries involved. Some host countries require capital maintenance agreements between the parent and its foreign subsidiary banks' regulators requiring parental support if the sub gets into financial trouble. But enforcement of such provisions across borders can be difficult. The greatest chance of parents walking away from insolvent subsidiaries is when the parent is small and solvent and the sub is insolvent regardless of size. The least chance is when the parent is large and solvent and the sub is insolvent, again regardless of size. Size matters most when the parent is solvent. Small parents are less likely to rescue insolvent foreign subs of any size.

EU member countries have different structures for deposit insurance as well as for financial institution supervision and regulation. Some have split supervision and regulation according to function while others have consolidated supervision and regulation into a single agency. In some

²⁸ A similar matrix is developed in Goodhart (2005). A more detailed analysis of the decision to expand cross-border through branches or subsidiaries appears in Dermine(2006) and Eisenbeis and Kaufman(2005b).

instances, the central bank is involved in prudential regulation and in other countries it is not. One implication of the different structures is that policy tradeoffs for regulatory agencies faced with the same set of policy issues may differ. This both sets up many opportunities for individual institutions to pit the countries' agencies against each other and fosters regulatory arbitrage on the part of financial institutions to seek a competitive advantage.²⁹

However, relying upon regulatory competition to level the playing field also risks creating a more lax supervisory system and may open the system up to unintended systemic problems should major financial institutions get into financial difficulty. To be sure, the EU has set minimum supervisory standards for the region through directives and agreements in order both to set a lower bound as far as safety and soundness risks are concerned and to promote cooperation and information sharing among the individual country supervisors.³⁰ While these directives and guidelines are an attempt to limit excessive regulatory competition, except at the margin, there is no EU-wide bank supervisor or other agency responsible for providing Euro-wide deposit insurance or for resolving the failure after declaring an institution insolvent and (establishing and enforcing a common closure rule). This is a major weakness of the current design. It results in one that may seemingly work well during good times, but, as noted earlier, is filled with risks, conflicts, and potential delays in resolving problems in bad times. Indeed, these risks are likely to prove more significant over time, as the EU financial system becomes more integrated and more countries with different economic and financial systems at different stages of development join. That is, one of the biggest threat to lasting EU financial stability hinges upon the design of deposit insurance systems within the EU countries and the structure of bankruptcy resolution in the event that institutions get into financial difficulties.

6. Deposit Insurance Payout Coordination Problems for the EU

Numerous practical issues arise if a large cross-border institution should experience financial difficulties and have to be legally closed and resolved. Cross border coordination and decision making would be extremely difficult, especially in the absence of explicit ex ante plans.³¹ Consider an extreme case in which a cross-border institution operated both branches and separately chartered subsidiaries in each of the current 25 EU countries. In this case there would be 24 home country regulators (one for the parent institution and each of the separately chartered subsidiaries), 24 different deposit insurance funds (with primary responsibility for the home chartered subsidiaries but with overlapping responsibilities for branches in each host country and foreign branches in their own country to the extent that the institution might have chosen to top out its coverage), and 24 separate central banks possibly involved if emergency liquidity had to be provided to keep the institution operating while claims against it were resolved. In the

²⁹ Kremers, Schoenmaker and Wiertz (2003) recognize the importance of the existence of certain of these conflicts involving systemic supervision (the lender-of-last resort) and prudential supervision in comparing the supervisory structure adopted in the Netherlands and the United Kingdom.

³⁰ One of the more important of these directives sets policy towards capital adequacy through the Capital Adequacy Directive, which led to the Basel I capital standards for EU supervisors to follow. Basel I has now been refined by the Basel Bank Supervisors Committee now known as Basel II. Unfortunately, concentration of supervisory efforts on capital standards substitutes supervisory judgment for market-based risk weights to determine if an institution has sufficient capital. Wall and Eisenbeis (2002) argue that this focus is misplaced and misdirects supervisory attention from prompt corrective action and least cost resolution of troubled institution.

³¹ The European Commission is engaged in a review of its Deposit Insurance Directive 94/19 and surveys are still being conducted to provide an up to date compendium of the exact provisions of each country's scheme.

extreme, there could be 72 separate entities that would have a role in some part of the resolution of this institution.

With different deposit insurance coverage, sorting out who would be responsible for what claims would be a daunting task, especially when it comes to the top off coverage claims for cross-border branches. In addition, because of different laws governing claims in bankruptcy across the different countries, there would be the added complication that depositors' claims might be treated differently if held in a branch than a subsidiary. Imagine the difficulty for a depositor, especially a corporate customer, who might have multiple accounts across countries, in choosing an account in his/her own country among say branches of banks headquartered in 23 other countries with different insurance and resolution systems. Any claims might be settled differently depending upon which bank or country the account was held and whether the account was in a branch or subsidiary. Imagine also depositors in a member country with branches of banks chartered, say, in all of the other 24 countries. The depositors would be faced with options involving 25 deposit insurance schemes and 25 insolvency resolution schemes. To make the guarantee system work smoothly, there would have to be no risk that one or more country deposit insurance funds might default or might not be able or unwilling to meet its obligations, particularly when many of the deposits of the insolvent bank are at branches in host countries. While this may, in good times, be viewed by the responsible authorities as an unlikely event, there is ample evidence that commitments are not always kept in bad times (see Appendix I for a discussion of the failures of US sponsored nonfederal government deposit insurance systems). For this reason, Goodhart and Schoenmaker (2006) argue for the establishment of explicit ex ante commitments to share the burden should losses occur.

7. Possible Solutions to the Deposit Insurance Problems and Difficulties in Resolving Problems in Foreign-Owned Banks

It is well understood that poorly designed deposit insurance, safety nets and regulatory structures encourage both moral hazard behavior by banks and poor bank regulator performance in resolving troubled banks can lead to excess forbearance on problem institutions. These effects increase both the likelihood and costs of a banking crisis.

In the EU, there is little uniformity in the underlying legal structure for resolving bank failures. Only a few regulators have legal closure authority, and failure resolution is covered under general bankruptcy laws. This is in stark contrast to the U.S., for example, where there is a separate bankruptcy and administrative process for banking mergers administered by the FDIC.

Part of the difficulties with efficient resolution of foreign-owned bank insolvencies lie in the heterogeneity of both the closure rule and the deposit insurance structure across countries. These difficulties include: differences in both provisions and enforcement; overlapping of legislation, regulation, and supervision between home and host countries; and inherent incentives for regulators to favor the welfare of their home countries, possibly at the expense of the host country. These problems are complex and do not lead to easy or simple lasting solutions. Moreover, they become increasingly significant as more and more banks operate banking offices in foreign countries.

Coordination and cooperation among home and host countries, which has become the focal point for European efforts to deal with troubled institutions is a necessary but not sufficient condition

to solve the problem.³² What appears to be required is greater harmonization and homogeneity, particularly in closure policies and claims resolution and most likely eventual EU-wide deposit insurance and bankruptcy laws and resolution agencies. Indeed, centralized multinational regimes for deposit insurance and insolvency declaration (closure rule) and resolution, in terms of both provisions and enforcement, appear to be the most promising way to ensure that bank failures are resolved efficiently and without creating undue uncertainty.³³ This would eliminate the differences that make multiple individual home-host country regulatory regimes and cross-border enforcement a severe problem. But such a system raises numerous questions. Which countries should be included in the arrangement, how to deal with those excluded, how to organize the governing board, how are countries represented on the board, what authority and enforcement power would such a board have, what funding would be available, especially given the lack of a fiscal taxing authority at the pan-European level, and whether the conflicts discussed above are eliminated by a single structure or primarily only internalized and hidden from view? These issues are significant enough that it is unlikely that a single, multinational structure for either deposit insurance or insolvency resolution could be adopted in the near future. We put forward a four point program for efficiently resolving insolvent banks so that both their credit losses and the widespread fear of bank failures are minimized and the adverse moral hazard incentives inherent in deposit insurance become benign. Indeed, with efficient insolvency resolution, deposit insurance provides desirable built-in redundancy in case specific resolutions turn out ex-post not to be effective, much like airplanes that have two or even three brake systems in case the first system fails. But this is a second best solution. The preferred solution is to prevent the occurrence of bank insolvencies through effective market discipline and appropriate regulatory prompt corrective actions.

The proposal is based on a fundamental understanding of the nature of bank failures and where their costs occur. Banks become economically insolvent when the market value of their assets declines below the value of their deposits and other debt funding so that the value of their capital turns negative. At this point, a bank cannot pay out all its debts, including deposits in full and on time, and the depositors and other creditors share in the losses according to their legal priority.

These claimants may experience both credit and liquidity losses in the resolution process. Credit losses may occur when the recovery value of the bank as a whole or in parts falls short of the par value of its deposits or other debt on the respective due dates. Liquidity losses may occur for two reasons. First, depositors may not have immediate (next business day or so) and full access to the par value of their insured claims or to the estimated recovery value of their *de jure* uninsured claims. In the case of insured deposits, the insurer must have a fund to provide eligible depositors with immediate and full access before the insurer may collect the proceeds from the sale of the bank or its underlying assets and, in case of losses, to fill the difference between the par value and the recovery value. In the case of uninsured claims, liquidity can be provided either by a direct injection of funds or through a liquid and active secondary market for receivership certificates given to uninsured claimants by the insurance agency. Second, qualified borrowers may not be able to utilize their existing credit lines immediately. Insolvent banks may be said to be resolved efficiently with least cost to society when the sum of aggregate credit losses and aggregate liquidity losses, or total losses, are at or close to zero.

³² This issue has also been addressed by Denmark's Nationalbank (2005).

³³ Kane (2005) considers another alternative which involves the sale of options on insolvency losses.

Insolvent banks in a country may be resolved efficiently if the process employed by bank regulators in the country in which a bank is chartered or licensed can satisfy the following four rules or principles.³⁴ Each principle focuses importantly on the term “prompt.”

1. Prompt legal closure when the bank’s equity capital declines to some pre-specified and well-publicized positive minimum greater than zero (legal closure rule),
2. Prompt estimate of the recovery values and assignment of credit losses (“haircuts”) to *de jure* uninsured bank claimants when equity is negative to avoid protecting *de-jure* uninsured claimants,
3. Prompt reopening (e.g., next workday), particularly of larger banks, with full depositor access to their accounts on their due dates at their insured or estimated recovery values and full borrower access to their pre-established credit lines, and
4. Prompt re-privatization in whole or in parts with adequate capital.

Adoption of these four principles and the necessary infrastructure to make them work, would largely eliminate most of the agency problems, negative externalities, insurance fund losses, and coordination problems associated with the current EU system that has been identified here and by others as well.

The next sub sections review how each principle is or could be satisfied in bank insolvencies in the United States. We argue that, while not without flaws and not focused on foreign-owned banks, the current system in the U.S. may serve as a useful model for other countries in designing their insolvency resolution policies. The U.S. system was developed largely in response to the widespread and costly bank and thrift institution insolvencies of the 1980s.

7.1 Prompt Legal Closure

The Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 introduced a bright line bank closure rule that is triggered when the ratio of book value tangible equity capital to total on-balance sheet assets declines to a minimum of 2 percent.³⁵ If not corrected within 90 days, the bank must be declared legally insolvent, closed by the appropriate federal or state regulator, and placed in receivership or conservatorship.³⁶ Its charter is revoked. Shareholder controlling interests are terminated and senior management is changed. If the institution can be successfully resolved before its market value capital declines below zero, losses are confined to shareholders. Depositors and other creditors are fully protected and kept whole, and deposit insurance is effectively redundant. Thus, any adverse spillover effects, which occur primarily when capital turns negative and losses are imposed on counterparties, are minimized.

Because the closure rule is specified in terms of book value capital rather than the market value of capital, there is no guarantee that the institution will be resolved before its economic capital is depleted or that creditors will be fully protected against losses. As a bank approaches insolvency, book values tend to increasingly overstate market values for assets. Thus, there is a risk that use

³⁴ See Kaufman (2004a). Similar plans have been proposed by Mayes (2005) and the Reserve Bank of New Zealand (Harrison, 2005), among others.

³⁵ Banks and thrift institutions in the U.S. are not subject to the corporate bankruptcy code but to a special code in the Federal Deposit Insurance Act (FDIA). The bank act is considerably more administrative and less judicial, considerably more creditor friendly, and potentially faster in the declaration of insolvency ousting the shareholders and in-place senior management, and payments to creditors. Bank and financial holding companies are, however, subject to the general corporate bankruptcy code (Bliss and Kaufman, 2006).

³⁶ Two 90 day extensions are permitted.

of the book value closure rule may result in de facto forbearance.^{37 38} Nevertheless, specifying a closure rule based on a capital ratio that is greater than zero provides some protection against losses due to the deviation of book from market value and losses due to errors in measuring asset values.

Legal closure according to a well specified, publicized, and credibly enforced closure rule has several desirable attributes. There are no surprises. All players know the rules in advance and base their actions accordingly. It treats all depositors and other creditors in the same priority class more fairly. Because banks tend to have a larger percentage of demand deposits and other short-term deposits and debt than other firms, bad news, impending insolvency, or uncertainty about how creditors would be treated in the event of insolvency typically increase the incentives of those who can withdraw their funds to do so while there are still assets available to satisfy their claims. Uncertainty thus raises the probability of a run, with the initial runners receiving full payment and those unable, or unwilling to run, receiving less. However, the presence of a strong perception of an enforced closure rule at positive capital would greatly reduce the incentive to run. All debt claimants, regardless of the date of maturity of their claims, would know that they would not suffer credit losses. Reducing the incentive for runs also increases the time regulators have to act to deter insolvency or bring about an efficient resolution if the closure trigger is breached. At the same time, equity holders would have greater incentive to attempt to address problems promptly as capital ratios declined, since they would know with greater certainty that they would stand to lose their claims. They would have little incentive to engage in excessive risk taking or moral hazard behavior.

Banks become insolvent in the U.S. and need to be legally closed because another provision of FDICIA – prompt corrective action (PCA) – has failed to incent financially troubled banks to turn around before insolvency. PCA established a series of five capital tranches ranging down from “well-capitalized” to “critically under-capitalized.” Progressively harsher and more mandatory sanctions are applied by the bank regulators on weak financial institutions as their net worth declines through these tranches to discourage their insolvency (Table 10). The sanctions are similar to those that the market imposes on firms in non-regulated industries. Sanctions include change in senior management, reductions in dividends, restrictions on growth and acquisitions, adoption of capital restorations plans and, if the bank is a subsidiary of a financial holding company, loss of its parent’s status as a financial holding company with the associated wider range of powers.³⁹ The tranches effectively serve as “speed bumps” to slow a bank’s deterioration and to force regulators to become more involved with troubled banks well before insolvency, so that they may be ready to close them legally when necessary and not be caught by surprise and delayed. Thus, PCA effectively “buys time” for the regulators to act efficiently. PCA also grants regulators some discretion to apply appropriate sanctions and actions as a bank’s capital position deteriorates depending upon the individual circumstances to turn the bank around to profitability. This is in contrast to the supervisory actions employed prior to FDICIA when intervention was less frequent and discretion was often focused on ways to keep institutions operating after they had become economically insolvent without forcing improvements. This latter policy tended to result in losses to both uninsured creditors and the FDIC.

³⁷ While regulators in the U.S. may also declare a bank insolvent for a number of other reasons, such as unsafe and unsound banking, they must do so when the at the closure rule capital ratio is breached.

³⁸ Wall and Eisenbeis (2002) demonstrate that, on average, institutions in the U.S. have been legally closed long after the market value of equity became negative.

³⁹ (Price-Waterhouse Coopers, 2003)

While PCA has not prevented all bank failures, it has contributed significantly to turning troubled banks around before insolvency and reducing both the number and the aggregate cost of failures.⁴⁰ However, it is important to note that PCA and a closure rule at positive capital are not intended to prevent all failures. As in other industries, inefficient and/or unlucky banks should be permitted to fail and inept management replaced. But, because the adverse externalities of bank insolvencies are widely perceived to be substantially greater than for other firms, such failures should occur only at low cost with minimal losses to creditors.

7.2 Prompt Estimate and Allocation of Credit Losses

Because the regulators should be scrutinizing troubled banks under PCA well before they approach the capital ratio closure trigger, the recovery value of the institution as a whole or in parts should be able to be estimated quickly upon legal closure for most banks. If the present value of the estimated recovery value falls short of the par value of the deposits and other debts, pro rata losses (haircuts) should be allocated to these claimants in their order of legal priority to avoid protecting *de-jure* uninsured claimants. In the US, the FDIC has equal standing with depositors at domestic offices and higher standing than other depositors and creditors.⁴¹ The FDIC stands in the shoes of the insured depositors at domestic offices and is obligated to make them whole. It also shares proportionally in any losses with uninsured depositors at these offices beyond the losses charged first to other creditors and deposits at foreign offices. FDICIA requires the FDIC to share any losses in the insolvency with uninsured claimants and resolve the institution at least cost to the insurance fund. The only exception is when doing so is likely to “have serious adverse effects on economic conditions and financial stability,” the so-called “systemic risk exemption” or successor to “too-big-to-fail.” Requiring parties besides the FDIC to share in any losses is necessary to minimize moral hazard excessive risk-taking behavior by banks and to enhance market discipline by reinforcing the *ex post* at-risk nature of *de jure* at-risk claimants. This should, in turn, reduce the number of bank failures.

7.3 Prompt Reopening of Large Banks

Liquidity losses to depositors can occur through delayed access to or freezing of deposit accounts. This process in effect transforms demand deposits and short-term time deposits involuntarily into longer-term time deposits or even bonds. Liquidity losses also result when credit lines cannot be relied upon or drawn down by borrowers to meet business needs. When regulators close a bank legally they often also effectively close it physically, at least partially, until funds are recovered from the sale of assets to start paying depositors on their claims. In many countries the lack of access to deposits and credit lines is more feared than credit losses to depositors and generates as great, if not greater, adverse externalities. The inability to use deposits to make immediate payments greatly reduces the efficiency of the payments system. Additionally, the more likely depositors are to have access to their funds promptly, the less likely they are to engage in runs.

Regulators often are unable or unwilling to avoid, at least briefly, closing banks physically when they close them legally, e.g., because of insufficient information on depositors or recovery values or insufficient funds to advance payments. In some countries, both insured and uninsured depositors first need to file claims with the deposit insurance agency after notification in order to attain access to their funds. In others, it is left to depositors to monitor newspapers and file

⁴⁰ See OCC (2003) and FDIC Salmon et al. (2003). Kaufman (2004d) and Wall and Eisenbeis (2002) both suggest, however, that losses in individual cases have been significant.

⁴¹ Under the Depositor Preference Act of 1993, claims of general bank creditors, including sellers of Fed funds, and deposits at foreign offices are subordinated to deposits at domestic offices. See Kaufman (1997) and Marino and Bennett (1999)

claims. This is a time consuming and costly process during which the funds are effectively frozen. Thus, there is considerable pressure on regulators to avoid legally closing banks promptly. By delaying legal closure, the regulators not only avoid liquidity losses. But delay also postpones, at least temporarily, explicitly recognizing underlying implicit credit losses and provides additional time in which the bank may try to regain solvency and thereby avoid altogether the unpleasant task of legal closure. But evidence in many countries strongly suggests that, on average, such forbearance increases the costs in the long-run over what they would have been had the insolvent institution been legally closed promptly. To reduce the incentive for regulators to forbear, FDICIA made prompt legal closure mandatory and to increase the efficiency of the resolution required it be at least cost to the FDIC.

Liquidity losses may be minimized or eliminated entirely by legally reopening the insolvent bank the next business day with full access to all accounts. This would provide insured depositors near immediate and seamless access to the par value of their accounts, uninsured depositors and other general creditors to the estimated recovery value of their accounts on due dates, and borrowers to their credit lines.⁴² Thus, legal closure is separated from physical closure.

Potential payments to depositors and other debt claimants, either directly or through assumption of these claims by another bank, requires an immediate sale of the bank by the FDIC or access to a source of funds either its own or through a pre-designated source of borrowing. The FDIC may also operate the bank temporarily through a newly chartered bridge bank that assumes most or all of the assets and liabilities of the failed bank, generally at market values. The bridge bank is either capitalized with equity by the FDIC or its deposits are fully guaranteed by the FDIC during its operation until it is reprivatized. The bridge bank provides the FDIC with additional time to find qualified private buyers for the bank and wind-down its operations efficiently.

It should be noted that minimizing liquidity losses is not a traditional deposit insurance function, which is to protect targeted depositors against credit losses. Less attention has been paid to the problem of the timing of when depositors gain access to their funds. This depends both on when the insurance agency receives the proceeds from the sale of the bank as a whole or in parts and whether the agency has access to a fund or borrowing facilities to make advance payments to the depositors of both the estimated recovery amount and for insured depositors also of the amount necessary to make them whole.

In the U.S., the FDIC usually pays insured deposits at the failed bank at par the next business day even though it may not yet have collected from the sale of the insolvent bank's assets.. This occurs either through a transfer of the insured deposits to another solvent bank, which assumes the liabilities, generally with and offsetting financial payment from the FDIC, or less frequently, through a payout.⁴³ The FDIC can generally make such speedy payments as they have been monitoring problem banks carefully under PCA and have access to the bank's records on eligible

⁴² Fear of the adverse consequences of liquidity as well as credit losses have at times induced the regulators not to give haircuts to uninsured debt claimants, particularly at large banks, after failing the institution by revoking its charter and ousting shareholders and management. This is often incorrectly termed "too-big-to-fail" (TBTF). This has proven highly costly and inefficient. Losses tend to increase and ultimate resolution is only postponed, at which time losses borne by the FDIC or taxpayer.

⁴³ Recent survey of deposit insurance practices indicates that few countries (only about 15%) pay insured depositors within 3 months (see Demirgüç-Kunt, Karacaovali, and Laeven, 2005 and Kaufman and Seelig, 2002). In large part this reflects that the insurance agency has insufficient information on the identify of the insured depositors and the amount of deposits insured, and requires the claimant to file a claim. In the US, the FDIC generally has the necessary information and typically does not require depositors to file claims.

insured deposits.⁴⁴ In contrast, uninsured depositors and other creditors generally receive receivership certificates and are paid in order of their legal priority as proceeds are received from the sale of the bank assets. Unless there is an active secondary market for these certificates, uninsured creditors receiving these certificates may suffer liquidity difficulties. To maximize efficiency, these depositors should share in any credit losses but not suffer liquidity losses. To achieve this, the FDIC has the authority to make advance payments to these claimants on the basis of estimated or average recovery amounts before it has actually collected the proceeds (Kaufman and Seelig, 2002). If payments are made at the time of legal closure, this procedure is essentially equivalent to not having physically closed the institution. Advance dividends also permit the estimated recovery value of uninsured deposits to be transferred to a newly chartered bridge bank with immediate access by depositors. In bridge banks, borrowers generally maintain access to their existing credit lines. This further reduces any liquidity losses. The FDIC is able to make advance dividends as it has access to a pool of funds provided by premiums paid by banks and can borrow a limited amount from the U.S. Treasury.

Estimates of the recovery value of the funds advanced as dividends tend to be on the conservative side because the FDIC absorbs the loss if it overestimates the recovery amounts. If it underestimates the recovery amounts, it makes additional payments to the claimants later. The FDIC, in its capacity of receiver, can borrow the necessary funds to make advance dividend payments from its corporate capacity, which has access to the FDIC accumulated fund.

The FDIC used advance dividends briefly in a number of resolutions in the early 1980s and early 1990s, when it did not fully protect most or all uninsured debt claimants. But probably because most bank failures in the U.S. since the mid-1990s have involved small banks, the FDIC has not used advance dividends often since.

Use of bridge banks and advance dividends to minimize liquidity losses, especially in combination with the previous principle of preventing or, at least, minimizing credit losses, should eliminate much of the fear of bank failures. It should permit efficient resolutions of large banks without strong negative reactions by the affected depositors and having to invoke the idea that some banks are “too-big-too-fail.”

7.4 Prompt Re-privatization and Recapitalization

FDICIA requires that insolvencies be resolved at least cost to the FDIC. This also reduces losses to depositors at domestic offices who share the same priority. The requirement encourages rapid sale of bank assets after legal closure and is an attempt to deal with the fact that experience suggests, on average, that assets lose value the longer they are held in receivership. Re-privatization can be more difficult when banks are publicly owned, including bridge banks. Public ownership of banks is not always rooted in the desire to allocate resources efficiently. Nor do publicly owned institutions necessarily seek to maximize profits. Rather, the intent may be to reallocate funds for socially desirable purposes or for political purposes. Thus, when a government-sponsored bank becomes insolvent, the government is likely to keep the institution in operation regardless of its financial condition, and its return to solvency is likely to be slower. The consequence is that losses are likely to continue and the ultimate cost of resolution to the taxpayer is likely to be larger than it otherwise would.

To minimize government forbearance and its attendant costs, insolvent banks should be sold to the private sector in whole or parts, as soon as this can be done efficiently. Indeed, in the U.S.,

⁴⁴ The FDIC currently does not have information on all insured depositors at the largest banks but has issued a proposal for obtaining this information.

the maximum life of a bridge bank is specified by law to be no longer than two years, with three one-year extensions (which is probably longer than necessary). Moreover, the sale should be on terms that provide sufficient private capital to ensure that, after adjusting for any guarantees to the buyers, the resulting institution will attain, at minimum, “adequately capitalized” status, if not “well capitalized” status, to guard against a quick return to insolvency. Again, because under PCA the FDIC is aware of most pending insolvencies, it can begin the bidder search process for most banks before legal closure and the actual bidding at closure. As noted, larger banks may need to be bridged to give the FDIC additional time to sell to the highest bidders without having to resort to fire-sale losses or otherwise being forced to unwind the bank inefficiently.

8. Proposed Solution To Cross-Border Branching in the EU

To date, little progress has been made to deal with the supervisory and failure resolution issues raised by cross-border banking organizations. The principle focus has been on obtaining cooperation and data sharing among responsible supervisory agencies within the existing decentralized regulatory framework. For example, the major financial public policy authorities of the European Union member countries have recently signed a Memorandum of Understanding on Cooperation in Financial Crisis Situations that announced in a press release (May 14, 2005).⁴⁵

Largely motivated by inquiries by the Nordea Bank about the feasibility of taking advantage of the new European Company Statute in order to reorganize itself, the Nordic countries have pushed ahead and established formal memoranda of understandings on joint supervisory policies and agreements governing the treatment of institutions in financial distress (Mayes 2006).⁴⁶ The bank considered replacing its cross-border subsidiaries, which are currently supervised by regulators in the countries where they are chartered, with branches to be supervised by Swedish authorities, where Noredea would remain headquartered. The converted subsidiaries’ deposits would be insured by the Swedish deposit guarantee system. But financial stability and lender of last resort functions would remain the responsibilities of host countries, where Nordea is often more significant than in Sweden.

Mayes(2005) describes in detail the contingency efforts of the Nordic country supervisors to plan and assign supervisory activities and sort out ex ante how they might respond to a crisis, should the new Nordea organization experience financial difficulties. While Nordea’s plan appears to be stalled at this point, the problems and issues that Nordic country regulators and insurers began to focus on deal with what is likely to become the dominant issue for large European banks in the future. The discussions highlight the complexities in structuring shared regulatory responsibility within the current European framework.

We are skeptical that voluntary cooperative arrangements will work when put to the test in a crisis, especially if substantial commitment of a country’s treasury funds should prove necessary to either pay out depositors or to rescue the institution should it experience financial difficulties.

⁴⁵ Press Release, “Memorandum of Understanding Between the Banking Supervisors, Central Banks and Finance Ministries of the European Union in Financial Crisis Situations,” May 14, 2005, http://www.ecb.int/press/pr/date/2005/html/pr050518_1.en.html) The MOU is not a public document.

⁴⁶ The bank is headquartered in Sweden and operates subsidiary banks in that country as well as Norway, Denmark, Finland and Sweden. In addition it has branches in Estonia, Poland, Singapore and New York City. According to Mayes (2006) Nordea holds the dominant market share in Finland, with a 40% market share; 25% of the market in Denmark; 20% in Sweden and 15% in Norway.

However, the efficiency advantages of cross-border branching are too large to discard, and the supervisory issues will arise again.

In lieu of cooperation, we would propose an alternative, when combined with the four point proposal for efficient resolution of trouble institutions discussed earlier, would significantly reduce the home-host country conflict and loss-sharing problems and enhance financial stability, while co-existing within the current regulatory framework. We propose that as a condition of obtaining a single cross-border branching charter under the European Company Statute, any banking institution be required to subject itself to a system of Prompt Corrective Action (PCA) and Structured Early Intervention and Resolution (SEIR) that would be administered consistent with the four point program.

While we leave the ultimate legal structure of such an agreement to the lawyers, necessary provisions would include a critical, positive capital ratio that would trigger resolution. In the event that this trigger capital threshold is breached, the institution's shareholders would be required to return its charter back to the appropriately designed supervisory regulator (presumably the home country) and be put in statutory receivership to be resolved.

The numerical value of the capital-asset trigger ratio could be determined in a couple of ways. It could be set uniformly across the Euro-area. Alternatively, it could be determined by the home country and would be the same for all banks chartered in the country. Competition among countries would prevent this ratio from being chosen inefficiently. If set too high, banks would not choose the country for their charter. If set too low, the deposit insurer would be liable for larger payments to other countries.

The home country or designated supervisor would have several options to resolve the problems. It could liquidate the bank by selling the assets separately, sell the bank as a whole or operate it temporarily as a bridge bank. For large entities, the bridge bank would mean that it could be opened immediately and services would be maintained almost seamlessly. Liquidity losses would be minimized. The bank would not be liquidated, thus avoiding the negative externalities that have caused so much concern.

If the regulator is able to resolve an institution before its capital turns negative, there is no insolvency or bankruptcy and no losses to depositors and other creditors. Only if regulators fail to catch an institution before its capital turns negative and it became insolvent would it be necessary to invoke bankruptcy resolution procedures and assign losses to depositors and other creditors. To deal with an insolvent institution efficiently, it would be useful as a condition for granting a charter under the new European Charter statute, for the EU to require member countries to adopt a separate bankruptcy resolution code for banks. Such a statute could be based on that applicable to banks in the United States that gives regulators the power to legally close banks and assign pro-rata losses to depositors and other creditors (Bliss and Kaufman(2006)).

The proposal would have several advantages. If the bank is successfully put into resolution before its capital is depleted, the home country does not impose losses on depositors in either the home or host countries. Thus, the differences in deposit insurance schemes among countries discussed earlier decrease in importance. The rule requiring the institution to voluntarily give up its charter may be seen as a cost imposed on the banks for the privilege of being able to branch across national boundaries. Since the shareholders, as a condition of obtaining the charter, ex ante have agreed to give up their charter, there are no issues of "taking of property." Any residual value will be returned to the shareholders. This is similar to conditions any insurance company imposes of

its insurees in their contracts. Shareholders, who are unwilling to recapitalize a troubled institution to bring it up to regulatory standards, indicate by their lack of action their belief that the institution as presently organized and operated is no longer a going concern. Finally, there would be less incentive on the part of regulatory authorities to engage in forbearance. Both managers and creditors of the institution would clearly understand when and under what conditions a troubled institution would be forced into resolution mode and this would tend to reinforce market discipline. Finally, regulatory agency problems associated with overlapping jurisdictions and deposit insurance schemes would be eliminated, because the scope and nature of regulatory responsibilities would be specified ex ante and perfectly clear.

9. Conclusions

The focus of this study has been on the structure of supervisory and deposit insurance systems in cross-border banking through branching with particular emphasis on the EU and the related aspects of failure resolution and coordination when financial problems arise. The issue is of importance and deserves attention because the costs of any resulting crisis may more than offset the efficiency benefits of the branching. We have 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.

To provide a more efficient arrangement, we propose four principles to ensure the efficient resolution of bank failures, should they occur, with minimum, if any, credit and liquidity losses. These include: prompt legal closure of institutions before they become economically insolvent, prompt identification of claims and assignment of losses, prompt reopening of failed institutions and prompt recapitalizing and re-privatization of failed institutions. Implementing these proposals would go a long way towards mitigating or possibly even eliminating many of the potential agency and related problems inherent in the current multiple and confusing EU crisis resolution and deposit insurance regimes across countries. Finally, we propose a mechanism to put such a scheme into place quickly in the case where a cross-border banking organization seeks to take advantage of the liberal cross-border branching provisions in the single banking license available to banks in the EU. In return for the privilege of such a license, the bank agrees to be subject to a legal closure rule as a positive capital ratio established by the EU or the home country.

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Appendix I

The US has experimented extensively with decentralized deposit insurance systems that were not creatures of the federal government.⁴⁷ Most of these systems failed within a few years. In every case, the insurance systems were unable to meet unusual demands for a payout when either a very large institution got into financial difficulty or many smaller institutions failed at the same time. The same fate befell funds quite recently in Ohio in 1985 and Rhode Island in 1991 (see Kane (1987) and Pukkinen and Rosengren (1993)).

There were several design flaws in these deposit insurance systems (see Pukkinen and Rosengren (1993)) that could have significant implications for the EU. First, the systems tended to be critically under funded. Second, they tended to be undiversified in one of two ways. Either they were undiversified because the institutions being insured were not geographically disbursed and hence were vulnerable to regional business cycles or economic shocks, or they were undiversified because the failure of one or two large institutions was sufficient to bankrupt the funds. Third, they often had poorly designed governance systems, and this was particularly the case in the privately sponsored plans. Finally, when threatened with collapse, there was not the recognition that what provided the credibility to the plan was not so much the size of the fund, but the willingness of the sponsoring entity – the particular state legislature – to make good on the guarantees the fund offered.

Many of the same design flaws in these state-sponsored systems appear to be potentially inherent in many of the systems being put in place in the EMU. Any fund whose insured base is not adequately diversified or that does not have the ability or willingness to use taxpayers resources, should fund resources be depleted, will not likely stand up to the costly failure of a few large banks. These diversification issues are especially important in those EU countries with only one or two major institutions where the failure of even one might endanger the entire fund. Smaller countries, in particular, with only a few relatively large institutions are more likely to experience funding problems than larger countries. At a minimum, this means that reliance upon private deposit insurance systems, which the EU directive permits, seems extremely risky. Moreover, the fact that the fund is private may still not insulate taxpayers from fiscal responsibility, especially when the fund is jointly managed with both private and public officials from either the central bank, Ministry of Finance, or Supervisory Authority. This government involvement raises the perception of an implicit government backing, even without official recognition of that responsibility.

What most architects of deposit insurance schemes seem to miss is that it is nearly impossible to determine ex ante whether or not a fund is adequately funded. More importantly, what gives the fund credibility, especially when the financial problems in one institution threaten to spill over to others, is not the size of the fund per se but rather the willingness to make good on the guarantees should the fund run out of resources. The differences in arrangements within the EU raise considerable questions about how responsibilities will be handled in the event that a fund gets in trouble. For example, Table 5 shows that some schemes are supposedly fully funded, some are only funded with ex post premiums or levies, some can make special assessments on its members over and above normal contributions, some can borrow from the public or central bank, and some funds, such as in Latvia, have an explicit provision committing the government to provide funds.

⁴⁷ These started with the New York State safety fund and culminated with the failure of the Rhode Island Share and Deposit Indemnity Corporation in 1991. Between 1908 and 1917 a total of eight states established deposit insurance systems. These included Oklahoma, Kansas, Nebraska, Texas, Mississippi, South Dakota, North Dakota, and Washington. See Thies and Gerlowski (1989).

Kane (1987) argues that waffling and legislative delay was a major problem in the case of the ODGF that was in part political posturing, but tendency to delay and avoid recognition of losses applies to federally sponsored programs as well. The events surrounding the eventual collapse of the FSLIC in the US demonstrates the propensity of legislators to avoid facing up to the problem.

The circumstances surrounding the ODGF crisis also points to another problem related to the split of responsibilities for systemic risk between the member countries of the EU and the ECB. Specifically, the longer the delay in attempting to deal with the problem, the more likely it is that runs or systemic problems would develop that would convert what might be a problem in one institution into a problem for the deposit system itself. Individual member nation's regulatory and legislative authorities, to the extent that they may be reluctant to impose costs on their own taxpayers, have incentives to delay and gamble that a broader authority would step in and assume the responsibilities for a crisis.⁴⁸

In Ohio, of the losses to the ODGF, amounted to about \$170 million, which was more than the state legislature was willing to appropriate to make good on the guarantees implicit in its state sponsorship. This episode illustrates two facts. First, it is the ability to tap into taxpayer resources as needed rather than the size of the fund that provides the credibility of the deposit insurance guarantee. The initial reluctance of the State of Ohio to live up to its commitment with provides an interesting comparison to many of the countries currently in or entering the EU. Ohio's state gross domestic product (GDP) in 1985 was \$176 billion. This is larger than 8 of the original EU countries' GDP including: Austria, Belgium, Finland, Greece, Luxembourg, Netherlands, Portugal, and Spain. It is also larger than the real GDP of all the newly admitted countries to the EU.

It is not clear why countries with even smaller resources would be more willing than a relatively richer state like Ohio to honor its deposit insurance liabilities, especially, if payments were to be made to resident depositors in other, larger EU countries. The temptation on the part of poorer countries and their politicians to gamble, in the hope that they will be bailed out by the ECB should a major crisis arise. A chief difference, of course, between the resolution of the ODGF crisis and a potential deposit insurance crisis in the EU is that there is no federal deposit insurance fund in the EU to which losses could be shifted. Table 9 contains an assessment of the combination of factors that would suggest agency problems would be the greatest should a financial crisis or the failure of a large bank materialize that threatened the solvency of the deposit insurance fund. We conjecture based on past experience that these problems would be greatest in smaller countries, in those countries with unfunded plans, where the banking system is highly concentrated, with a large number of foreign banks operated in the system and there were strong perceptions of implicit or the existence of government guarantees for the insurance fund.

⁴⁸ This observation is not only rooted in experience but also in theory. See Santos and Kahn(2002), also Garcia and Nieto (2005).

Table 1 Percent of Cross-Border Penetration of Banks as % of Assets

Country	1997	1999	2001	2002	2003	2004
Austria	3	2	19	21	19	19
Belgium	23	20	23	22	21	21
Denmark	4	4	17	18	17	15
Finland	8	9	7	9	7	59
France	7	6	11	11	10	9
Germany	2	3	3	5	5	5
Greece	11	10	4	6	19	25
Ireland	46	50	48	37	35	36
Italy	6	7	5	5	5	6
Luxembourg	83	88	88	89	89	89
Netherlands	5	4	10	9	10	11
Portugal	13	13	24	24	26	25
Spain	9	7	8	9	10	11
Sweden	15	29	6	6	7	8
United Kingdom	25	26	25	23	23	26
EU 15	13	13	15	15	15	16
Cyprus			16	17	18	23
Czech Republic			68	90	92	87
Estonia			91	90	89	98
Hungary			55	53	56	56
Lithuania			47	56	51	74
Latvia			24	21	22	39
Malta			49	42	40	39
Poland			60	59	59	59
Slovenia			14	16	18	19
Slovakia			na	81	82	88
NEW EU 10			47	53	53	58

Source: Schoenmaker and Oosterloo(2006). Includes subsidiaries and branches

Table 2
Relative Size of Old and Accession Economics

<i>Country name</i>	Income group	GDP 2005 Purchasing Power Parity Basis	EU GDP Share 2005 Purchasing Power Parity Basis	GDP per capita 2005 Purchasing Power Parity Basis
Old Members				
Austria	High income	\$269,400,000,000	2.22%	\$32,900
Belgium	High income	\$329,300,000,000	2.71%	\$31,800
Denmark	High income	\$182,100,000,000	1.50%	\$33,500
Finland	High income	\$158,400,000,000	1.31%	\$30,300
France	High income	\$1,816,000,000,000	14.97%	\$29,900
Germany	High income	\$2,446,000,000,000	20.16%	\$29,700
Greece	High income	\$242,800,000,000	2.00%	\$22,800
Ireland	High income	\$136,900,000,000	1.13%	\$34,100
Italy	High income	\$1,645,000,000,000	13.56%	\$28,300
Luxembourg	High income	\$29,370,000,000	0.24%	\$62,700
Netherlands	High income	\$500,000,000,000	4.12%	\$30,500
Portugal	High income	\$194,800,000,000	1.61%	\$18,400
Spain	High income	\$1,014,000,000,000	8.36%	\$25,100
Sweden	High income	\$266,500,000,000	2.20%	\$29,600
United Kingdom	High income	\$1,867,000,000,000	15.39%	\$30,900
New Members				
Cyprus	High income	\$16,820,000,000	0.14%	\$21,600
Czech Rep.	Upper middle income	\$184,900,000,000	1.52%	\$18,100
Estonia	Upper middle income	\$21,810,000,000	0.18%	\$16,400
Hungary	Upper middle income	\$159,000,000,000	1.31%	\$15,900
Lithuania	Upper middle income	49,410,000,000	0.41%	\$14,100
Latvia	Upper middle income	\$29,420,000,000	0.24%	\$12,800
Malta	High income	\$7,485,000,000	0.06%	\$18,800
Poland	Upper middle income	\$489,300,000,000	4.03%	\$12,700
Slovak Republic	Upper middle income	\$85,140,000,000	0.70%	\$15,700
Slovenia	High income	\$42,090,000,000	0.35%	\$20,900

Source: CIA, The World Fact Book 2005

Table 3
Deposit Insurance Characteristics by Country*

<i>Country name</i>	Deposit Insurance Coverage of Foreign Institutions and deposits
Old Members	
Austria Einlagensicherung der Banken & Bankiers Gesellschaft m.b.H.	Only accounts denominated in EUROS and currencies of other EEA countries
Belgium Deposit And Financial Instrument Protection Fund	Only accounts denominated in EUROS and currencies of other EEA countries
Denmark The Guarantee Fund for Depositors and Investors	Foreign currency deposits are covered if made in Denmark
Finland Finnish Deposit Guarantee Fund	Foreign currency deposits are covered if made in Finland
France Deposit insurance (warranty) Fund	Yes, but only accounts denominated in EUROS and currencies of other EEA countries
Germany The German Private Commercial Banks Compensation Scheme for Depositors and Investor (There are other schemes in Germany as well)	Yes if made in Germany
Greece Hellenic Deposit Guarantee Fund	Yes, covers deposits in branches in EU and in branches of non EU countries unless equivalent coverage is available to those branches
Ireland Deposit Protection Scheme	All deposits made in Ireland
Italy Interbank Deposit Protection Fund	Yes - The Interbank Deposit Protection Fund also compensates the depositors of foreign branches of Italian banks. In the case of Italian banks operating in EU countries, the amount of compensation cannot exceed the protection guaranteed by the host country.
Luxembourg The Luxembourg Deposit Guarantee Association	Yes
Netherlands Collective Guarantee Scheme (CGS)	Yes, but only accounts denominated in EUROS and currencies of other EEA countries
Portugal Deposit Guarantee Fund	Yes, deposits are guaranteed regardless of the currency in which they are denominated, and whether the depositor is resident or non-resident in Portugal.
* Austria has 4 different funds, Germany has 6 funds, Italy has 3 funds, Portugal has 2 funds, Spain has 3 funds- In each case the main insurance funds for commercial banks or credit institutions is listed.	

Table 3 (cont) Deposit Insurance Characteristics by Country	
<i>Country name</i>	Deposit Insurance Coverage of Foreign Institutions and deposits
Spain Deposit Guarantee Fund for Banking Institutions	Yes Deposits in Spain or in institutions from another member state of the European Union, whatever the currency in which they are denominated, with the exclusion of those deposited by financial institutions, public administrations and certain other persons linked to credit institutions in any of the ways envisaged in the regulations.
Sweden Deposit Guarantee Board	Yes, all deposits made in Sweden
United Kingdom Financial Services Compensation Scheme (FSCS)	Yes, all deposits in EUROS or EEA currencies
New Members	
Cyprus Deposit Protection Scheme	No
Czech Rep. Deposit Insurance Fund	Yes but compensation for foreign exchange deposits is disbursed in the Czech currency.
Estonia Deposit Guarantee Fund	Deposits of foreign credit institutions are guaranteed
Hungary National Deposit Insurance Fund of Hungary	yes
Lithuania State Company "Deposit and Investment Insurance	Yes, Deposits of branches of EU headquartered institutions are eligible for insurance. Excluded depositors' deposits are deposits held with the daughter banks of Lithuanian banks or divisions of these banks operating beyond the territory of the Republic of Lithuania. Deposits in currencies of foreign countries that are not members of the European Union, with the exception of the USA, are non-insurable.
Latvia Deposit Guarantee Fund	yes
Malta Depositor Compensation Scheme	Yes
Poland Bank Guarantee Fund	Yes
Slovak Republic Deposit Protection Fund (DPF)	Yes
Slovenia Deposit Guarantee Scheme	Yes

Source: Hall(2001) and Table 11 Sources.

Table 4
Insured Deposits by Country in the EU

<i>Country name</i>	Deposit Insurance Coverage
Old Members	
Austria	EUR 20,000
Belgium	EUR 20,000 on deposits and EUR 20,000 for financial instruments for a total of EURO 40,000
Denmark	DKK 300,000 deposits covered net of loans (about 40,000 EURO)
Finland	FIM 150,000 - up to 25000 Euro, deposits will be covered in full if depositor demonstrates that the deposit represented the sale of a residence.
France	EUR 70,000
Germany	30% of bank's equity capital (All non-bank deposits are covered up to a limit of 30% of the liab. capital with a minimum limit is 1.5 million Euro, and given that the average equity size of a commercial bank is 295.5 million Euro, the average limit is around 90 million Euro.); official coinsurance 90% to EUR 20,000
Greece	EUR 20,000
Ireland	90% of EUR 20,000
Italy	ITL 200 Mil.- equivalent to 103,291 Euro
Luxembourg	The total amount of the Guarantee will in no case exceed 20,000 euros (deposit guarantee) + 20,000 euros (investor compensation)= 40,000 euros per customer
Netherlands	EUR 20,000
Portugal	EUR 25,000
Spain	EUR 20,000
Sweden	SEK 250,000
United Kingdom	100% of first £2000 and 90% of next £33,000
New Members	
Cyprus	Cyprus equivalent of EUR 20,000
Czech Rep.	90% with max coverage of 25,000 EURO equivalent
Estonia	EUR 12 782 /EEK 200 000 effective from December 31, 2005 EUR 20 000 / EEK 313 000 effective from December 31, 2007 at the latest
Hungary	EUR 20,000/HUF 6,555,555 at EU accession
Lithuania	Currently 14,481/LTL 50,000, EUR 17,377/LTL 60,000 from 1/1/07 but as of Jan. 1 2008 coverage will be 20,000 euro
Latvia	EUR 8535/6000 lats at present, EUR 12,802/9000 lats from 12/31/07, EUR 18,492/13000 lats from 12/31/08
Malta	EUR 20,000, about 8600 Maltese lira
Poland	Since 2003 the Fund's guarantee has covered in 100% monies up to a sum of PLN equivalent of 1,000 EUR, and in 90% the sums between the value of 1,000 to 22,500 EUR (as counted inclusively regardless of the number of contracts concluded between the depositor and the bank).
Slovak Republic	90%, not to exceed EUR 20,000
Slovenia	5,100,000 tolar, 5,1 mio SIT (per depositor per institution)

Table 5
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Old Members			
Austria	Government/ Private Funding-no permanent fund-ex post	Not risk based - pro rata, ex post assessments on protected deposit base	Managing directors elected by General Assembly with representation from each trade association. Are accountable to General Assembly
Belgium	Government/ Private Funding State can provide limited funding-permanent fund	Not risk based- flat rate of .02% but if fund liquid assets fall below critical level premiums may be raised by .04%	Joint Private Official
Denmark	Capital must be at least DKK 3.2 billion (thousands of millions). Any of three separate funds may, if necessary and within prescribed limits, borrow from the other sections. In addition, the Fund may raise loans if its capital is insufficient-permanent fund	Not risk based – Flat rate levy with max rate of .2% of covered deposits	Joint Private Official
Finland	Fund members pay an admission fee equal to one-tenth of the total amount of the expenses of actual operations of the Fund for the previous financial period, but at least 17 000 euro. The Fund may borrow from members if funding is insufficient in proportion that their liabilities were of covered liabilities-permanent fund	Not risk based - fixed 0.05% charge and a variable premium that can range up to .25% depending upon need for funds	Privately administered by elected represented from member banks (both domestic and foreign according to rules set by Min. of Fin and supervised by FSA
France	Ex post assessments as needed. Fonds de Garantie des Dépôts can borrow funds from members and/or call for additional funds determined by a ruling of the Comité de la réglementation bancaire et financière (French Banking and Finances Committee)-no permanent fund	Not risk based – ex post levy - on demand but limited. Contribution may not be less than € 2,000 for a half-yearly contribution and € 4,000 for the subscription of certificates of association.	Private

Table 5 (cont)
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Germany	Private Funding. There is no public funding. Bundesbank may not by law be lender of last resort for the deposit insurance schemes. One time payment of .09%.-permanent funds	Not risk based (but hybrid) – mixture of ex-ante and ex-post premiums. Base rate of .03% but may range from 0.0 to .06% of covered liabilities basis. There can also be an extraordinary premium of up to 100% of a regular premium in case the funds are not sufficient. Banks that have paid for more than 20 years and are classified in the lowest risk category(A), can be exempted from premium payment. Banks that are classified as higher risks(B or C), are required to pay an additional premium of up to 250% of the regular premium.	The scheme is managed by a commission of 10 bank representatives that are accountable to the general assembly of the Association.
Greece	3,000 million GDR with 60% provided by Bank of Greece and 40% provided by Hellenic Banks' Association-permanent fund	Not risk based - Annual premiums are graduated (decreasing) as size of deposits increases from 1.25% for smallest size class up to .025% for largest size class	Administered jointly between Bank of Greece, Hellenic Bank Association and Ministry of Finance by 7-member board chaired by one of the Deputy Governors of the Bank of Greece. The other six members shall be selected from the Bank of Greece (2), the Ministry of National Economy (1), and the Hellenic Banks' Association (3).
Ireland	Private funding-permanent fund	Not risk based - annual premiums of .20% of covered deposits	Public
Italy	Government/ Private Funding - Bank of Italy can make low-interest loans to facilitate payout of large bank-no permanent fund	Risk based (levied ex post) - Premiums base on sliding scale of protected deposits with marginal premiums increasing as size increases from .4% to .8%	Private, but decisions must be approved by Central Bank

Table 5 (cont)
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Luxembourg	Private Funding-no permanent fund	Not risk based – ex post premiums	Private
Netherlands	Government/ Private Funding - with government providing interest free bridge financing-no permanent fund	Not risk based - Ex post as needed, up to a max of 5% of proportion of bank's deposits to total protected deposits in scheme	Jointly managed by central bank and banking sector trade organizations
Portugal	Government/ Private Funding-permanent fund	Risk-based, 0.1% to 0.2% + more in emergencies The annual contributions are defined according to the monthly average of the deposits made in the previous year and to the fixed contribution rate, weighted by the solvency ratio of each institution (the lower this ratio, the higher the contribution). The payment of the annual contributions may be partly (up to a limit of 75 per cent) replaced by an irrevocable contract, guaranteed where necessary by securities having a low credit risk and high liquidity. If the resources are insufficient to comply with its commitments, the Deposit Guarantee Fund may ask for special contributions or resort to loans.	Public

Table 5 (cont)
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Spain	Government/ Private Funding - Central bank can make loans to fund – permanent fund	Not risk based - .6% for CBs, .4% for SBs and 1% for credit cooperatives, extraordinary contributions may be required, and exceptionally, extraordinary contributions made by the Central Bank when they are authorized by Law.	Joint Private Official- Board comprised of 4 members from Bank of Spain and 4 from member institutions
Sweden	Government/ Private Funding-permanent fund	Risk-based, 0.5% now, 0.1% later (future date is not available)	Public
United Kingdom	Private Funding-no permanent fund	Not risk based - Fees determined on basis of projections of next year's losses-for banks fees are limited to .3% of protected deposits each year	Government legislated and privately administered. Board appointed by FSA
New Members			
Cyprus	Private Funding—permanent fund	Not risk based - levies determined by the fund after initial contribution is made	Joint and Private Official by Central Bank and 5 member Management Committee consisting of the governor of the Central Bank, the head of the Banking Supervision and Regulation Division of the Central Bank and two representatives of the banks nominated by the Association of Commercial Banks and one representative of the Minister of Finance nominated by the Minister of Finance.

Table 5 (cont)
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Czech Rep.	Government/ Private Funding - Gov't provides 50% of funds for compensation of depositors, Central Bank and Gov't will provide loans to cover short fall. In case the Fund's reserves are not sufficient to disburse compensation, the Fund has to acquire any and all funds on the market. There is no government guarantee for its borrowing-permanent fund	Not risk based - 0.1% of insured deposits including accrued interest and .05% for building and savings banks .	Fund is independent institution managed by a five-member Board of Administration. At least one member of the Board is appointed from among employees of the Czech National Bank and at least two members are appointed from among members of the boards of directors of banks.
Estonia	Government/ Private Funding – Govy't provided initial funding and banks paid EEK 50,000. Fund cn borrow with out gov't guarantee and can ask gov't to borrow limited amt on its behalf. Initial contribution for Deposit Guarantee Sectoral Fund - 50 000 kroons-permanent fund	Not risk based - quarterly contributions for Deposit Guarantee Sectoral Fund – 0.07 per cent of guaranteed deposits for Investor Protection Sectoral Fund	8 member supervisory board: two members appointed by the Riigikogu; one by the Government on recommendation of Minister of Finance; one by the President of the Bank of Estonia; one by the Financial Supervision Authority; one by the organizations representing credit institutions; one member appointed by the organizations representing investment institutions; one member appointed by the organizations representing pension management companies.
Hungary	Government/ Private Funding, - one-off admission fee on entry (0.5% of the member 's registered capital) – permanent fund	Not risk based - .5% of deposits up to 1 mil. HUF, .3% between 1 and 6 mil HUF, and .05 above 6 mil. HUF	Board of Directors consists of Central Bank president, administrative secretary of Ministry of Finance, president of inspections, two delegates from insured institutions and managing director of DIF
Latvia	Government/Private Funding with initial contribution of 50,000 lats. If funds are insufficient, then payments will be made by gov't	Not risk based - .2% of deposits	Public
Malta	Private Funding –permanent fund	Not risk based – ex post assessments, administrative fees and income from investments	Management Committee appointed by the MFSA. made up of persons representing MFSA, the Central Bank of Malta, investment firms, the banks and customers.

Table 5 (cont)
EU Deposit Insurance Fund Governance and Funding

<i>Country name</i>	Funding	Premiums	Administration
Poland	Permanent fund-joint gov't private funding	Not risk based – Fees determined yearly and levied on deposits and off-balance sheet liabilities separately.	Fund Council and Fund Management Board. The Fund Council consists of a chairman and ten members having appropriate university degrees and professional experience. The Fund Management Board shall consist of five members, including the President and his deputy. Management Board is appointed by the Fund Council from among persons having the appropriate university degree and five years of service in the banking industry.
Lithuania	Funded by banks and by government	Not risk based. Commercial banks and branches (departments) of foreign banks pay the Insurance Company insurance premiums, annually amounting to 0.45 percent of all insurable deposits	Public - The Council is comprised of 6 members, appointed by the Government of the Republic of Lithuania. The Ministry of Finance proposes 3 candidates, the Bank of Lithuania – 2 candidates, the Securities Commission – 1 candidate.
Slovak Republic	Government/private-permanent fund	Not risk based – and range from 0.1% to 0.3% for banks	Joint Private Official
Slovenia	Private funding –no permanent fund	Not risk based – fee calculate on the basis of each bank's share of guaranteed deposits	Public, Bank of Slovenia

Table 6
Deposit Insurance Provisions and Characteristics

<i>Country name</i>	Top-up Permitted	Co-Insurance	% Co-Insurance Percentage	Private v Publicly Managed
Old Members				
Austria		Co-insurance	10	Managing directors elected by General assembly with representation from each trade association. Are accountable to General Assembly
Belgium		Co-insurance	10	Joint Private Official
Denmark		No Co-insurance	0	Joint Private Official
Finland		No Co-insurance	0	Privately administered by member banks according to rules set by Min. of Fin and supervised by FSA, The Fund shall be administered by a Delegation elected by the member deposit banks and branches of foreign credit institutions and by a Board of Directors elected by the Delegation. At least one of the directors shall represent the branches of the foreign credit institutions that are members of the fund.
France		No Co-insurance	0	Private
Germany		Co-insurance	10	The scheme is managed by a commission of 10 bank representatives that are accountable to the general assembly of the Association. All groups of commercial banks are represented in the commission.'
Greece		No Co-insurance	0	Administered jointly between Bank of Greece, Hellenic Bank Association and Ministry of Finance, law provides it is not a public institution, TEK is managed by a 7-member Board. The Board shall be chaired by one of the Deputy Governors of the Bank of Greece. The other six members shall be selected from the Bank of Greece (2), the Ministry of National Economy (1), and the Hellenic Banks' Association (3).
Ireland		Co-insurance	10	Public
Italy		No co-insurance	0	Private, but decisions must be approved by Central Bank
Luxembourg	Yes - EU member chartered institutions may join and obtain supplemental insurance	No Co-insurance	0	Private
Netherlands		No Co-insurance	0	Jointly managed by central bank and banking sector trade organizations

Table 6 (cont)
Deposit Insurance Provisions and Characteristics

<i>Country name</i>	Top-up Permitted	Co-Insurance	Co-Insurance Percentage	Private v Publicly Managed
Portugal		No Co-insurance	0	Public
Spain		No Co-insurance	0	Joint Private Official- Board comprised of 4 members from Bank of Spain and 4 from member institutions
Sweden		No Co-insurance	0	Public
United Kingdom	Top- up is permitted	Co-insurance	10%	Government legislated and privately administered. Board appointed by FSA
New Members				
Cyprus		Co-insurance	10%	Joint and Private Official by Central Bank and Management Committee. The Committee shall consist of five members, the chairman, the vice-chairman and three other members. Chairman and vice-chairman shall be ex-officio the governor of the Central Bank and the head of the Banking Supervision and Regulation Division of the Central Bank, respectively. The three other members of the Committee appointed by the governor of the Central Bank and shall be two representatives of the banks nominated by the Association of Commercial Banks and one representative of the Minister of Finance nominated by the Minister of Finance.
Czech Rep.		Co-insurance	10%	Public, The Fund is an independent institution managed by a five-member Board of Administration. The president, vice president and the other members of the Board are appointed and removed by the Finance Minister. At least one member of the Board is appointed from among employees of the Czech National Bank and at least two members are appointed from among members of the boards of directors of banks. The Board is the statutory body of the Fund and manages its activities.
Estonia		Co-insurance	10%	Joint Private/Official-The supervisory board shall consist of eight members appointed as follows: two members appointed by the Riigikogu; one member appointed by the Government of the Republic on the proposal of the Minister of Finance; one member appointed by the President of the Bank of Estonia; one member appointed by the Financial Supervision Authority; one member appointed by the organizations representing credit institutions; one member appointed by the organizations representing investment institutions; one member appointed by the organizations representing pension management companies.
Hungary		Co-insurance	10	Joint Private Official, Board of Directors consists of Central Bank president, administrative secretary of Ministry of Finance, president of inspections, two delegates from insured institutions and managing director of DIF

Lithuania	Yes for EU member banks	Co- insurance	10	Public
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Table 6 (cont)
Deposit Insurance Provisions and Characteristics

<i>Country name</i>	Top-up Permitted	Co-Insurance	Co-Insurance Percentage	Private v Publicly Managed
Latvia	Top off is mandatory and coverage is only for difference between insurance provided by home country	No Co-insurance	0	Public
Malta	Effectively yes since all foreign branches are required to participate regardless of coverage in home country	No Co-insurance	0	Joint Private Official, Management Committee which is appointed by the MFSA. This Committee is made up of persons representing MFSA, the Central Bank of Malta, investment services intermediaries, the banks and customers.
Poland	Branches of EU banks when guarantee is lower than provided in Poland may join fund to increase coverage.	Co-insurance	10%	Joint Private Official Fund Council and Fund Management Board. The Fund Council consists of a chairman and ten members having appropriate university degrees and professional experience .The Fund Management Board shall consist of five members, including the President and his deputy. The Management Board is appointed by the Fund Council from among persons having the appropriate university degree and five years of service in the banking industry.
Slovak Republic	Foreign bank can join fund if its deposits are not insured or available insurance is less than provided by Fund.	Co-insurance	10%	Joint Private Official
Slovenia	Participation is required unless home country has equivalent scheme.	No Co-insurance	0	Public, Bank of Slovenia

Table 7
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Old Members				
Austria	Financial Market Authority	NC	Financial Market Authority and bankruptcy court	Within 3 months
Belgium	Bankruptcy Court Notice is published in the Moniteur belge	Claimants have two months to file claim,	Bankruptcy court	2 months
Denmark	Closure is by The Danish Financial Supervisory Authority (DFSA)	Must request another institution to file claim. Depositors of failed bank will be notified within one month of failure,	The Danish Financial Supervisory Authority (DFSA)	Shall be effected as soon as possible and not later than 3 months after the commencement of the suspension of payments or compulsory winding-up.
Finland	FSA declares that the bank had failed to meet its obligations. The FSA has 21 days to make this decision.	The fund will notify depositors and also publish notice of its decision to pay out funds.	Courts and/or FSA	3 months - Failure to receive payment within the required time limit gives the depositor a claim against the fund in court.
France	Commission Bancaire's notice prior court's declaration	Customers notified by Fund and have 15 days to respond.	Resolution overseen by banking supervisor	3 months with the possibility for the Supervisory Commission to extend by 3 months again.
Germany	Petition filed by Financial Supervisory Authority to court	Creditors are notified by German compensation scheme within 21 days of notification of insolvency and claims must be filed in writing by creditors with the German compensation scheme within one year.	Financial Supervisory Authority	Payments must be made within 3 months.

NC=not clear

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Greece	Bank of Greece and courts, 21 days after an institution has failed to make payment on contractual obligations, then failure will have occurred	Notification will take place in the press	Bank of Greece and court	HDGF pays compensation in respect of unavailable deposits within three months of the date when the deposits became unavailable. This time limit may be extended by no more than two further 3month periods.
Ireland	Determination by either the Irish Central Bank and Financial Services Regulatory Authority or a court ruling	Claims must be filed by depositors	General Insolvency Laws	3 months
Italy	The Courts have the legal power to declare the insolvency status. However, the Bank of Italy, independently from the Courts' declaration, can propose to the Minister of the Economy and Finance the compulsory administrative liquidation of a bank in each of the following cases: exceptionally serious violations of prudential requirements, exceptionally serious irregularities in the bank's administration, exceptionally serious financial losses.	FITD subrogates in the right of depositors and carries out pay-offs directly.	The 1993 Banking Law Bank of Italy appoints liquidator	The reimbursement of depositors shall be made, up to the equivalent of EURO 20,000 (twenty thousand) within three months of the compulsory liquidation order. The Bank of Italy may extend this term in exceptional circumstances or special cases, for a total period not to exceed nine months

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Luxembourg	Petition filed by bank regulator-Commission de Surveillance du Secteur Financier (CSSF)-or institution itself to the court	Claims must be made by depositors the AGDL and declaration to be made through the liquidators of the establishment.	Law on the Financial Sector of April, 1993 Court will appoint a bankruptcy judge who will appoint a liquidator	Reimbursement starts as soon as claims have been verified and must be finished three months after the occurrence of in-availability of funds. The Luxembourg supervision authority may grant 3 extensions of 3 months each of this deadline.
Netherlands	Nederlandsche Bank which is the supervisor must petition the court	Nederlandsche Bank can declare insolvency and advertises in the newspapers for depositors to apply for compensation.. Victims of the bank failure can then register with De Nederlandsche Bank during a period of five months	Act of the Supervision of the credit system 1992, Bankruptcy Act	As soon as possible but in any case no later than three months of the date on which the creditor or investor duly submitted his claims, recompense that creditor or investor for the amount of the claims covered by the scheme. In very exceptional circumstances, decide that the period of three months shall be extended by a maximum of another three months.
Portugal	The Banco de Portugal, as the banking supervisory authority Management is required to notify the Banco de Portugal of the bank's inability to meet its obligations, but Banco de Portugal may also intervene		Banco de Portugal may force a winding up pursuant to Credit Institutions and Financial Companies: Legal Framework (approved by Decree-Law No. 298/92 of 31 December and amended by Decree-Laws No. 246/95 of 14 September, No. 232/96 of 5 December, No. 222/99 of 22 June, No. 250/2000 of 13 October, No. 285/2001 of 3 November, No. 201/2002 of 26 September, No. 319/2002 of 28 December and No. 252/2003 of 17 October).	Repayment shall take place within a maximum of three months of the date on which deposits became unavailable; in exceptional circumstances and on a case-by-case basis, the Fund may apply to the Banco de Portugal for a maximum of three further extensions of the time limit, neither of which shall exceed three months. Without prejudice to the period of limitation set forth in the general law, the expiry of the time limit prescribed in the foregoing paragraph does not affect the depositors' right of compensation.

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Spain	Bank of Spain petitions court	Depositors are not required to file a claim. The insurer makes a record of the depositors who are entitled to compensation and informs depositors of the events through ordinary mail of their right to compensation	General insolvency laws and DISCIPLINE AND INTERVENTION OF CREDIT INSTITUTIONS Law 26/1988, of 29 July (BOE day 30) (Correction of errors, BOE of 4 August 1989), Authority to impose sanctions for very serious infractions shall rest with the Minister of Economy and Finance, at the proposal of the Bank of Spain, except for revocation of authorization, which shall be imposed by the Council of Ministers.	Will start as soon as possible and shall take place within a maximum of three months of the date on which deposits became unavailable; the Funds may apply to the Banco de Espana for a maximum of three further extensions of the time limit, neither of which shall exceed three months.
Sweden	Finansinspektionen	NA	Companies Act	Reimbursements will start as soon as possible. They have to be done no later than 3 months after the institution is declared bankrupt.
United Kingdom	Bank files with court	If a bank or building society that becomes insolvent depositor will be contacted by the liquidator or by Financial Services Compensation Scheme and file a claim form	Insolvency Act 1986, Banking Act 1987	All claims should be paid within 3 months (can be extended by a further 3 months or by actions of the court)

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
New Members				
Cyprus	Bank Supervision Dept., Central Bank of Cyprus or a court order determines if bank unable to repay deposits	Deposit Protection Scheme will collect information on depositors eligible for claims.	Banking Law specifies that upon declaration by a court or revocation of the banking license by the Central Bank constitutes grounds for its winding up by the Court on the application of, the Central Bank and the appointment of a receiver.	Publish an announcement in the Official Gazette The Fund's Management Committee must proceed with the compensation payment within three months from the date deposits became unavailable, unless the Central Bank of Cyprus approves an extension in accordance with the provisions of the Regulations.
Czech Rep.	Banking Supervision of CNB can impose conservatorship. Bank management responsible for notifying CNB of impending insolvency	Compensation for an insured deposit claim shall be paid from the Fund to an eligible person after the Fund receives notification in writing from the Czech National Bank	General bankruptcy statutes and Act No. 21/1992 Coll. of 20 December 1991, on Banks as amended If a bank is wound up and liquidated, the Czech National Bank shall have exclusive authority to submit a proposal for the nomination of the liquidator. In addition, the Czech National Bank shall have exclusive authority to submit a proposal for the dismissal of the liquidator and for the nomination of a new liquidator or a proposal for the winding up of the joint-stock company if the bank's license has been revoked. The court shall rule on the Czech National Bank's proposal the within 24 hours of the proposal being submitted.	Reimbursement starts within 3 months after deposits become unavailable (may be prolonged twice by 3 months), ends within 5 years

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Estonia	Banking Supervision Department of Estonia Central Bank can withdraw a banking license.	Within three working days after the date on which deposits become unavailable, the Fund shall publish a notice in at least two daily national newspapers on at least two occasions setting out the name of the bank, the term and procedure for payment and a list of the documents required upon the payment of compensation	Bankruptcy Act, Act on Credit Institutions – A bank may be wound up by the central bank (Eesti Pank) or on the basis of a court order the Bankruptcy Law . When legal insolvency is declared, the Liquidation Board or trustee in bankruptcy takes over.	Payment must begin not later than thirty days after the date on which deposits become unavailable and completed within three months The Fund may extend the term by up to three months at a time, but not for more than a total of nine months.
Malta	Malta Financial Services Authority	According to rules established by MFSA	Receiver appointed by bankruptcy court and a liquidator	Within 3 months
Latvia	Insolvency petition to Bankruptcy Court or to the Finance and Capital Market Commission or by that Commission	Guaranteed compensation after the occurrence of a case of unavailability of deposits have submitted their claims to the liquidator or administrator or Commission	Liquidator appointed under the Credit Institutions Law under the control of the Finance and Capital Market Commission	Payment within 3 months with up to 3 extensions of 3 months each
Slovak Republic	National Bank of Slovakia files petition	Failed bank or conservator must announce in media and publicize inside the bank	Conservator	Within 5 days after deposits are inaccessible (frozen, become unavailable) the DPF decides a start of reimbursement; reimbursement ends within 3 months (may be prolonged twice by 3 months), special cases may be reimbursed within 3 years
Slovenia	Bank of Slovinia	If bank or savings bank is declared bankrupt guaranteed deposits will be repaid by a bank designated by the Bank of Slovenia to act as successor. This bank will provide the funds necessary for repaying guaranteed deposits.	Bankruptcy court appoints trustee recommended by Bank of Slovinia	Liability for guaranteed deposits will be assumed by Bank of Slovinia Payment must be made within 3 mo.

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Hungary	Hungarian Financial Supervisory Authority	Claim filed by customer. Bank and fund are obliged to inform depositors through daily press and announcements which provide information on where indemnity claims can be submitted and when the payments start.	<p>The consent of the Minister of Finance and of the President of the NBH is required for the HFSA to withdraw a credit institution's operating license. (<i>CIFE Section 30 (4)</i>) When it withdraws a license, the HFSA shall make a resolution for winding up the credit institution or initiate liquidation. The HFSA shall initiate the liquidation of the credit institution if the operating license is withdrawn because the credit institution fails to pay any of its undisputed debts within five days of the date on which they are due or no longer possesses sufficient own funds (assets) for satisfying the known claims of creditors. In any other case, an order for the winding up of the institution may be issued.</p> <p>The special rules laid down in Section 176/A -185/H of the CIFE are applicable to the winding up and liquidation of credit institution, in addition to the rules of the Bankruptcy Act and the Companies Act. As a general rule, the winding up and liquidation proceeding of financial institutions may be conducted only by the HFSA's nonprofit company.</p>	Payments must start within 15 days after deposits were frozen or after the bank's operational license was withdrawn, or after the bank's liquidation was announced, and complete the proceedings within three months. Two 3 month extensions are permitted.

Table 7 (cont)
EU Insolvency Resolution

<i>Country name</i>	Closure Decision Controlled by	Claim Notification and Verification	Authority Controlling Resolution	Legal Payment Requirements for Insured Deposits
Poland	Commission on Supervision which is part of the Polish National Bank files a petition with the bankruptcy court. Petition must be considered by the court within on month of receipt	Payouts are made on the basis of a list of depositors of the bank, for which bankruptcy has been declared by a court. A list of depositors is drafted by the trustee in bankruptcy within 30 days from the date of announcing bankruptcy and is presented to the Fund Management Board. After checking the list of depositors, within 7 days the Fund Management Board assumes and issues to the public information for a written nationwide announcement, as well as informs the entities covered by the guarantee system of the resolution on transferring to the trustee in bankruptcy the sum of guaranteed funds which is to be paid out	Receiver appointed by bankruptcy court	The trustee in bankruptcy executes payment of the guaranteed funds according to the schedule accepted by the Fund Management Board, but not later than 30 days from receiving the sums from the Fund for payment for the guaranteed deposits.
Lithuania	The Central Bank of Lithuania as banking supervisor is empowered to close a bank	The Council of the Insurance Company announces the procedure for paying insurance compensations in the Valstybės žinios. The Co. announces the place and time of paying insurance claims in at least 2 Lithuanian daily newspapers. To get paid, a depositor must submit a personal identification document .	Administrator appointed by the Central Bank of Lithuania is empowered to initiate bankruptcy proceedings which are in turn administered by a court appointed receiver.	Payment must be made within 3 months after funds are unavailable or bankruptcy declared. May be extended 3 months twice by the Council of the Insurance Company.

Table 8

POSSIBLE DEPOSIT INSURANCE SYSTEMS DIFFERENCES IN DIFFERENT COUNTRIES

<ul style="list-style-type: none"> • Account coverage <ul style="list-style-type: none"> • Maximum amount • Type of account, e.g., inter-bank • Foreign currency deposits • Coinsurance • Netting • Ownership <ul style="list-style-type: none"> • Private vs. public (government) • Funding (premiums) <ul style="list-style-type: none"> • Ex-ante vs. ex-post • Magnitude • Risk-based vs. flat • Regular vs. “topping up” • Reserve fund <ul style="list-style-type: none"> • Minimum magnitude • Voluntary or required • Government support <ul style="list-style-type: none"> • Explicit (official) vs. implicit • Credibility of private funding (premiums) • Speed of payment if insolvency <ul style="list-style-type: none"> • Insured depositors - to par value • Uninsured depositors - to market (recovery) value • Advance dividends vs. as assets sold 	<ul style="list-style-type: none"> • Claim filed <ul style="list-style-type: none"> • Automatically • By claimant • Pre-insolvency intervention <ul style="list-style-type: none"> • Prompt correction action (PCA) • Declaration of insolvency <ul style="list-style-type: none"> • Private creditors or government agency • Insurance agency vs. other • Closure rule vs. discretion (forbearance) • Insolvency resolution <ul style="list-style-type: none"> • Administered by insurance agency, other agencies, or bankruptcy court • Least cost resolution (LCR) • Insurer serves as receiver/conservator • Too big to fail • Membership <ul style="list-style-type: none"> • Mandatory or voluntary • Other <ul style="list-style-type: none"> • Coinsurance • Offsetting
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Table 9**LIKELY IMPLICATIONS FOR HOST COUNTRY TREATMENT OF FOREIGN BANK SUBSIDIARIES OF INSOLVENT****PARENT OR SUBSIDIARY BANKS BY RELATIVE SIZE OF BANK IN COUNTRY**

Home Country (Parent)			
Large Bank		Small Bank	
<u>Solvent</u>	<u>Insolvent</u>	<u>Solvent</u>	<u>Insolvent</u>
NP	RR	NP	RR
PC*	R	R**	R
NP	RR	NP	RR
PC*	R	R**	R

**Host Country
(Subsidiary)**

}

Large Bank

{

**Solvent
Insolvent**

Small Bank

{

**Solvent
Insolvent**

Notes:

- NP: No problem
- RR: Reputation risk/asset protection
- PC: Parent choice of rescue or walk and resolution with asset protection
- R: Resolution with asset protection
- *: Parent likely to rescue
- ** : Parent likely to walk

Assumptions

- Parent bank likely to attempt to “repatriate” assets at foreign subsidiaries in anticipation of official insolvency so host needs to protect subsidiary assets.
- Abstracts from functionality concerns re computer/records/senior management availability for operating subsidiary as independent (stand-alone) facility after insolvency and legal closure of either the subsidiary or parent
- Abstracts from capital maintenance agreements between parent and subsidiary banks or host countries.

Table 10

**SUMMARY OF PROMPT CORRECTIVE ACTION PROVISIONS OF THE
FEDERAL DEPOSIT INSURANCE CORPORATION IMPROVEMENT ACT OF 1991**

Zone	Mandatory Provisions	Discretionary Provisions	Capital Ratios (percent)		
			Risk Based Total	Leverage Tier 1	Leverage Tier 1
1. Well capitalized			>10	>6	>5
2. Adequately capitalized	1. No brokered deposits, except with FDIC approval		>8	>4	>4
3. Undercapitalized	1. Suspend dividends and management fees 2. Require capital restoration plan 3. Restrict asset growth 4. Approval required for acquisitions, branching, and new activities 5. No brokered deposits	1. Order recapitalization 2. Restrict inter-affiliate transactions 3. Restrict deposit interest rates 4. Restrict certain other activities 5. Any other action that would better carry out prompt corrective action	<8	<4	<4
4. Significantly undercapitalized	1. Same as for Zone 3 2. Order recapitalization* 3. Restrict inter-affiliate transactions* 4. Restrict deposit interest rates* 5. Pay of officers restricted	1. Any Zone 3 discretionary actions 2. Conservatorship or receivership if fails to submit or implement plan or recapitalize pursuant to order 3. Any other Zone 5 provision, if such action is necessary to carry out prompt corrective action	<6	<3	<3
5. Critically undercapitalized	1. Same as for Zone 4 2. Receiver/conservator within 90 days* 3. Receiver if still in Zone 5 four quarters after becoming critically under-capitalized 4. Suspend payments on subordinated debt* 5. Restrict certain other activities				<2

- Not required if primary supervisor determines action would not serve purpose of prompt corrective action or if certain other conditions are met.

SOURCE: Board of Governors of the Federal Reserve System.

Country name	Table 11 Sources of Information
Old Members	http://www.oba.hu/index.php?m=article&aid=190 , http://www.worldbank.org/research/interest/2003_bank_survey , http://ec.europa.eu/civiljustice/bankruptcy/bankruptcy_gen_en.htm http://www.efdi.net/participantsDetails.asp?IdParticipants=1&Category=members
Austria	Hall(2001), http://www.einlagensicherung.at
Belgium	http://www.fondsdeprotection.be/files/reglement_dintervention_en.pdf , http://www.protectionfund.be
Denmark	http://www.gii.dk/ , http://www.indskydergarantifonden.dk
Finland	http://www.pankkiyhdistys.fi/english/index.html , http://www.talletussuojarahasto.fi
France	http://www.garantiedesdepots.fr/spip/rubrique.php3?id_rubrique=16 , http://www.garantiedesdepots.fr
Germany	Deposit Guarantee and Investor Compensation Act 1998. http://wdsbeta.worldbank.org/external/default/WDSContentServer/IW3P/IB/2001/03/30/000094946_01032007445638/Rendered/PDF/multi0page.pdf , http://www.bankenverband.de/pic/artikelpic/082006/0607_entschaedigung_en.pdf , http://www.bdb.de
Greece	http://www.hdgf.gr/binary/hdgf_Law.pdf , http://www.hdgf.gr
Ireland	http://www.ifsra.ie/frame_main.asp?pg=/consumer/cr_cs_dp.asp&nv=/consumer/cr_nav.asp , http://www.centralbank.ie
Italy	http://www.fitd.it/en/deposit_guarantee/deposit_insurance.htm , http://www.fitd.it
Luxembourg	http://www.agdl.lu/pdf/FAQ_0505_EN.pdf , http://www.pwc.com/lu/eng/ins-sol/publ/pwc_banking_050493_uk.pdf , http://www.agdl.lu
Netherlands	Hall(2001), http://www.finansbank.nl/finansbank/netherlands/english/consumer_banking/savings/top_interest_base_account/cgs , http://www.dnb.nl
Portugal	http://www.bportugal.pt/default_e.htm , http://www.bportugal.pt/publish/legisl/rgicsf2004_e.pdf , http://www.fgd.bportugal.pt
Spain	http://www.fgd.es/Indexin.htm , http://www.fgd.es
Sweden	http://www.ign.se/English/index.html , http://www.ign.se
United Kingdom	FSCS annual report 2003/2004 and International deposit insurance survey, http://www.fscs.org.uk http://www.fscs.org.uk/consumer/how_to_claim/deposits/
New Members	http://www.oba.hu/index.php?m=article&aid=190 , http://www.worldbank.org/research/interest/2003_bank_survey
Cyprus	http://www.centralbank.gov.cy/media/pdf/BCRGE_DEPOSITPROTECTION.pdf , Establishment of Deposit Protection Scheme Regulations of 2000, http://www.centralbank.gov.cy
Czech Rep.	http://www.iadi.org/html/App/SiteContent/Member%20Profile%20DIF%20Czech%20Republic.pdf , http://www.fpv.cz http://www.cnb.cz/www.cnb.cz/en/legislation/acts/download/act_on_banks.pdf , http://www.fpv.cz/index00en.html
Estonia	http://www.legaltext.ee/text/en/X60018K3.htm , http://www.eestipank.info/pub/en/dokumendid/dokumendid/oigusaktid/seadused/_3.html , http://www.tf.ee
Hungary	http://www.iadi.org/html/App/SiteContent/Member%20Profile%20Hungary.pdf , www.ndif.hu , http://english.pszaf.hu/engine.aspx?page=pszafen_authorizationguides , http://www.ndif.hu
Latvia	http://www.fktk.lv/en/ , http://www.fktk.lv/downloads/news_en/NoguldgarantijulikumsAngl.doc , http://www.fktk.lv/texts_files/NoguldgarantijulikumsAngl.doc , http://www.fktk.lv/en/law/credit_institutions/laws/credit_institution_law
Lithuania	http://www.idf.lt/eng/about.html , http://www.tdd.lt/idf/ , http://www.lrkt.lt/dokumentai/1996/n6a0418a.htm
Malta	http://www.compensationschemes.org.mt/pages/default.asp , http://www.compensationschemes.org.mt/pages/files/DEPOSITOR%20COMPENSATION%20SCH http://www.compensationschemes.org.mt
Poland	http://www.bfg.pl/u235/navi/27927;THE LAW of 14 December 1994 on the Bank Guarantee Fund , http://www.bfg.pl/_itemserver/pdf/rap2005_ang_03_ok.pdf , http://www.bfg.pl
Slovak Republic	http://www.slovak.sk/business/legislation/protection_bank_5.htm , http://www.fovsr.sk
Slovenia	http://www.bsi.si/html/eng/deposit_insurance_system/description/description1.htm , http://www.bsi.si/en/bank-of-slovenia.asp?Mapald=84 , http://www.bsi.si

Multiple Safety Net Regulators and Agency Problems in the EU: Is Prompt Corrective Action Partly the Solution?

David G Mayes, María J Nieto, Larry Wall*

Abstract

The potential for Prompt Corrective Action (PCA) to deal with problem banks in Europe has been widely recognized. In a PCA framework, a bank's losses are likely to be substantially reduced. This reduction in the losses to deposit insurance and governments will improve the problem of allocating those losses across the various insurance schemes and make it less likely that any deposit insurer will renege on its obligations in a cross border banking crisis. This paper explores the institutional changes needed in Europe if PCA is to be effective in resolving the cross-border agency problems that arise in supervising and resolving cross-border banking groups. The paper identifies these changes starting with enhancements in the availability of information on banking groups' financial condition to prudential supervisors. Next, the paper considers the collective decision making by prudential supervisors with authority to make discretionary decisions within the PCA framework as soon as a bank of a cross-border banking group falls below the minimum capital standard. Finally, the paper analyzes the coordination measures that should be implemented if PCA requires the bank to be resolved.

* David Mayes (david.mayes@bof.fi): University of Auckland and Bank of Finland, PO Box 160, 00101 Helsinki, Finland, M. J. Nieto (maria.nieto@bde.es): Banco de España, Alcalá 48, 28014 Madrid (Spain). Larry D. Wall (larry.wall@atl.frb.org): Federal Reserve Bank of Atlanta, 1000 Peachtree Street N.E. Atlanta, Georgia 30309-4470 (USA). The authors thank George Benston and Robert Eisenbeis, for helpful comments on a very preliminary draft as well as the participants in the Conference held at the LSE Financial Markets Group on Prompt Corrective Action & Cross-Border Supervisory Issues (London, 20 November 2006). The views expressed here are those of the authors and do not necessarily reflect those of the Banco de España, the Bank of Finland, the Federal Reserve Bank of Atlanta or the Federal Reserve System.

Introduction

Large pan-European and regional banks are developing in the European Union (EU). However, the existing institutional framework for dealing with cross border crisis has thus far largely neglected the coordination among prudential supervisors, deposit insurance regulators and reorganization authorities that is needed in an explicit drive to try to ensure the minimization of the potential loss to the taxpayer. Indeed, the present safety net framework across borders not only does not have minimization of taxpayers losses as a goal but has embedded in it incentive conflicts that are likely to substantially increase taxpayer losses.

Academics and policy makers alike have made proposals on how to reform the EU safety net in order to reduce the problems of asymmetric information and create an incentive compatible regulatory structure. However, most of these proposals have focused on mechanisms to reduce asymmetric information between prudential supervisors and central banks, and much less attention has been paid to propose mechanisms to align the incentives among prudential supervisors and between them and deposit insurance and resolution authorities.

The importance of this topic was recognized by the European Shadow Financial Regulatory Committee, which devoted its very first report (ESFRC, 1998) to a proposal for dealing with problem banks, in which it recommended establishing a Structured Early Intervention and Resolution (SEIR) regime that called for predictable supervisory action for undercapitalized banks culminating in the withdrawal of the bank's charter before its regulatory capital reaches zero. More recently, the ESFRC (2005) argued that implementation of a version of SEIR called Prompt Corrective Action (PCA) in each individual Member State would contribute to host country supervisors' trust in home country supervisors. Benink and Benston (2005) also propose SEIR as a mechanism for protecting deposit insurance funds and taxpayers from losses in the EU, as part of a more broad based regulatory reform. Along similar lines, Mayes (2004) proposes intervention at prescribed benchmarks (ideally above economic insolvency) as a means of offering a plausible policy for coping with the exit of banks whose failure poses systemic risks in the EU.

While PCA is, in our view, one reasonable approach, there are two issues to be addressed before it could be used to set minimum standards in Europe. First, PCA was designed to work with the institutional structure of U.S. bank regulation. Nieto and Wall (2006) identify several institutional changes that would be needed in European bank regulatory institutions in order for PCA to be effective (described in the second section of this article). Secondly, PCA was designed to reduce principal-agent problems in a purely domestic setting where the supervisor as agent is ultimately accountable to his principal, the voters and taxpayers. While the basic structure of PCA would be helpful in an international setting, explicit consideration of cross-border issues would make PCA more effective in addressing the principal-agent problems that arise from the supervision of a cross-border banking group.

The focus of this paper is on making PCA more effective for cross-border banking groups in the EU.¹ We take as given that all Member States have adopted a uniform system of PCA that complies with the requirements set out by Nieto and Wall (2006). In recognition of the political

¹ The related question of the relationship of the bank supervisor to the lender of last resort when dealing with cross-border banking groups is also important but it is beyond the scope of this paper. See Repullo (2004), and Kahn and Santos (2002, 2004).

problems in implementing an EU-level supervisor, we take as granted the existing supervisory and other regulatory institutions in the EU to the extent feasible. However, in some cases we identify gaps between what exists and what is needed for effective prudential supervision, deposit insurance and reorganization of cross-border banking groups that can only be covered by substantial changes to existing legislation in the Member States. While we believe the general approach to disciplining large cross-border banking groups advocated in this paper provides the best opportunity for an effective system in the absence of EU-level institutions, this paper does not consider the desirability of EU-level institutions and arrangements should they become politically feasible.

The paper is organized as follows. The first section analyzes the potential problems with the current institutional framework of bank supervision. The second section evaluates the potential contribution of adopting a PCA type regime in setting minimally acceptable supervisory responses. As the second section discusses, PCA was developed for banks operating in the US and, as such, does not address some important cross-border concerns. Thus, the third section considers additional measures that may be taken to supplement PCA and make it more responsive to cross-border issues. The concluding remarks are provided in the last section.

1. Supervisory Discretion and Cross-Border Banking

Cross-border groups increasingly operate as integrated entities with provision of services such as risk management, liquidity management, data processing, and loan evaluation each centralized in one part of the group (though not all services are necessarily centralized in the same country). They often do not have a neat structure of a parent and free-standing locally incorporated subsidiaries but a complex interweaving of branches and subsidiaries that cannot survive on their own. In this context, bank supervisory structures must also be structured for efficient cross-border operations. The need for efficient cross-border prudential supervision implies somebody has to be clearly responsible, it needs a clear objective whose attainment can be transparently and objectively assessed and, most importantly, it needs the tools and powers to undertake the tasks efficiently and effectively in practice and in prospect. This has long been recognized in the work of the Basel Committee of Banking Supervisors (Basel Core Principles for Effective Banking Supervision, 1997).² Some authority has to take the lead, normally one in the 'home' country where the bank or holding company is headquartered, and the other, 'host' country authorities have to co-operate with them and with each other if the system is to work. Moreover, since there are multiple authorities in each country, whose range of powers and competences often do not match, this coordination is very difficult to achieve.³ Each country remains responsible for its own financial stability yet, where there are large cross-border institutions, that can only be delivered realistically if substantial reliance is placed on foreign authorities. In a crisis, national authorities will tend to put their own national interests first, so any process of recognition of international claims in advance needs to be very carefully structured so that the joint actions match an agreed means of addressing and, where necessary, trading off the possibly conflicting interests of the countries involved.⁴

² The Basel Core Principles for Effective Banking Supervision were revised in 2006.

³ This mismatch of responsibilities relates to the different financial sectors – insurance, banking, securities markets – to the different functions – prudential supervision, deposit insurance, crisis resolution – and to the powers each holds under the variety of legal and regulatory systems that currently exist.

⁴ If there is a threat to the financial system as a whole from bank failure or distress, countries tend to permit special measures to be taken, as in the case of the systemic risk exemption in the United States (Mayes, 2006a).

The present structure of supervision, deposit insurance coverage and bank resolution in the EU largely follows the legal structure of banking groups. As shown in Table 1, prudential supervision, deposit insurance and resolution are generally the responsibility of the regulators of each country in which a bank is incorporated. The principal exceptions are that: (1) a *bank subsidiary* is supervised as part of the consolidated group by the home country supervisor and as a "solo" entity may be supervised by the home supervisor of the parent bank if the host country supervisor of the subsidiary delegates its responsibility,⁵ and (2) the host country deposit insurer of a *branch* may supplement the coverage provided by the insurer of the home country of the bank to bring it up to the host country's level if the bank wishes it.

The problem with supervising banking groups as collections of separate legal banking charters is that the legal approach does not reflect how these organizations function in practice. A well-known example of cross-border banking regional integration is Nordea (see Table 2), which is currently organized in the form of subsidiaries that operate with a highly integrated operation. This is set to go further if Nordea changes to a branch structure across the whole region under the European Companies Act as currently planned. Indeed if Nordea does change from its current subsidiary structure to one with branches, its legal form will become a much closer match to the actual structure of its current operations. It is actually an illusion that many subsidiaries can somehow be cut off from their parent in the event of difficulty and asked to function on their own, with or without statutory management (Mayes, 2006). As Schmidt Bies (2004) puts it 'entities can be created within the structure of the group to transfer and fund assets [that] may or may not be consolidated for accounting purposes, depending upon their structure.' (p.1). The idea that the various deposit insurers or supervisors can take independent decisions to minimize their losses in these circumstances is thus not realistic.

The interdependence of prudential supervision of banks operating across borders creates a principal-agent relationship between the society (voters and taxpayers) of one country as principal and the various supervisors of the rest of the banking group as the agents.⁶ The delegation approach has also been used recently to debate financial supervisory issues (Bjerre-Nielsen, 2004). The standard set of principal agent problems are made substantially worse when some of the principals have no direct authority over the agent, such as is the case when supervisors in one country may expose the taxpayers in another country to losses. The problem is, that to the extent the agent follows the interests of the principals, the agent's incentives will be to follow the goals of the principal that has some direct authority over the agent. That is, when conflicts arise among the principals, the supervisor (agent) is likely to follow the perceived interests of their own country's government and voters (principle). Eisenbeis and Kaufman (2006) describe the agency problems and conflicts of cross-border banking in general and, in particular, in the EU.

2. Structured Early Intervention and Resolution/Prompt Corrective Action as a Limit on Prudential Supervisors' Discretion

SEIR was first laid out by Benston and Kaufman (1988) to minimize deposit insurance losses by requiring a series of mandatory supervisory interventions as a bank's regulatory capital ratio

⁵ This delegation is contemplated in Article 131 of the CRD. In addition, according to Article 44, the home country authorities are responsible for the prudential supervision of consolidated banking groups including bank subsidiaries and affiliates in other Member States (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)).

⁶ See Alessina and Tabellini (2004, 2005) for a discussion of the conditions for the delegation of the tasks to agents.

falls.⁷ 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 FDIC, 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 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), the owners had strong incentives to recapitalize, sell, or liquidate the bank rather than put it to the FDIC.⁸

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). PCA deals with prudential supervisors’ agency problem by first allowing and then requiring specific intervention by the supervisory authorities on a timely basis.

Whereas SEIR sketches out how supervisors would respond to a drop in capital adequacy, PCA provides a list of actions the supervisors must take and another set of actions the supervisor may 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. Focusing specifically on the EU, Nieto and Wall (2006) identify three important aspects of the philosophy underlying PCA: (1) “that bank prudential supervisor’s primary focus should be on protecting the deposit insurance fund and minimizing government losses,” (2) “that supervisors should have a clear set of required actions to be taken as a bank becomes progressively more undercapitalized,” and (3) “that undercapitalized banks should be closed before the economic value of their capital becomes negative.” The four institutional prerequisites identified 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.

⁷ See Benston, George J. and George G. Kaufman (1988). For a discussion of the intellectual history of PCA see Benston, G., and Kaufman, G. (1994).

⁸ 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 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).⁹ The definition and level of the capital ratios that would trigger mandatory supervisory action and eventually intervention is a relevant subject that is beyond the scope of this paper. Moreover, the original PCA was designed to address principal-agent problems in the supervision in the US and does not explicitly contemplate the complications introduced by cross-border banking groups. A number of authors discuss the merits of adopting PCA in the EU, including in some cases the recognition of the gains from using PCA in supervising cross-border groups. However, none of these authors (Nieto and Wall, 2006; Benink and Benston 2005; Mayes 2004 and 2006) and policy analyst recommendations (ESFRC, 2005) explicitly consider the changes needed in the EU if PCA is to be effective in resolving the cross-border agency problems that arise in supervising cross-border banking groups.

3. A Prompt Corrective Action for Cross-Border Banking Groups in the EU

Banks operating under PCA can fall into one of three categories: (1) adequate capital, (2) undercapitalized but still having a good chance of rebuilding its capital, and (3) sufficiently undercapitalized that the bank should be placed into resolution to minimize the losses. Cross-border banking groups that are being supervised by national banking supervisors introduce additional supervisory challenges in each of these three categories. The following subsections consider those challenges and recommends additions and modifications of PCA adopted with the 1991 passage of the FDICIA to address the challenges of cross-border groups in the EU.

3.1 Assuring accurate and timely information of banking groups financial condition

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 cooperate closely with each other. They shall provide one another with any information which is essential or relevant for the exercise of the other authorities' supervisory tasks under this Directive. In this regard, 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"*

⁹ 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.

These provisions for information sharing have also been strengthened with the adoption of Pillar 3 of the new Capital Accord.¹⁰ For example, banks are required to report total and Tier 1 capital ratio 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 triggering a special examination of the banking group.¹¹

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. A better alternative would be the creation of a single database on banks' financial condition so that all prudential supervisors can understand 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."* The Mayes (2006b) and Vesala (2005) proposal of a common data base would minimise the information asymmetries between home and host prudential supervisors although their proposal is limited by 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).¹²

While measures may be adopted at the EU level to enforce the sharing of hard information (verifiable facts) such as financial statements among prudential supervisors, the sharing of soft information (or nonverifiable judgments) cannot be compelled. For example, a national supervisor may consider that a bank's financial statements overstate the true capital of the bank. But if the supervisor wants to exercise forbearance, it can do so by doing nothing, neither compelling the bank to revise its financial statements nor sharing the additional information with other supervisors.

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, 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. They find some authors (Sironi, 2001; Evanoff and Wall, 2002; Llewellyn and Mayes, 2004) who are persuaded that the information is sufficiently reliable to be of use at least in setting a backstop for critically undercapitalized organizations. We concur that the use of market risk measures would provide a valuable supplemental measure for PCA.

However, supervisors have proven 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

¹⁰ 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.

¹¹ The required level of disclosure is both limited in its relevance and its timeliness (Mayes, 2004). In this author's view, the requirements fall well short of what has been required of banks in New Zealand since 1996, where disclosure statements are required quarterly, have to reveal peak exposures and where bank directors are legally liable for their accuracy.

¹² L 177/ 1 OJ of 30 June, 2006.

bank. These measures could include subordinated debt spreads but they could also include 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 (see definition in p.9) to review the group's condition and, when appropriate, for triggering a coordinated special examination of the banking group.

3.2 Co-ordination of PCA disciplinary measures short of resolution

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 a measure, such as replacing existing management, which might be essential to restore the banks' financial health in some cases, could be counterproductive in other cases.¹³

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. An example where taking action could be harmful to the group but benefit the supervisor's country would be that a supervisor could impose draconian limitations on a bank that is small relative to its financial system, but where the bank provides valuable services to the rest of the group elsewhere. An example, where failing to act could be harmful would be forbearance on the part of the home country supervisor of a banking group 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 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

¹³ It is assumed that the authorities in each of the EU countries would have a similar if not identical range of powers available for PCA, when faced by the same circumstances. 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.

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 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 government and the tax payer of the subsidiary's host country, hence, increasing the agency problem.

Another mechanism for the coordination of discretionary PCA actions would be that of a college of the prudential supervisors of the banks in the group.¹⁴ 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.¹⁵ The coordination mechanisms could be merely advisory, leaving the final decision up to the national supervisors of each bank, or binding upon the members. In some cases allowing each supervisor to take disciplinary action may 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 may not result in effective coordination to the extent that different supervisors reach different conclusions about the appropriate actions either because the supervisors 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 may be to give the authority to make decisions about discretionary actions that will be binding on all prudential supervisors to the college (see Appendix for a description of different scenarios of collegial binding decision). The idea 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 remedial actions and even burden sharing in the event of loss.

Ideally, a college of supervisors for each cross-border banking group will have been 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 at the least be mandatory as soon as a bank owned by a cross-border banking group falls below the capital standard.¹⁶ The formation of the college does not entail 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

¹⁴ While there is common cause about the importance of the role of the consolidating, lead or coordinating supervisor, the meaning of these terms varies considerably across the CRD, the European Financial Services Roundtable (2004) and CEBS (2006).

¹⁵ L 177/48 Official Journal of the European Union of 30 June, 2006.

¹⁶ There is a clear complexity if responsibility for ongoing supervision and resolution (whether or not least cost) belong to different agencies

the committee to select one supervisor as the primary contact (typically the parent's supervisor) with the bank unless the problems are focused in particular subsidiaries/markets. 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 have problems reaching a decision. One way of forcing timely action would be for PCA to establish a presumption that a certain action will automatically be effective within 30 days (or 60 or 90 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 adopting decision rules which 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 Member States to have a voice in the corrective measures' decision taken under PCA, the college does not completely solve the agency problem 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 would be possible 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.¹⁷ 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.

3.3 Coordination of resolution

PCA requires timely resolution, which is to say it sets a hard boundary which, when crossed by the bank, requires that the bank be forced into resolution.¹⁸ Timely resolution of banks can enhance financial stability in a variety of ways. First, the lack of a deposit insurance subsidy to risk taking and the threat of losing the bank's charter may deter the bank from taking excess risk. If problems should arise, the bank has an incentive to quickly rebuild its capital or sell itself to a stronger bank before the supervisors withdraw the bank's charter.¹⁹ Moreover, in the case of the license withdrawal, depositors and other non-subordinated creditors are less likely to run on a failed bank if they know that deposits are backed by assets or guarantees. Last but not least, the smaller the losses to deposit insurance and governments, the less of a problem it will be to

¹⁷ 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.

¹⁸ SEIR simply calls its lowest category "mandatory reorganization." Banks in PCA's "critically undercapitalized" category are to have a receiver or conservator appointed within 90 days unless the supervisor can show that another action would better meet PCA's goal of minimizing deposit insurance losses.

¹⁹ Kane, Bennett and Oshinsky (2006) find evidence that distressed banks are more likely to recapitalize or sell themselves in the period after the adoption of PCA than in a prior period.

allocate those losses across the various insurance schemes and the less likely any deposit insurance is to renege on its obligations. In a PCA *cum* closure rule at a positive level of regulatory capital, losses will be by definition smaller than in the absence of PCA to the extent that deposits would be backed by assets of at least the same market value, except in the case of rapid decline in asset value, massive fraud or inadequate monitoring by the regulatory agencies.

If this hard boundary is to be credible, Nieto and Wall (2006) argue that it must be accompanied by a credible process for resolving insolvent banks. Supervisors will justifiably be reluctant to force a bank into resolution if forcing a bank into resolution is almost certain to cause systemic impacts that will adversely impact their country's real economy because of inadequate resolution procedures.

In the EU, there is no a framework of commonly accepted standards of bank resolution practice including a common definition of bank insolvency and a fully-fledged single legal framework or a common decision-making structure across Member States. Hadjiemmanuil (2004) argues that a single pan-European legal and administrative framework for bank resolution is not only still lacking but also it is unlikely to emerge in the foreseeable future. As a result, bank resolution procedures largely depend on national laws. These national laws often fail to meet many of the requirements for a credible, efficient resolution system. Even if consideration is limited to the requirements for a large domestic bank group operating in a single country, most EU countries lack an adequate system. Nieto and Wall (2006) highlight two requirements that are generally not met by EU national resolution systems: (1) the need for special bankruptcy provisions for banks in which a banking authority is given authorization to create and operate a 'bridge' or similar bank,²⁰ and (2) a requirement that depositors be provided prompt access to their funds. These weaknesses in EU national resolution systems are likely to give policymakers little choice but to recapitalize a large, deeply insolvent banking group.

Additional problems arise when the banking group subject to resolution operates across borders. Goodhart and Schoenmaker (2006) analyze these problems associated with the resolution of cross-border banks. Although their analysis focuses on the issues associated with recapitalizing a distressed bank operating across Member States boundaries, many similar issues are likely to arise with a bank forced into resolution.²¹ The following subsection summarizes their key findings and the next subsection discusses how the issues would be addressed in a PCA framework.

3.3.1 Recapitalizing a cross-border banking group in the absence of PCA

The withdrawal of the charter of a cross-border banking group, especially a large group, could have severe adverse consequences for the financial stability of one or more Member States. Given the limitations of other existing EU resolution options, the only option that is likely to forestall financial instability may be for the affected Member States to recapitalize the bank at taxpayer expense. However, disagreements about whether a bank should be recapitalized and, if so, how the burden should be apportioned are likely to delay action until the market loses confidence in the bank.

²⁰ In the US the most obvious way to do this in the case of a large bank is to form a 'bridge bank', which is a national bank newly chartered by the Comptroller of the Currency under the control of the FDIC.

²¹ Goodhart and Schoenmaker (2006, p. 37) note that early closure of a bank as provided for by the U.S. version of PCA would "reduce the problem." Their focus on recapitalization presumably reflects their views about the political viability of adopting PCA in Europe for the foreseeable future rather than its economic merits.

By the time confidence is lost, the time for organizing a recapitalization will be very short (likely only a few hours) and the costs of recapitalization are likely to be a substantial fraction of the bank's assets. Without any "ex ante" agreement on sharing the cost of recapitalization, the country most affected may be forced to decide whether to bear all of the recapitalization cost or to let the bank be forced into bankruptcy proceedings where liquidation is possible. While this may be the largest country this is by no means certain. Nordea, for example is more important in Finland than it is in the home country, Sweden. Small countries may simply not have the resources for such a recapitalization and will hence be forced into having the crisis.

An alternative to negotiating an agreement during a crisis would be for an "ex ante" agreement on burden sharing involving the various national ministries of finance. There are several ways in which such an *ex ante* agreement could be structured. Goodhart and Schoenmaker (2006), for example, recommend that all countries in which the bank operates share the burden according to some measure of the operations that the bank has in their country, assets being their preferred measure. However, obtaining agreement on any single measure (a proxy) for a fair distribution may be difficult. For example, assets may not be a good proxy for the real and financial impact of a bank's failure. Such impact may depend, for example, on the structure of the local deposit market or on the bank's role in the country's securities and derivatives markets.

It is also not clear how decisions would be taken. Access to public funds is presumably a matter for the relevant ministries of finance. However, ministries of finance would no doubt want to be advised by supervisors, deposit insurers and central banks. Whether they should all sit round the table or whether different parties should meet for different purposes during the process of managing the problems is an open issue. Goodhart and Schoenmaker (2006) recommend that all three parties from each of the countries being there in addition to EU level representation from the Committee of European Banking Supervisors (CEBS), the European Central Bank, ECOFIN and the European Commission, subject to a '*de minimis*' threshold of 5 percent of the group's assets and 15 percent of the country's banking assets.

3.3.2 Resolution of a cross-border banking group under PCA

A version of PCA that was effective for groups operating only in one country would by itself substantially reduce the problems of resolving a large cross-border banking group. PCA provides for early resolution (charter withdrawal) before a bank can incur losses substantially in excess of its regulatory capital.²² At best, such a PCA would give supervisors time to organize an orderly resolution of a problem bank because it would result in the bank's charter being withdrawn while creditors were confident the bank had sufficient assets to honour their claims. More likely, given the U.S. experience, some bank runs will occur because at least some uninsured creditors are likely to take losses in bank resolutions and will act to protect themselves. However, even if market participants control the timing of the bank resolution, PCA will still reduce the problems of resolving a failing banking group. PCA's requirement that bank charters be withdrawn at positive values of bank's regulatory capital should substantially reduce the losses to tax payers and significantly reduce any conflicts over how best to share the burden. The losses may even be sufficiently low so that they can be absorbed by the banking industry through payments to their deposit insurer.

An EU version of PCA designed to resolve cross-border banking groups could significantly improve the efficiency of bank resolution, further lowering the overall cost of resolution. The first

²² Such a PCA would include a credible resolution mechanism as advocated by Nieto and Wall (2006).

part of cross-border resolution version of PCA would require that the parties to the process start meeting as soon as a bank falls below the minimum capital standard required by the CRD. Market participants will look for signals that supervisory intervention is likely so that they can reduce their credit exposure before the supervisors act. Thus, the formation of a college to decide the status of a bank (resolution college) should occur either automatically well before resolution becomes likely or it will have to be kept secret (although it is unlikely that it will remain so). Early formation of the college would allow all concerned safety net regulators to plan for the possibility that the bank will need to be recapitalized or resolved, without sending the signal that the supervisors consider such action likely. Thus, should a run occur at a banking group, the relevant safety net regulators and finance ministries will be prepared to take appropriate action.

The college that decides how best to resolve a bank will need to reflect the views of most, if not all, of the participants in the Goodhart and Schoenmaker (2006) proposal. Even if the bank is closed without any losses to the taxpayer, at least some finance ministries/national central banks may need to advance funds to the deposit insurer to cover the insurer's share of the losses, in part because some deposit insurers collect funds on an "ex post" basis. In theory, such support by national governments is limited by the Directive 94/19/EC on deposit insurance, which discourages governments from providing funding to their deposit insurer and support by the central bank is limited by EC Treaty (article 101). In practice, these restrictions may not prove viable given the importance of giving depositors immediate access to their funds discussed in Nieto and Wall (2006) and the limited funds available to many deposit insurers. The burden sharing proposals of Goodhart and Schoenmaker (2006) implicitly recognize this possibility.

While the college planning the potential resolution cannot know for certain whether or how much losses will be incurred in resolving the bank, there could be disagreements about how to share any costs that do arise. One method of allocation would simply be to assess for each insurer the amount needed to cover losses to insured depositors in the bank or banks covered by the insurer. The losses allocated under this procedure, however, will depend in part on the gains from keeping the banking group together so that the group retains any going concern value and so that the group can be sold to its highest value. However an *ex ante* agreement on burden sharing may turn out to be more workable in practice, as suggested by Goodhart and Schoenmaker (2006).

It is likely that the balance of interests needed to be taken into account in deciding whether to intervene will also be appropriate for decision-making about the subsequent resolution of the bank. The fact that a bank had to be put into resolution suggests that a quick sale of the entire group is unlikely. The group is likely to have arranged such a sale before resolution if that were possible. Thus, the resolution of almost all large cross-border groups is likely to involve their being operated as some equivalent of a bridge bank (or bridge banking group) pending the return of its assets to the private sector. A bridge banking group would be roughly equivalent to a governmental recapitalization except that the shareholders in the failed group would lose their claim on the group and losses may be imposed on some classes of creditors (especially the subordinated creditors). Someone will have to have managerial authority over the bank and in almost all cases the home country supervisor will be the logical party to appoint the new management. The bank's management should be overseen by a college with representatives from all of the affected Member States, perhaps reduced by the same *de minimis* rule used before the bank went into resolution. In effect, the college would serve as a replacement for the group's board of directors as the original directors would no longer have any role in the governance of the group. Whether each nation needs to be represented by its banking supervisor, its ministry of finance and its national central bank may depend on the circumstances. If the respective national ministries of finance or national central banks are not making an important contribution to the

resolution then they should probably be dropped from the oversight college to help keep its size manageable.

The conflicts between different stakeholders will not end after the formation of a bridge bank.²³ The managers and college of overseers of the bridge bank will have a variety of decisions to make that could provoke sharp controversies. One such decision is where the banking group should continue lending and where it should reduce or stop lending. Those countries and industries facing reduced lending may be concerned about the impact of the cuts on their domestic economic activity. However, having the bank continue to lend to loss making geographical areas and industries is likely to provoke concerns from some committee members about the likely losses to the bank. Another potentially controversial decision is that of closing some branches and subsidiaries. The managers may also recommend these closures to improve the efficiency of the surviving organization. Again, those Member States that face the cuts may view the situation differently from those that are concerned about further losses. A third potential source of controversy is the weight given to various considerations when the group's assets are returned to the private sector. Many in the college overseeing the bridge bank (formerly resolution committee) are likely to favour accepting the highest bid for the group (or parts of the group) but others on the college may want to include other considerations, such as any labor force reductions planned by the prospective acquirers, or keeping the national charter of the bank.

4. Conclusion

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 compatible with the existing decentralized structure of the EU safety net.

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 EU could use PCA to enhance the availability of information to prudential supervisors as well as supervisor's use of market information. Availability could be improved by enhancing information sharing requirements on individual bank's financial condition as a part of the adoption of PCA. 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) on a collegial form. However, even if a satisfactory means of deciding what to do can be implemented,

²³ The same sorts of conflicts are likely to occur under the current system if the national ministries of finance decide to recapitalize a distressed bank. To the extent the various ministries hold a sizeable part of the bank's stock, they will likely expect to participate in the decisions of the bank before privatization and also in the decisions on how best to privatize the bank.

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 authority to take the corrective measures in PCA.

Finally, should a bank that is part of an integrated cross-border banking group reach the point where PCA mandates resolution, its resolution could have implications for a number of Member States. The timing of the resolution is unlikely to remain in the supervisor's hands, so the process of making these decisions needs to begin before markets perceive that the bank must be resolved. The parties from each country that will play a role in the resolution (the banking prudential supervisor, the ministry of finance and the national central bank) should begin planning for the resolution with the appropriate EU institutions and the ECB no later than the time the bank first falls below the minimum capital adequacy requirements set in the CRD. In a PCA *cum* closure rule at a positive level of regulatory capital, losses will be by definition smaller than in the absence of PCA to the extent that deposits would be backed by assets of at least the same market value, except in the case of rapid decline in asset value, massive fraud or inadequate monitoring by the regulatory agencies. In almost all cases, the best resolution of a large cross-border bank will involve the creation of the equivalent of a bridge bank or bridge banking group. This would require special bankruptcy provisions for banks in the EU. A number of additional decisions will then be needed as to how to run the bridge bank(s) until its assets are returned to the private sector as well as decisions about how best to return the assets to private owners. Thus, on-going oversight of the bridge bank should be provided by a board with safety net regulators from all of the affected Member States (banking prudential supervisor, ministry of finance and national central bank) perhaps reduced by the same *de minimis* rule used before the bank went into resolution.

Appendix

Potential problems and their resolution under a cross-border PCA with collegial binding decision making

1. **The consolidating supervisor wants to exercise forbearance [consolidating supervisor is taken to mean the supervisor of the parent bank (where the publicly traded entity is a bank) or supervisor of the lead (largest) bank where the publicly traded entity is a holding company]²⁴**

If a cross-border banking group encounters problems on a consolidated basis, weakness at its largest bank (which may also be the parent) is likely to be the cause.

1.A Existing Situation

The CRD calls upon supervisors to require that banks maintain capital at least equal to the minimum risk-based capital ratio. If the home country consolidating supervisor (CS) wants to forbear, the CS can take the minimum disciplinary measures required under national law, even if these measures are unlikely to induce the bank to change its operations. Moreover, this forbearance could continue even after a bank is economically insolvent.

One consequence of the CS being able to exercise forbearance is that a prudent host country PS of a subsidiary bank would increase monitoring if the parent organization is undercapitalized, even if the subsidiary is in good financial condition. If the parent is sufficiently distressed, the host country PS of the subsidiary may even want to limit the subsidiary's transactions with other subsidiaries and the parent to reduce the risk that the parent bank would seek to drain resources from the subsidiary to assist itself. Yet such prudent measures by the host country PS of the subsidiary could exacerbate the parent's problems by reducing the efficiency of the group, especially to the extent the group functions as an integrated entity.

Another consequence of the situation described is that the host country supervisor would not have the incentives to delegate the prudential supervision of the subsidiary bank to the CS. The host country of the subsidiary would bear full responsibility for the deposit insurance losses of the subsidiary bank as well as any adverse impacts on the operation of its financial system without having any enforcement authority over the parent bank to protect its interests. The CS would have the enforcement authority, but it would have only reputational incentives to protect the interests of the host country of the subsidiary. These reputational incentives may prove wholly inadequate if, as it is likely, the banking group in question has significant political power in its home country and thereby influence over the CS.

1.B With PCA and coordination arrangements

PCA provides the CS with a clear mandate to take certain corrective actions as a bank's regulatory capital ratio declines. The CS may forbear only in the sense that in the early

²⁴ We assume here that forbearance is undertaken under the genuine belief that giving time will enable the bank to recover and meet its obligations. Unfortunately there are examples (Mishkin, 2005) where forbearance has been the result of political and other direct pressure and is known not to be the loss minimizing strategy.

stages, the CS need not adopt the most aggressive corrective actions available under PCA (discretionary actions). However, further actions will be mandated as capital falls, so the CS's opportunities for forbearance are limited unlike in the existing situation. Moreover, both the managers of the banking group and the CS would have the incentives to prevent further declines in regulatory capital, because they would know that further declines would force stronger corrective measures that will be less attractive to them.

The limited possibilities for forbearance under PCA would make more viable the possibility of a host country supervisor's delegating its responsibilities for subsidiaries to the CS. A host country supervisor that delegated its responsibility could do so in the knowledge that the CS's ability to forbear at the expense of the subsidiary's host country is greatly diminished. Host countries' supervisors responsible for large subsidiaries relative to the local market may remain reluctant to delegate authority to the CS, but supervisors responsible for smaller subsidiaries may decide to delegate their authority having the certainty that supervisory action will be prompt and in the framework of the PCA mandatory and discretionary provisions.

If PCA were adopted with a college of supervisors created to agree on their prudential supervisory actions on the different banks in the consolidated group, the CS's ability to forbear would be further reduced. The college would require the CS to take corrective measures.²⁵ This implies that the supervisory decisions are taken by the college which has effective powers on the national supervisors. Effective implementation requires as a precondition that prudential supervisors be given the same authority to take the corrective measures (mandatory and discretionary) in PCA. Even if the CS could veto actions, the CS would still be forced to defend its actions in front of its peers, which would somewhat reduce the probability that the CS would forbear.²⁶ At worse, the college of supervisors would agree to the use of PCA to impose less strict enforcement measures than would be optimal given a problem banking group's condition. However, even if the college would favour less strict enforcement, this situation would nevertheless be an improvement over the current situation without PCA where the CS could elect to take almost no action.

2. Home country CS wants to take aggressive corrective measures without adequately taking account of their impact on the host country of the subsidiary bank

For example, the subsidiary may be completely dependent on its parent for management of its operations, managing its risks, or providing information technology services (including the customer databases). If the home country CS were to force the parent bank into the bankruptcy court, the viability of even a highly capitalized subsidiary in another Member State may be questionable.

This scenario is unlikely if the banking group is a substantial part of the banking market in the CS's home country. However, it would be possible if the group was a small part of the CS's home country and the problem would be magnified if the subsidiary were an important part of its host country's banking system

²⁵ Unless the CS had the power to veto the college's actions.

²⁶ If the bank ever failed, the CS's analysis and actions would be known to the other PS who could be expected to pass this to other officials in their government.

2.A Current situation

The CS has a duty to inform the supervisors of the banking group's subsidiaries of its intended action. Whether the CS has any sort of obligation to take account of the impact of its action on the group's subsidiaries and their respective banking markets would depend on the situation.

If the subsidiary's PS has delegated responsibility for supervising the subsidiary to the home country CS, the agreement providing for the delegation most likely called on the CS to take account of the impact of its decisions on the subsidiary. However, the decision as to what sort of corrective action should be taken is ultimately a judgment call on the part of the CS. Hence, the agreement that the host country PS of the subsidiary has with the CS is unlikely to contain legally enforceable obligations on the part of the CS to consider the impact of its actions on the subsidiaries, banking markets and domestic economies.²⁷

If the subsidiary's PS has not delegated responsibility for supervision to the home country CS, the CS would not have any legal obligation to consider the impact of its actions on the subsidiary and its domestic banking market. The CS could, and likely would, consider the impact of its actions on the subsidiary, even absent a legally enforceable agreement to do so. However, the CS is ultimately accountable to the government and tax payers of its home country and not to those of the group's subsidiary (host country). Thus, it seems reasonable to expect that the costs imposed on the subsidiary and the host country will receive substantially less weight than they would if the subsidiary were located in the same country as the CS.

2.B With PCA and coordination arrangements

PCA per se would not prevent the home country CS from using its discretion and may even encourage the CS to take earlier corrective action. However, with the corrective actions clearly established "ex ante", the PS of the subsidiary would be put on early notice of the need to prepare to handle those actions required and authorized under PCA.

The college of supervisors would provide a mechanism that could limit the discretionary corrective measures that could be taken by the CS to the extent that it has effective powers over the national PS that would enforce the agreements at national level. Moreover, the college would require the home country CS to consider the impact of its actions on the subsidiaries before taking discretionary action. However, the college could only limit discretionary actions by the CS, the college could not block actions required by PCA.

3. The PS of a subsidiary wants to forbear in taking corrective measures

3.A Current situation

The host country PS of a subsidiary has the same freedom to exercise forbearance as the home country CS of the parent bank. The principal difference is that the CS supervises

²⁷ Where the bank is operating through branches in host countries the obligation of the lead supervisor is even less likely to have a formal requirement to consider the differential impact on the host.

the parent bank and it is also responsible for the consolidated group. Thus, the CS is in a position to pressure the parent bank of the banking group to take corrective action at the subsidiary even if the PS of the subsidiary would rather avoid or delay taking corrective action.

3.B With PCA and coordination arrangements

The host country PS of a subsidiary would be required to take the mandatory actions provided under PCA based on the subsidiary's capital adequacy. Moreover, the college of supervisors where the CS would be also represented could act to limit forbearance based solely on the subsidiary's regulatory capital. The college would also take into consideration the importance of the subsidiary activities on the banking group.

4. **The host country PS of a subsidiary bank wants to take aggressive corrective measures without adequately considering their impact on the rest of the group.**

This scenario is most likely to arise when the subsidiary bank is a small part of the financial system of the host country but it supplies critical services to the rest of the banking group. A possible example would be a group's London subsidiary that exists primarily to facilitate the group's access to the London wholesale financial markets.

In most respects, the current situation and the impact of PCA mirror the situation where the parent's CS wants to take aggressive corrective measures without considering the impact on the subsidiary's host country. The principal difference is that if the consolidated group is in good financial condition, it should be able to assist the subsidiary and eliminate the basis for the subsidiary's PS to take corrective action.

4. A Current situation

The host country PS of the subsidiary has a duty to inform the home country CS and the PS of a group's other bank subsidiaries of its intended action. Like the CS in scenario 1, the PS of the subsidiary is likely to consider the impact of its actions on the rest of the group. However, the PS of the subsidiary would not have any legal obligation to weigh the impact of its disciplinary action on the group as it would have had if the group would have its entire operations in the PS's home market.

4. B With PCA and coordination arrangements

As in scenario 1 with the CS, PCA per se would not prevent the host country PS of a subsidiary from using its discretionary corrective actions and may even encourage the PS to take earlier action. However, with the rules of supervisory action clearly established "ex ante", the home country CS and the host country PS of the subsidiaries in other countries would be put on early notice of the need to prepare for the corrective measures that may be taken against a subsidiary.

The college of supervisors could secure that the host country PS's discretionary corrective measures would not have a negative impact on the rest of the banking group subject always to the requirements of the PCA rules. The college could also be helpful in getting

the CS and other subsidiaries PS to pressure the group into helping its undercapitalized subsidiary.

5. **The banking group, which has a presence in several EU countries, incurs a series of losses which initially drop its capital below minimum regulatory requirements and will eventually make the bank insolvent if not addressed.**

If the bank becomes insolvent, the home country supervisor will recognize the need for recapitalization. Although the exact amount of the losses is uncertain "ex ante". National prudential supervisors, central banks, deposit insurers and ministries of finance are called to agree on the resolution of the crisis and the recapitalization process.

The home country supervisor puts the bank under special administration expecting that the national ministries of finance would agree on an "ex post" recapitalization that would allow a market friendly solution of the banking crisis.

5. A Current situation

The bank supervisors (CS and/or subsidiaries' PS) will demand that the bank restores its capital to levels above regulatory minima. The bank may raise its capital in response, but it may not do so for a variety of reasons (e.g. the shareholders have lost confidence in the management). If the recapitalization of the bank does not succeed and the bank's failure appears likely, the supervisor may want to organize a recapitalization agreement among the national ministries of finance of the countries where the group has operations. However, persuading the national governments to put up tax payers funds to support a bank, which has a (small) chance of surviving on its own, will be very difficult. A major problem is likely to be reaching an agreement on the burden sharing criteria for many possible reasons including: (a) bank's losses occurred in other country(ies) and/or, (b) the banking group is not considered systematically important in the host country(ies).

Against this background, national ministries of finance may or may not reach an agreement. If they cannot reach an agreement at some point market participants will lose confidence in the bank and a bank run is likely. After the bank run has begun, the ministries of finance will have one last opportunity to reach an agreement on burden sharing. At this point, the costs of recapitalization are likely to be high and the period of time in which to reach agreement is likely to be very short.²⁸ If they can reach agreement on providing the funds, the supervisors and the ministries of finance will still need to agree on who will run the bank and what priorities will be followed in restoring the bank's assets to the private sector.

If the national ministries of finance still cannot reach an agreement, the home country supervisor (CS) will be forced to proceed to bank resolution. Deposit insurers will pay the insured depositors and they will be under enormous political pressure to pay also the uninsured depositors.

²⁸ Market participants will not run on a bank unless they believe that they are at risk of loss, which they would be only if they believed that the losses were so large that the relevant Treasuries might not reach an agreement to recapitalize the bank.

5. B Situation with PCA (assuming closure rule at 2% of tangible equity)

The existence of capital/assets thresholds ratios in PCA would have demanded supervisors' action before the bank group's net worth would have been largely depleted. Such supervisory action would have ranged between asset growth and inter affiliate restrictions to the requirement of capital restoration to the shareholders. Prudential supervisors would require a recapitalization plan from the bank's shareholders by issuing capital or selling assets to another firm. The bank managers and owners are also more likely to put the bank up for sale to avoid having its charter withdrawn when its tangible equity ratio reaches 2 %.

If the bank's tangible capital ratio drops below 2 % of tangible equity, its supervisors will put the bank into receivership.²⁹ If assets are being marked to market, there is a chance that the value of the bank will exceed its liabilities (possibly excluding its Tier 2 liabilities).³⁰ Even if support is required, the losses may be sufficiently small so that they could be covered by the national deposit insurers. However, even in the extreme case where support is required from the national ministries of finance to create a bridge bank, agreement is likely to be easier to reach because the overall burden should be smaller. If the ministries of finance can reach agreement then our proposal provides a structure for managing the bridge bank and returning its assets to the private sector.

If government support is needed but the national ministries of finance cannot reach a agreement on the distribution of losses, then the bank would have to be put into liquidation. If this difference is positive, the bank's administrators would be able to more easily find a buyer of the bank.

²⁹ Although it is beyond the scope of this paper, an important issue is the definition of the closure rule. That is, the definition and level of the capital ratio that would trigger resolution. The 90-day rule applies in the US. This represents long enough for undercapitalization to turn into a major loss. An EU version could, for example, require intervention as soon as the 2% level is breached in order to increase the chance that losses can indeed be covered.

³⁰ Suppliers of Tier 2 capital should expect that their investment is at risk if their bank fails. Otherwise, their investment should not be included in Tier 2.

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Table 1: Supervision, Deposit Insurance and Resolution Authorities' Jurisdiction in the EU

	Prudential Supervisor¹	Deposit Insurance Regulators²	Reorganization and Winding-Up Authority³
Banks locally incorporated			
Parent banks authorized in home country	Home country authorizing parent bank (consolidated supervision - solvency)	Home country	Home country
Subsidiaries of parent banks headquartered and authorized in another EU country	Home country authorizing parent bank (consolidated supervision - solvency) Host country authorizing the subsidiary ("solo" basis) ⁴	Host country	Host country
Branches			
Branches of banks headquartered and authorized in other EU country	Home country of head office (consolidated supervision - solvency) Host country ⁵ (liquidity)	Home country (possibility of supplementing the guarantee by host country) ⁶	Home country

Source: Garcia and Nieto (2005)

¹ 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) Official Journal of the European Communities 30 June 2006. L 177

² Directive 94/19/EC of the European Parliament and of the Council of 30 May, 1994 on deposit-guarantee schemes. Official Journal of the European Communities 31 May, 1994, No. L135/5 and Directive 97/9/EC of the European Parliament and the Council of 3 March 1997 on investor-compensation schemes. Official Journal of the European Communities 3 May 1997 No. L 84/22.

³ Directive 2001/24/EC of the European Parliament and of the Council of 4 April on the reorganisation and winding up of credit institutions. Official Journal of the European Communities 5 May, 2001. L125

⁴ 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) Art. 44 " [It] shall not prevent the competent authorities of the various Member States from exchanging information in accordance with this Directive and with other Directives applicable to credit institutions. That information shall be subject to the conditions of professional secrecy."

⁵ 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) (art. 43.1): "[It] shall not affect the right of the competent authorities of the host Member State to carry out, in the discharge of their responsibilities under this Directive, on the-spot verifications of branches established within their territory"

⁶ Directive 94/19/EC of the European Parliament and of the Council of 30 May, 1994 on deposit-guarantee schemes. Official Journal of the European Communities 31 May, 1994. L 135. (art. 4). "...Admission shall be conditional on fulfilment of the relevant obligations of membership, including in particular payment of any contributions and other charges."

Table 2: Nordea; Market share in Nordic countries (%)

	<u>Denmark</u>	<u>Finland</u>	<u>Norway</u>	<u>Sweden</u>
Mortgage lending	17	32	12	16
Consumer lending	15	31	11	9
Personal deposits	22	33	8	18
Corporate lending	19	35	16	14
Corporate deposits	22	37	16	21
Investment funds	20	26	8	14
Life & pension	15	28	7	3
Brokerage	17	5	3	3

Mayes (2006)

Table 1
Mandatory and Discretionary Provisions Prompt Corrective Action

			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 favor 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.					

Law and Economics of Crisis Resolution in Cross-border Banking

Rosa María Lastra^{*}, Clas Wihlborg[#]

Abstract

The EU's Banking Directive envisions competition among European banks working across borders in branches under home country control. This international perspective stands in contrast to the national and territorial approach to banking supervision and crisis management. The cross-border expansion of banks and the effective supervision of institutions operating in various jurisdictions present numerous challenges for financial regulators and supervisors. Though considerable progress has been made with regard to the allocation of responsibility for supervision, notably via soft law rules and regional rules, the cross-border resolution of banking crises remains the matter of intense policy and legal debate. This paper presents some of the issues and legal principles at stake. We emphasize the need for credible "Prompt Corrective Action" procedures for banks approaching distress, and separate insolvency law for banks as prerequisites for effective market discipline and competition. Proposals with more or less direct involvement on the EU level while retaining essential elements of national responsibility are discussed and developed. One proposal is to create a European Standing Committee for Crisis Management to alleviate the shortcomings of the status quo and make the vision of the Banking Directive possible.

^{*} Senior Lecturer in International Financial and Monetary Law, Centre for Commercial Law Studies, Queen Mary, University of London (r.lastra@qmul.ac.uk). This paper draws on Chapters 4 and 14 of Lastra, *Legal Foundations of International Monetary Stability* (Oxford University Press, 2006). An earlier version was presented at a Conference on 'International Financial Instability. Cross-Border Banking and National Regulation' sponsored by the Federal Reserve Bank of Chicago and International Association of Deposit Insurers, October 5-6, 2006.

[#] Professor of Finance and Director, Center for Law, Economics and Financial Institutions (LEFIC), Copenhagen Business School, Solbjerg Plads 3, DK-2000 Frederiksberg, Denmark. E-mail: cw.fi@cbs.dk

1. Introduction

Under the EU's Banking Directive⁸⁵ banks can operate across the EU with a single license for branches under home country control. Regulation and supervision, as well as deposit insurance and the Lender of Last Resort function of Central Banks, are national responsibilities. The single banking license implies "mutual recognition" in the sense that each host country in the EU accepts the home country's regulation and supervision.

In spite of the Banking Directive, cross-border retail banking under a single banking license in Europe is rare. When cross-border banking takes place it is most often organized through subsidiaries. Foreign controlled banking activity is important primarily in Eastern Europe. In these cases host countries have the responsibility for local subsidiaries while home countries have the responsibility for the safety and soundness of the consolidated bank. Thus there is shared responsibility for regulation and supervision.

Government authorities have the powers to discourage and even prevent major cross-border mergers and acquisitions of banks. A bank is not likely to enter a country without the approval of host country authorities. Similarly, banks will not organize their activities in branches without the approval of government authorities. In Western Europe, take-overs of major banks have been actively discouraged by several governments and regulatory authorities. Major cross-border expansions in branches have not been observed.

The domination of subsidiaries over branches in cross-border retail banking can be explained both by the lack of approval by host countries and by the strategies of banks to organize their retail banking in subsidiaries when they enter new markets. As time goes by banks tend to integrate foreign subsidiaries with home operations to an increasing extent with the consequence that the relative advantage of cross-border banking in branches increases. Thus, subsidiaries become functionally integrated to an increasing extent in spite of their legal separation. One example of this inconsistency between functional and legal organizations is the pan-Nordic bank Nordea with systemically important market presence in Denmark, Finland, Norway and Sweden. Nordea has explicitly followed a strategy of functional integration of separate legal entities in the four countries. Nordea's management developed plans to reorganize its legal structure in 2005 along the lines envisioned in the Banking directive. Specifically, the bank planned to form a *Societas Europaeae* head-quartered in Stockholm with branches in the other three countries in order to have a legal structure that corresponds to the functional structure. Nordea's efforts have stalled, however, as a result of resistance from authorities in all the four countries involved and perhaps for fear of the competitive effects of differences in deposit insurance coverage.

In this paper we argue that efficient organization of cross-border retail banking requires the existence of pre-determined, credible and operational procedures for crisis management of banks generally and cross-border banks especially. Such procedures for dealing with banks in distress are conspicuously absent across the world with very few exceptions. As noted by Herring (2004) financial conglomerates operating with subsidiaries in several countries tend to become "Too Complex to Fail". Crisis resolution must involve authorities in all countries where the bank is operating and the asset-liability structure may be very opaque. Burden sharing among the

⁸⁵ The Banking Directive currently in force (Directive 2000/12/EC) consolidates seven core directives relating to credit institutions, including the First and Second Banking Directives, in one single text. Throughout this paper we refer to it as the Banking Directive.

governments involved becomes a major source of conflict. Eisenbeis and Kaufman (2006) describe the array of potential conflicts among authorities in host and home countries.

The complexity and conflicts associated with crisis management without clear procedures and rules for allocation of losses tend to lead to bail-outs as the only viable solution. Blanket guarantees for creditors become the norm rather than the exception and even shareholders tend to become protected. As a result, market discipline is undermined. Therefore, the conditions for stronger market discipline and for efficient competition are the same. Furthermore, following Goldberg, Sweeney and Wihlborg (2005) discussing the Nordea case, we argue here that credible bank insolvency procedures make it possible to realize the vision of a Single Banking License in the Banking directive.

There is much debate in Europe whether banking supervision, regulation and crisis management should be a national responsibility as is currently the case, or whether some or all of these functions should be centralized to the EU level. In the words of Boot (2006) there seems to be a contradiction between an international perspective on banking and national authority over regulation, supervision and legislation with respect to banking. In this paper we argue that the international perspective can be reconciled with the national perspective with relatively modest intervention on the EU level. This intervention refers to distress resolution procedures for banks. We present three alternative proposals with different degrees of EU intervention with respect to such procedures.

In the following we discuss in Section 2 the case for and the design of a *lex specialis* for bank insolvency as distinct from general corporate insolvency law. In Section 3 we provide an overview of legal procedures governing cross-border insolvency. Approaches to dealing with bank insolvency in Europe and the implications for market discipline are discussed in Section 4. Ways forward while reconciling the international perspective, national authority and strengthening market discipline are developed in Section 5. Three alternative proposals involving Prompt Corrective Action Procedures (PCA), bank insolvency law, and limited roles for EU authorities are presented in Section 6.

2. The Case for *Lex Specialis*; Prompt Corrective Action and Insolvency

Lex generalis for insolvency law implies that banks are treated like other corporations, i.e. they are subject to corporate insolvency law. This is the case for example under UK law, where ordinary insolvency principles are applied to banks (with some modifications for financial contracts, netting and setoff).

There are few countries with *lex specialis* for banks. Canada, Italy, Norway and the USA are among them. The introduction of a law does not necessarily mean that it is successful in the sense that it achieves its objectives. If not, as in Norway, the law is typically not put to use. Already before the Norwegian banking crisis in the late 80s, there were rules for “public administration” of banks in distress. The procedures are more similar to liquidation procedures than to restructuring procedures and the distressed bank is not expected to remain under public administration for long. The Norwegian case illustrates that it is not merely the existence of pre-determined insolvency procedures that matter. Banking in Norway is dominated by a few banks. Each one tends to be “too big to fail”. Therefore, liquidation has not been a politically acceptable alternative and liquidation procedures are not enforced. Thereby, they lose credibility.

The case for *lex specialis* with regard to bank insolvency can be supported by the existence of specific goals.⁸⁶ According to Schiffman,⁸⁷ corporate insolvency laws should seek to fulfill two principal objectives: fair and predictable treatment of creditors and maximisation of assets of the debtor in the interests of creditors. However, important goals in bank insolvency proceedings are the safety and soundness of the financial system at large and the integrity of the payment systems. The minimization of costs to deposit insurance funds is considered the main objective in the USA in particular.⁸⁸

Efficient corporate insolvency procedures allow appropriate restructuring, debt-reduction, management change, liquidity infusion or other actions to take place. The difficulty of designing efficient insolvency procedures is to a large extent caused by information problems and asymmetries of information about the cause of distress and asset values. Collateralized loans and priority rules discourage “runs” on the available resources of a distressed firm. A run can force a firm into bankruptcy prematurely. In banking this “run problem” is particularly acute. Guarantees of large creditor groups, such as deposit insurance for banks’ creditors, can discourage runs but they make creditors insensitive to risk and, thereby, they cause misallocation of resources.

In countries with explicit corporate restructuring law, such as Chapter 11 of the US Bankruptcy Code, an independent body with enforcement powers, such as a court, is required to determine the value of the firm and the value-maximizing course of action. Contracts are abrogated when firms enter restructuring proceedings. Therefore, the predictability of the outcome for various stakeholders is low and the outcome is generally more favorable to the shareholders and management than the outcomes in countries with a more creditor-and liquidation oriented approach to insolvency.⁸⁹ Predictability and, therefore, *ex ante* efficiency is also influenced by arbitrariness of court procedures, corruption of judges, and political influences on procedures.

Although the roles of insolvency procedures for banks in some ways are the same as for non-financial corporations the objectives of the procedures differ in important ways as mentioned above. These differences are explained by the special characteristics of banks. First, banks supply liquidity. A large part of their liabilities are very short term and they play an important role in the payment mechanism. These liabilities may be subject to bank runs if creditors fear non-repayment. Second, there are generally substantial amounts of very short term interbank liabilities that may contribute to contagion among banks if one bank fails. Third, creditors of banks in particular are diverse and many. Thus, banks do not generally have one or a few large creditors with a strong interest in resolution of distress. The risk of runs on a bank in distress and contagion implies that speed of action in distress resolution is of the essence. Conventional liquidation and restructuring procedures are too time-consuming to be applied to banks without modification.

For the reasons mentioned, bankruptcy and restructuring laws are not often applied in cases when banks face distress in countries characterized by *lex generalis*. One could argue that in countries with extensive deposit insurance, the insuring authority could take the coordinating role that large creditors often have in non-bank restructurings. However, in many countries the insuring authority may be the government and, even if there is a specific authority, there are in most countries neither pre-established procedures for settling claims against non-insured creditors, nor the expertise in the authority to manage the insolvency. Most countries simply do not allow banks to fail. Exception is the USA that has implemented bank-specific insolvency procedures through the FDIC.

⁸⁶ See E. Hüpkens (2003).

⁸⁷ See H. Schiffman (1999) pp. 89-90.

⁸⁸ See M. Krimminger (2005).

⁸⁹ See Wihlborg, Gangopadhyay and Hussain (2001)

In banking, the definition of insolvency (the trigger point for an insolvency proceeding) is sometimes a matter of controversy. As acknowledged, there are two traditional definitions of insolvency in commercial bankruptcy laws: failure to pay obligations as they fall due (equitable insolvency), and liabilities exceed assets (balance sheet insolvency)⁹⁰. In banking the line of demarcation between illiquidity (lack of liquid funds) and insolvency is not always clear. An economically insolvent bank is not always declared legally insolvent by the responsible authorities and may be offered financial assistance instead. The test of insolvency as the inability to meet payments as they fall due, is not applicable to banking, since the inability to honor the convertibility guarantee of deposits is not proof of insolvency, but rather evidence of illiquidity (Hüpkes, 2003).

In banking, the pre-insolvency phase is of great importance because of the difficulty of evaluating when the net worth of a bank is zero in market terms and the risk that depositors and other creditors will suffer losses if credit losses are realized after the bank is closed. In recent years PCA (prompt corrective action) rules, including SEIR (structured early intervention at trigger points while there is equity capital left) have been advocated. In the USA, PCA rules are legally binding since the enactment of FDICIA (Federal Deposit Insurance Corporation Improvement Act) in 1991. PCA rules are only effective if they are credible by being enshrined in the law, in particular the mandate to initiate early closure when the bank still has capital (even if it is critically undercapitalized). *Lex generalis* in many countries does not allow such early closure. As Goodhart (2004) points out, ‘the window of opportunity between closing a bank so early that the owners may sue and so late that the depositors may sue may have become vanishingly small’.

An important function of PCA rules is to allow intervention before insolvency occurs in order to rehabilitate or restructure a distressed bank. Laws with respect to bank rehabilitation, reorganization or restructuring vary widely from country to country. A take over or merger (also called purchase and assumption, that is purchase of assets and assumption of liabilities) generally preserves the going-concern value of an institution, as the acquirer succeeds both to a depositor base and to a base of loan customers. As opposed to a straight liquidation, it eliminates the danger that vital banking services in a community will be disrupted. A merger can be ‘assisted’ when only the “good” assets go to the acquirer (also referred to as ‘clean bank’s acquisition’). In an assisted transaction, the bad assets are subject to special administration. Sometimes, failed banks may be placed under special administration in the form of bridge banks, new banks, special funds or other arrangements. This is often meant to be a temporary solution in order to take over the operations of a failed bank and preserve its going-concern value while the government fiduciary seeks a more permanent solution to the problems or until an acquirer is found.

The Basel Committee on Banking Supervision acknowledges that in a market economy, failures are part of risk-taking and that a prompt and orderly liquidation of institutions that are no longer able to meet supervisory requirements is a necessary part of an efficient financial system, as forbearance normally leads to worsening problems and higher resolution costs. Although the Committee explicitly states that “in some cases the best interests of depositors may be served by some form of restructuring, possibly takeover by a stronger institution or injection of new capital or shareholder”, insolvency and liquidation are inevitable in some cases. For PCA procedures not to lead to forbearance and ultimately to bail-outs there must be preparedness for liquidation of insolvent banks. These procedures should be designed with the mentioned special characteristics and objectives in mind in order to be operational in case of a bank failure. The European Shadow

⁹⁰ See Schiffmann (1999), pp. 96-97.

Financial Regulatory Committee (ESFRC) (1998) proposed the following characteristics of special bank insolvency procedures (*Lex Specialis*):

1. Pre-specified trigger capital levels for pre-specified regulatory or legal action (PCA)
2. A pre-determined trigger initiating liquidation. This trigger point may actually be set at a positive capital ratio given uncertainty about asset values.(part of PCA)
3. Priority among creditors must be contractually pre-specified in such a way that claims with high liquidity value are given high priority.
4. Valuation procedures should be made transparent.
5. In liquidation other banks or the central bank need to be organized to honor claims with high liquidity value including interbank claims on behalf of the distressed bank. Banks may have incentives to organize such arrangements themselves (pooling) if clear liquidation procedures exist, but if banks do not, then regulators must make sure that arrangements exist.
6. The lender of last resort function should not be extended to insolvent banks.
7. The authorities managing a crisis must be made independent of ad hoc political pressures in order to enhance the credibility of the process.

The ESFRC Statement concludes that “The implementation of insolvency law for banks with these characteristics should achieve an acceptable, low risk of runs and low risk of contagion while inefficient owners and managers exit. The contractual predictability of claims and the predictability of bankruptcy and PCA-costs should provide efficient ex ante incentives. By achieving these objectives the government’s and the regulator’s fear of a system crash should be alleviated. Thereby, non-insurance of groups of creditors and shareholders would be credible”.

3. Legal Principles Governing Insolvency

Cross-border insolvency adds a layer of complexity to the resolution of a failed bank. Since complexity frustrates accountability, it is important to reach a clear *ex ante* understanding of what the applicable rules are if things turn sour. Institutions with global operations and aspirations may wish to explore the opportunities presented by ‘legal arbitrage’. Conflicts or inconsistencies may arise. And, in some cases, the temptation to exploit legal inconsistencies (or possible legal vacuums) with fraudulent intentions cannot be ignored (example of BCCI). In addition, some jurisdictions present important deficiencies or gaps in their legal systems (eg, offshore centres and some emerging economies).⁹¹

The principle of ‘**plurality of bankruptcy**’ – which typically goes hand-in-hand with the ‘**separate entity**’ approach to liquidation – means that bankruptcy proceedings are only effective in the country in which they are initiated and that therefore there is a plurality of proceedings, as they need to be initiated in every country in which the insolvent bank holds realizable assets or branches. Thus, this principle assigns **territorial effect** to the adjudication of bankruptcy. Under a separate entity approach a domestic branch of a foreign bank receives a liquidation preference, as local assets are segregated for the benefit of local creditors (practice of ‘ring fencing’).⁹² Ring fencing is contrary to the *pari passu* principle, since some creditors receive more favourable treatment than

⁹¹ Group of ten Contact Group on The Legal and Institutional Underpinnings of the International Financial System, ‘Insolvency arrangements and Contract Enforceability’, 2002.

⁹² According to Curtis, ‘This manner of segregating local assets to pay local claims is known as the “separate entity” approach to multinational bank liquidation. “Balkanization” might be a more appropriate term’. See C.T.Curtis, ‘The Status of Foreign Deposits under the Federal Deposit Preference Law’, 21 University of Pennsylvania Journal of International Economic Law No. 2, Summer 2000, at p. 254. See Campbell (2003).

others.⁹³ Under the separate entity approach, local branches of the foreign bank are treated as separate entities. This is the approach the US applies to the liquidation of US branches of foreign banks. US bank insolvency law is territorial for US branches of a foreign bank.

The principle of the **‘unity and universality of bankruptcy’** – which typically goes hand-in hand with the unitary or **‘single entity’** approach to liquidation – means that there is only one competent court to decide on the bankruptcy of the bank (unity), and that the bankruptcy law of the country in which the insolvency has been initiated is effective in all other countries in which the bank (parent entity) has assets or branches (universality). All assets and liabilities of the parent bank and its foreign branches are wound up as one legal entity. Thus, this principle assigns **extraterritorial effect** to the adjudication of bankruptcy. All assets and liabilities of the parent bank and its foreign branches are wound up as one legal entity. This single entity approach is envisioned in EU’s banking directive. for banks with a single license but the Directive is not supported by bank insolvency laws for the single entities.

If implemented, it is impossible under the unitary system to start separate insolvency proceedings against a domestic branch of a bank that has its head office in another country. US law applies this unitary principle to the liquidation of US banks with foreign branches, but not to the liquidation of US branches of foreign banks as noted above.

The inconsistency of the US legal approach to the liquidation of multinational banks,⁹⁴ depending on whether it is dealing with foreign branches in the US or with US branches of a foreign bank, illustrates the difficulties of reaching a common international platform with regard to the liquidation of multinational banks.

Though there is no international treaty on insolvency law, there have however been some attempts at reaching some commonly agreed international rules (mostly ‘soft law’).

UNCITRAL (the United Nations Commission on International Trade Law) adopted the Model Law on Cross-Border Insolvency in Vienna in May 1997. The Model law deals with the recognition of foreign insolvency proceedings, the co-operation between judicial authorities and administrators and other issues concerning the coordination of concurrent insolvency proceedings in multiple jurisdictions. However, this model law contains an optional clause whereby special insolvency regimes applicable to banks may be excluded from its scope.⁹⁵

Another example of international ‘soft law’ rule that is often mentioned is the International Bar Association’s (IBA) Cross-Border Insolvency Concordat, approved by the Council of the Section on Business Law of the IBA in September 1995, which set out some essential principles that can assist insolvency practitioners faced with concurrent proceedings in relation to the same debtor in two or more jurisdictions.⁹⁶

⁹³ See Campbell (2003). Article 13.1 of UNCITRAL’s model law on cross-border insolvency does not permit ‘ring-fencing’.

⁹⁴ Baxter et alii (2004) consider, however, that this difference in approach is a good policy choice, which takes account of the fact that financial services are different and that they are highly regulated and supervised.

⁹⁵ Article 1(2) of the Uncitral Model Law.

⁹⁶ There has been a revision to the IBA Cross Border Insolvency Concordat in the form of the UNCITRAL Legislative Guide on Insolvency Law which can be found at http://www.uncitral.org/pdf/english/texts/insolven/05-80722_Ebook.pdf. The history of this revision can be found in: <http://www.ibanet.org/images/downloads/uncitral%20memorandum%20for%20website.pdf>

In 1999, UNCITRAL (United Nations Commission on International Trade Law) commenced work on the Legislative Guide on Insolvency Law, considering corporate insolvency. Work proceeded through a joint colloquium with INSOL (a world-wide federation of national associations for accountants and lawyers who specialize in insolvency) and the IBA. The Legislative Guide was completed in 2004 and adopted by the United National General Assembly on 2 December 2004.⁹⁷

The World Bank has coordinated the effort of the UNCITRAL Legislative Guide with its own Global Bank Insolvency Initiative to articulate a set of standards on insolvency and creditor rights for the purposes of the Bank/Fund initiative on Standards and Codes. Accordingly, the World Bank, in collaboration with staff of the Fund and UNCITRAL and other experts, has prepared a document, setting out a unified Insolvency and Creditor Rights Standard (the “ICR Standard”), which integrates the World Bank Principles for Effective Creditor Rights and Insolvency Systems (one of the twelve areas under the joint World Bank and International Monetary Fund initiative on standards and codes)⁹⁸ and the UNCITRAL Recommendations (included in the UNCITRAL Legislative Guide on Insolvency). This document was published on 21 December 2005.⁹⁹

This ICR standard (one of the twelve areas identified by the Bank and the Fund in their joint initiative)¹⁰⁰ will be used for the purposes of assessing member countries observance’ in the ROSCs, Reports on the Observance of Standards and Codes.

The ICR standard only briefly refers to ‘international considerations’ (point 15), stating - as a World Bank Principle – that,

Insolvency proceedings may have international aspects, and a country’s legal system should establish clear rules pertaining to jurisdiction, recognition of foreign judgments, cooperation among courts in different countries and choice of law. Key factors to effective handling of cross-border matters typically include:

- (i) *A clear and speedy process for obtaining recognition of foreign insolvency proceedings*
- (ii) *Relief to be granted upon recognition of foreign insolvency proceedings.*
- (iii) *Foreign insolvency representatives to have access to courts and other relevant authorities*
- (iv) *Courts and insolvency representatives to cooperate in international insolvency proceedings*
- (v) *Non-discrimination between foreign and domestic creditors*

The ICR standard supports the ‘single entity’ approach and the ‘unity and universality’ principle in its recommendation 31, which states:

⁹⁷ The text of UNCITRAL Legislative Guide on Insolvency Law is available at http://www.uncitral.org/uncitral/en/uncitral_texts/insolvency/2004Guide.html. It is important to differentiate between a model law and a legislative guide. A model law – such as UNCITRAL’s model law on cross border insolvency - is a legislative text recommended to States for enactment as part of national law, with or without modification. The focus of the legislative guide, on the other hand, is upon providing guidance to legislators and other users as to the core issues that it would be desirable to address in a law, but not intending that the recommendations of a legislative guide be enacted as part of national law as such.

⁹⁸ The text of the Principles is available at <http://worldbank.org/gild>

⁹⁹ The [ICR ROSC Standard](http://siteresources.worldbank.org/GILD/ConferenceMaterial/20774191/ICR_Standard_21_Dec_2005_Eng.pdf) has been posted for public review and comment since December 2005. See http://siteresources.worldbank.org/GILD/ConferenceMaterial/20774191/ICR_Standard_21_Dec_2005_Eng.pdf

¹⁰⁰ The other eleven areas are: accounting, auditing, anti-money laundering and countering the financing of terrorism (AML/CFT), banking supervision, corporate governance, data dissemination, fiscal transparency, insurance supervision, monetary and financial policy transparency, payment systems, and securities regulation. See Lastra (2006), chapter 14.

The law applicable to the validity and effectiveness of rights and claims existing at the time of the commencement of insolvency proceedings should be determined by the private international law rules of the State in which insolvency proceedings are commenced.

However recommendation 32 brings back territoriality in the following exception, relevant in the case of bank insolvency:

Notwithstanding recommendation 31, the effects of insolvency proceedings on the rights and obligations of the participants in a payment or settlement system or in a regulated market should be governed solely by the law applicable to that system or market.

Furthermore, the ICR standard recognizes that banks may require special insolvency laws, when it talks about ‘exclusions’ in point 3 accompanied by the following explanatory footnote:

Highly regulated organizations such as banks and insurance companies may require specialized treatment that can appropriately be provided in a separate insolvency regime or though special provisions in the general insolvency law.

The general thrust of the ICR standards for insolvency law favors the single entity approach but the commitment to this principle is not established for banks.

International rules concerning the regulation of branches and subsidiaries

Throughout its 31 years of existence the Basel Committee has addressed various issues concerning the allocation of supervisory responsibilities (home-host), capital regulation and other principles for the effective supervision of international banks. Although the Basel Committee provides little guidance concerning bank exit policies and the problems involved in the resolution of cross-border banking crises,¹⁰¹ a number of principles dealing with cross-border supervision of branches and subsidiaries can be applied to issues of insolvency of a bank operating in different jurisdictions. In particular, the principle of ‘parental responsibility’ (home country control) for the supervision of branches – as legally dependent units – and the consideration that *subsidiaries become independent legal entities under the laws of the country of incorporation* are principles observed generally and often included in Memoranda of Understanding (MoUs) between supervisory authorities in different countries.

According to the “Basel Concordat” of 1975 ad 1983, there are two basic principles, which are fundamental to the supervision of banks’ foreign establishments: that no foreign banking establishment should escape supervision; and that the supervision should be “adequate”.¹⁰² An adequate supervision is one in which the host authorities are responsible for the foreign bank establishments (subsidiaries) operating in their territories as individual institutions, while the parent authorities are responsible for them as parts of larger banking groups.

The solvency of branches is the responsibility of the parent authorities, though the host authorities can demand endowment capital for foreign branches. Thereby, they deviate from the single entity

¹⁰¹ In 1992, the Basel Committee published a document on The Insolvency Liquidation of a Multinational Bank (a summary of which is included as an appendix at the end of this paper, since it presents some ‘seeds’ that could lead to future harmonization efforts).

¹⁰² The Committee has published other documents and standards regarding the supervision of cross border banking. In April 1990 it published a supplement to the 1983 Concordat on “Information flows between banking supervisory authorities.” Following the collapse of BCCI in July 1992, the Committee published the “Minimum Standards for the supervision of international banking groups and their cross-border establishments.” In October 1996 the Committee published a document entitled “The Supervision of Cross-Border Banking (October 1996). In September 1997 the Committee published the “Core Principles for Effective Banking Supervision,” that I refer to below. See also the Compendium of documents produced by the Basel Committee on Banking Supervision (February 2000), Volume III International Supervisory Issues, Chapter I: The Basel Concordat and Minimum Standards at <http://www.bis.org/publ/bcbse004.htm>.

approach by introducing an element of territorialism for branches. The solvency of subsidiaries is the joint responsibility of both host and home authorities. The supervision of liquidity remains the primary responsibility of the host country, though in the case of branches, liquidity will also be a concern for the home authorities.

Principles related to the management of crisis and bank insolvency of foreign establishments should be analysed within this context of mutual co-operation between supervisory authorities. Parent authorities should be informed immediately by the host authorities of any serious problems which arise in a parent bank's foreign establishment and similarly, parent authorities should inform host authorities when problems arise in a parent bank which are likely to affect the parent bank's foreign establishment.

In 1997 the Basel Committee published the "Core Principles for Effective Banking Supervision"¹⁰³ which have important implication for the supervision of international banks. The following principles are particularly relevant for the subject of this paper:

- (i) An effective system of banking supervision will have clear responsibilities and objectives for each agency involved in the supervision of banking institutions.¹⁰⁴
- (ii) A prompt and early exit of banks that are no longer able to meet supervisory requirements is a necessary part of an efficient financial system and supervisors should be responsible for and assist in such an orderly exit.¹⁰⁵
- (iii) Bank supervisors must practice *global consolidated supervision* adequately monitoring and applying appropriate prudential norms to all aspects of the business conducted by these banking organizations world wide, primarily at their foreign branches, joint ventures and subsidiaries.¹⁰⁶

Consolidated supervision is based on the principle that financial groups form a single economic entity. However, when the question of the resolution of a failed multinational bank or financial group arises, the single economic entity principle is not implemented when the group is split up into its many legal entities, and foreign branches are sometimes liquidated as separate units.¹⁰⁷

- (iv) The Basel Committee recommends that the supervisory authority be responsible for or assist in the orderly exit of problem banks in order to ensure that depositors are repaid to the fullest extend possible from the resources of the bank (supplemented by any applicable deposit insurance) and ahead of shareholders, subordinated debt holders and other connected parties.¹⁰⁸

- (v) Close co-operation with other supervisors is essential and particularly so where the operations of banks cross national boundaries.

¹⁰³ Basel Committee on Banking Supervision. Core Principles for Effective Banking Supervision (Basel Core Principles), <http://www.bis.org/publ/bcbasc102.pdf>. The Basel Core Principles for Effective Banking Supervision are intended to serve as a basic reference for supervisory and other public authorities worldwide to apply in the supervision of all banks within their jurisdictions.

¹⁰⁴ Basel Core Principles, pages 4 and 11-12. Principle 1 determines the preconditions for effective banking supervision.

¹⁰⁵ See explanatory note accompanying Principle 22 of the Basel Core Principles of Effective Banking Supervision of September 2007. See also Hüpkes (2003) and Hadjiemmanuil (2004).

¹⁰⁶ Basel Core Principles, Principle 23, pages 6-7 and 41.

¹⁰⁷ Zuberbühler, Daniel. The Financial Industry in the 21st Century. Introduction. 21/09/00. Director of the Secretariat, Swiss Federal Banking Commission. Document at <http://www.bis.org/review/rr000921c.pdf> at page 2.

¹⁰⁸ See Basel Core Principles for Effective Banking Supervision, section II "Preconditions for Effective Bank Supervision", at p. 12. According to the Basel Committee, banking supervision is only part of wider arrangements that are needed to promote stability in the financial markets. One of these arrangements should include precisely procedures for efficient resolution of problems in banks. When problems are not remediable, the prompt and orderly exit of institutions that are no longer able to meet supervisory requirements is a necessary part of an efficient financial system.

The above Basel principles indicate substantial awareness and concern with procedures for dealing with distressed cross-border banks. The Basel Committee has not been more specific, however, with respect to operational rules for dealing with banks in distress. We turn next to the EU's Insolvency Regime for credit institutions where the same concerns appear.

The EU Insolvency Regime

The EU insolvency regime consists of one regulation on insolvency proceedings (Council Regulation (EC) No. 1346/2000 of 29 May 2000) and of two directives: a directive on the reorganisation and winding up of credit institutions (Directive 2001/24/EC of 4 April 2001), and a directive concerning the reorganisation and winding-up of insurance undertakings (Directive 2001/17/EC of 19 March 2001).

The EU insolvency regime is an example of binding supranational/regional rules in the field of insolvency law in general and of bank insolvency law in particular. However, the EU rules are mainly of a private international law character. They introduce the principles of unity and universality of bankruptcy, conferring exclusive jurisdiction to the home Member State, but they do not seek to harmonize in a substantive way national legislation concerning insolvency proceedings, which remain different across the Member States of the EU. The principles are consistent with the single license of the banking directive..

Application of these principles is a very different matter, requiring mutual recognition of home country insolvency procedures. Since most countries lack a *lex specialis* for banks and corporate insolvency law is not considered practical for banks, preconditions for mutual recognition of bank insolvency procedures are absent. Thus, the EU lacks an operational insolvency regime for cross-border banks. As a result, the Banking Directive has not been implemented in practice to an important degree.

In the absence of a formal international insolvency legal regime, countries resort to bilateral agreements, often in the form of a Memorandum of Understanding (MoU), to establish some principles of co-operation in the regulation of cross-border establishments. We turn to implications of this situation next.

4. The Status Quo in the EU

Padoa-Schioppa refers to the current approach for regulation and supervision as one based on '*European regulation with national supervision*'.¹⁰⁹ European Regulation refers to the Banking Directive, as well as to European implementation of Basel principles. Prudential supervision is decentralized to the level of the member states. In this sense, EU banking policy presents a rather unified picture.

The Banking Directive does not describe the reality of European banking, however. Banks in different countries operate under supervisors with different procedures and strictness. Insolvency regimes for banks differ, as noted, and laws for corporate governance, bankruptcy, directors' liability, credit and capital markets vary substantially. Deposit insurance systems are different as well. Cross-border branch banking will be viable only if customers in host countries have faith that they have recourse in case a branch of a foreign bank violates local laws, and banks' creditors have

¹⁰⁹ See Tommaso Padoa-Schioppa, *Regulating Finance* (Oxford: Oxford University Press, 2004), Ch. 8 on 'Central Banks and Financial Stability', 121.

faith that they will be not be discriminated against if the foreign bank faces distress. These differences contribute to banks entering new markets mostly with subsidiaries rather than branches.

Increasing functional integration of host and home country subsidiaries is an indication that the advantage of the subsidiary organization decreases with time in local markets. The lack of credible rules for dealing with insolvency and the scope for conflicts of interest between host and home countries are most likely greater hurdles for cross-border branch banking than customers' lack of trust in foreign entities.¹¹⁰ When subsidiaries become increasingly integrated the scope for conflicts of interest between host countries and home countries increases, since banks are able to move assets between subsidiaries evading supervisory controls. Thereby the banks erase the barriers created by the legal separation of entities.

Since the general principle for crisis management in the European Union is national competence, the instruments to deal with a crisis are national (albeit combined with mechanisms for European co-operation)¹¹¹ and the costs of a crisis are typically borne at the national level. However, as the process of financial integration in Europe advances and banks' subsidiaries become increasingly functionally integrated, the likelihood of a pan-European crisis increases. In the absence of a European solution and absence of operational insolvency laws for banks, bilateral cooperative arrangements prevail.

In general where banks operate across borders there are Memoranda of Understanding about cooperation between home-and host country supervisors. These memoranda are typically very general and even secret. In an EU report from The Economic and Financial Committee quoted above it is stated that "*there is no blue print for crisis resolution*". The following statement covers coordination and the assignment of responsibility for decision making with respect to crisis management:¹¹²

"the presumption in international banking supervision is that the home country authorities are responsible for decisions on crisis management". However, *"The principle of home country control is not directly applicable to foreign subsidiaries, as the host country authorities are obliged to treat these as domestic institutions with their own legal identity. In the event of a crisis at a foreign subsidiary, the host country supervisor – which is in fact the subsidiary's home country supervisor – can take any preventive measure envisaged in this context."* Since most international activity takes place in subsidiaries there is very little guidance in these statements. Thus, if a crisis occurs in an international EU bank, ad hoc solutions must be developed quickly in committees including central banks, financial supervisors and ministries in the countries concerned. Politics of fiscal burden sharing and other national concerns easily become the major issues in negotiations rather than long-term consequences for incentives of stakeholders in banks. The lack of clear procedures in combination with the need to act quickly, and the political incentives to protect depositor groups, creates a system where the authorities most likely are obliged to support the distressed bank bailing out most creditors and perhaps even shareholders.

Memoranda of Understanding (MoUs) between home and host countries are intended to lay down the procedures for crisis management. These MoUs are mostly secret, however, in order to allow

¹¹⁰ See Eisenbeis and Kaufman (2006) for a detailed review of potential conflicts of interest.

¹¹¹ Xavier Freixas refers to the current system as one of improvised co-operation. "The term 'improvised co-operation' has been coined to convey the view of an efficient, although adaptative exchange of information and decision-taking. The existence of joint committees should help to improve the efficiency of information exchange. See Freixas, "Crisis Management in Europe" in Jeroen Kremer, Dirk Schoenmaker and Peter Wierst (eds.), *Financial Supervision in Europe* (Cheltenham: Edward Elgar, 2003), 110.

¹¹² Economic Paper No 156, July 2001 from The Economic and Financial Committee

“constructive ambiguity” to create uncertainty about the degree to which creditors will be protected. This uncertainty is supposed to be a source of market discipline for banks. The secrecy may be seen as a signal, however, that there is no understanding with respect to procedures in the MoUs and that, in fact, distressed banks will be bailed out. Thus, market discipline suffers.

Two more aspects of crisis management in the EU should be mentioned without going into detail. One aspect is that deposit insurance is the responsibility of a bank’s home country meaning the country where a bank is incorporated. Thus, depositors in host country branches are insured by the bank’s home country. This means that under the Banking Directive banks with different home countries would offer their customers different deposit insurance coverage. “Top-up” insurance can be offered by host countries where the coverage is relatively high, however. These rules for deposit insurance are important crisis management for two reasons:

First, authorities in home countries of large international banks may not be willing to offer deposit insurance to depositors in foreign branches, or they may try to discriminate in case the deposit insurance fund must be used. The international bank can become “Too Big To Save” from the point of view of the home country.

Second, responsibility for deposit insurance implies that a country’s tax payers gets a stake in the soundness of banks and a valid claim on being involved in supervision. Home country deposit insurance is therefore consistent with home country control and supervision under the banking directive.. Top-up insurance by the host country implies correspondingly that the host country has a direct interest in the quality of supervision of the single entity and in the management of a crisis. The case for shared responsibility between home and host countries is strengthened by top-up deposit insurance.

A second aspect of crisis management in banking is liquidity support for banks facing liquidity problems but not insolvency. These situations are typically handled by central banks as Lenders of Last Resort (LOLR). However, when a bank faces distress it is not obvious that authorities can determine whether an illiquid bank is solvent and the value of a borrowing bank’s collateral. LOLR lending by a central bank can therefore be used as temporary aid to distressed bank and delay indications of insolvency. Such delays can increase an insolvent bank’s losses and increase the final costs of a bank failure for creditors and tax payers. It is therefore important to know which central bank serves as the LOLR for an international bank.

In the EU the LOLR responsibility is understood to remain at the national level, because it has not been specifically transferred.¹¹³ Since prudential supervision remains at the national level, it is logical to assume that the national authorities have the adequate expertise and information to assess the problems of banks within their jurisdictions. The national central banks, working together with the supervisory authorities if supervision is separated from the central bank (and also with the fiscal authorities), are ultimately responsible for the decision on whether or not to grant collateralized emergency lending.¹¹⁴

¹¹³ René Smits holds a different opinion. He regards this LOLR responsibility as an exclusive EU competence. See René Smits, ‘The role of the ESCB in Banking Supervision’, *Legal Aspects of the European System of Central Banks, Liber Amicorum Paolo Zamboni Garavelli* (Frankfurt: European Central Bank, 2005), n.32.

¹¹⁴ Another problematic issue is the definition and availability of collateral in times of crisis. This point is made by Lorenzo Bini Smaghi, in Charles Goodhart (ed.), *Which Lender of Last Resort For Europe?* (Central Banking Publications: London, 2000) Ch.7, 247

It remains unclear whether the national central banks within the EMU would be considered to be acting as operational arms of the ESCB (according to article 14 (3) and 12 (1) of the ESCB Statute in combination with a creative and generous interpretation of articles 18 regarding discount and credit operations¹¹⁵ and Article 20 of the ESCB Statute) or as national agencies (according to article 14 (4) of the ESCB Statute). In the first case, the ECB should grant prior authorization; if they are considered to be acting as national agencies, a consultation procedure suffices.

The wording of the principle of subsidiarity leaves the door open for a possible Community/Union competence (which could be exercised either directly by the ECB or by the NCBs in their capacity as operational arms of the ESCB). According to Article 5 EC, it could be argued in a crisis that action by the ECB would be more effective than action by a national central bank. The reason why such an argument would be persuasive arises from the risk of contagion. In a closely integrated banking and financial market in the EU a liquidity crisis with one institution in one centre could have immediate implications for institutions in other centers. National supervisory authorities do not have the ability, authority or inclination to deal effectively with externalities with cross-border effects. The ECB is possibly best able to judge the risk of contagion. Only if the crisis could be easily contained at the national level (though in a single currency area, this judgment is tricky), there would be no need for a European solution.

According to some commentators a degree of ‘constructive ambiguity’ is desirable in the case of crisis management. And ambiguity is what the EC law provides. It may take a first pan-European crisis to bring some clarity to LOLR responsibilities. The ambiguity with respect of the division of LOLR responsibility within the EMU extends also to the division of responsibility between home and host countries for large branch operations under a Single License. Central banks in host countries have the responsibility for financial stability in the countries but the home country supervisor and central bank is in a better position to evaluate the solvency of the international bank and the collateral it offers to the LOLR.

Our approach below to these ambiguities is to minimize the likelihood that LOLR services will be offered to banks in or near insolvency. PCA procedures with several trigger capital ratios as solvency declines offer such an approach.

5. Ways Forward Reconciling the International Perspective, National Authority and Market Discipline

There are three general approaches to deal with the problems of cross border insolvency as well as combined approaches. The three general approaches are discussed in this section while specific proposals that combine elements of the three approaches are presented in the concluding section. It is assumed in each case that the objectives of regulation and legislation is to create conditions for competition among banks working across borders and to enhance market discipline. The three approaches discussed in this section are 1. Stay the Course with MoUs; 2. EU wide authority and legislation, and 3. National authority over single entities.

1. Stay the Course with MoUs.

¹¹⁵ The second indent of Article 18.1 – regarding credit operations – of the ESCB Statute leaves the door open for a generous interpretation that could allow for the ECB to intervene in a generalised liquidity crisis. This article provides that the ECB and the NCBs may ‘conduct credit operations with credit institutions and other market participants with lending based on adequate collateral.’

This approach implies that individual countries do not introduce *lex specialis* for bank insolvency and there are no legally binding PCA procedures as in the USA. Co-operation and information sharing, through MoUs remain the model for crisis management. Under these conditions conflicts of interest among host and home countries will remain strong and haggling over burden sharing is likely to occur in a crisis. These problems will increase as banks become functionally more integrated. Ad hoc bail-outs are likely to be the rule rather than the exception and market participants understand this. Thus market discipline will remain weak. It is of course, possible that MoUs could include specific rules and principles for burden sharing. If so, publication of the MoUs could contribute to the credibility of the procedures and enhance market discipline. However, as long as the procedures in the MoUs are not legally binding their credibility will remain limited.

Under this approach it is not likely that the vision of the Banking Directive with banks operating across the EU with a single license can be realized. Supervisory authorities and representatives of tax-payers are not likely to accept a large foreign presence in branches unless they are ring-fenced and restricted in other ways.

2. Establishment of EU-wide authority and legislation with respect to banking.

The idea of an EU wide supervisory authority, an EU wide deposit insurance scheme, and mandatory EU bank insolvency legislation has obvious advantages but there are strong disadvantages as well. It is not obvious that harmonized supervision and legislation will be superior to supervision and legislation on the national level. Furthermore, the EU wide supervision and legislation will have to be applied across countries with great variation in legislation and traditions with respect to for example, banking and corporate insolvency, and variation with respect to the relation between public authorities and private firms. For these reasons, the idea of an EU supervisor and an international bankruptcy court appears farfetched (if not impossible) and not necessarily desirable.

EU wide solutions need not cover all the areas mentioned, however. Lastra (2006) has suggested that large multinational banking institutions and financial conglomerates should be incorporated as *Societas Europaeae* in a home country of choice (as proposed by Nordea) and that a specific EU-insolvency regime should apply to them.¹¹⁶ This proposal requires that an EU *lex specialis* for these banks with a single license is developed. The same banks could also be made subject to legislated PCA procedures. Supervision of these banks with a single license would remain the responsibility of home countries. Harmonized crisis management, PCA procedures and insolvency procedures could also be handled on the national level.

For this type of reform to be effective supervisors in individual countries must be convinced that that the PCA procedures and the insolvency law are credible and non-discriminatory, and that it makes insolvency of large banks possible without threats to the payment system. If host country supervisors are not convinced, then they are likely to be uncooperative with respect to the establishment of branches in their countries.

¹¹⁶ A “Societas Europaeae” (SE) or European Company is a public-limited company set up in the territory of the EU under the European Company Statute, which consists a Regulation (Council Regulation 2001/2157/EC of 8.10.2001 on the Statute for a European Company) and a Directive (Directive 2001/86/EC of 8.10.2001 supplementing the Statute for a European company with regard to the involvement of employees. See http://ec.europa.eu/internal_market/company/se/index_en.htm#legislation

An alternative route is to offer banks the choice of incorporating as *Societas Europaea*.¹¹⁷ The single banking license can then be made conditional on incorporating this way, making the bank subject to special PCA and insolvency procedures. Banks that choose to incorporate under national law would not obtain the single license but most likely be restricted to cross-border banking in subsidiaries.

The voluntary approach has the advantage of stimulating institutional competition in the sense that national legislators may want to develop their own better versions of the European law.

3. National authority over single entities

Can countries on their own initiative create the conditions for banks working across Europe under a single banking license under home country control and subject to market discipline? Goldberg, Sweeney and Wihlborg (2005)¹¹⁸ use the Nordea case as a starting point for discussing approaches to supervision and crisis management for banks working across borders with a Single License.

An efficient supervisory structure should be incentive compatible in the sense that supervisory responsibility coincides with risk taking through deposit insurance responsibility. The home country approach has this property if there is no top-up insurance in host countries. Other advantages with the “home country approach” are that the organization of regulation and supervision, as well as the organization of the bank can become relatively transparent with clear assignment of responsibility, and market discipline of the bank’s behavior can be enhanced because, from the home country perspective, the bank may become “too big to save”. Statements to the effect that depositors and other creditors are not protected beyond the explicit, partial insurance scheme become credible. Therefore, market discipline is likely to have a strong effect on the bank’s behavior with respect to risk-taking and capital structure.

The mentioned advantages with home country control do not come automatically, however. As noted, the solution requires acceptance in the host countries that foreign home country supervisors are responsible for large parts of the domestic banking systems. This acceptance does not come without institutional support in the form of supervisory organization and distress resolution procedures.

Host country supervisors must rely on the home country supervisor to treat all branches fairly in a crisis situation, and they must have trust in the home country supervisor as head crisis manager. If this trust and acceptance does not exist, the host-country supervisors may intervene in a crisis to take over and bailout the branches in their countries. If markets expect this to happen, then market discipline will be weak. Thus, rules for resolution of a crisis in a bank need to be clear and credible *ex ante*. These rules need to include binding measures for “prompt corrective action”

The conclusion of this discussion is that home countries must introduce credible PCA procedures and bank insolvency law in order to “earn” recognition as supervisors of large parts of host country banking systems. The PCA-rules must assure all countries involved that the intervention will be fair in relation to all branches and creditors independent of country. The PCA rules should also be strong enough and allow intervention early enough to make LOLR assistance by central banks essentially unnecessary. Otherwise, the ambiguity about the responsibility for LOLR intervention reduces transparency with respect to crisis management responsibility.

¹¹⁷ Hertig and MacCahery argues that European Company Law in competition with national law provides incentives for institutional competition in the area of company law.

¹¹⁸ See also Angkinand and Wihlborg (2006)

The supervisors in the host countries can contribute to the credibility of the regulatory regime by making it clear that they take no regulatory, supervisory, or crisis resolution responsibility, but they accept the *ex ante* determined rules for structured intervention and partial deposit insurance. Nevertheless, the home country supervisor must be able to obtain local expertise from the host country supervisors upon request. Responsibility must not thereby be shifted towards the host countries, however.

If these principles were implemented, distress resolution procedures would become the subject of institutional competition. The government that wants to support the competitiveness of its banking industry can do so by implementing strong rule based bank insolvency procedures.

There is also concern that the potential differences in deposit insurance coverage between domestic and foreign banks operating in the same country could lead to politically unacceptable consequences in case a foreign bank with relatively low coverage fails. In the US, branches of foreign banks must join the US deposit insurance system and, therefore, US regulators also restrict the operations of foreign branches. The benefits of branch banking cannot be realized under these conditions.

If differences in deposit insurance coverage can be accepted, the coverage becomes the subject of institutional competition as well. Relatively low coverage reduces the international competitiveness of banks. Thus, the government that fears the potential costs associated with the failure of domestic bank with large international branch operations would keep the insurance coverage relatively low. The country aspiring to be the home base of large banks have an incentive to offer relatively generous insurance but the generosity will be tempered by potential costs.

Finally, the institutional support for cross-border banking through branches must include mutual recognition of insolvency procedures in the sense that host countries accept the home country's jurisdiction over bank assets located in the host country.

6. Concluding Proposals

We conclude by presenting three proposals for frameworks for resolution of cross-border banking crises. The proposals are combinations of the three approaches presented in the previous section. They have different levels of ambition with respect to achieving the objectives of effective competition among banks operating across the EU under a single license and enhanced market discipline. The first proposal combines the Stay the Course approach with the European authority approach by adding a *European Standing Committee for Crisis Management* to the status quo. The second proposal combines the European authority approach with the national authority approach by strengthening institutional competition with respect to PCA procedures and a *Lex Specialis* for bank insolvency. The third proposal, finally, relies primarily on the National authority approach but it adds a European authority dimension by having an EU body endorsing home country PCA rules and insolvency procedures as prerequisites for the Single Banking License.

A European Standing Committee for Crisis Management (based on Lastra, 2006)

Multilateral memoranda of understanding were agreed on in 2003 and 2005 (the first between central banks and supervisory authorities and the second also including finance ministries) to address the issue of co-operation in the case of a crisis. It is regrettable that they have not been published. In both cases, only a press release was made publicly available, but not the actual rules and procedures that would be applicable in the case of a crisis. These two MoUs should be published in the same way as the MoU that established the UK tripartite Standing Committee was

published in 1997. Ambiguity and uncertainty as to the procedures and loci of power are not constructive. In the event of a crisis, the procedures to follow should be crystal clear *ex ante* for the institution affected, other market participants and the public at large

Laudable as the setting of principles and procedures for sharing information in crisis situations is (the objective of both MoUs), it is ‘not enough’ to deal with a crisis, particularly when so many parties are involved. Lastra argues that an ‘institutional solution’ is needed and that the current structure for crisis management in the EU is inadequate to deal with the possibility of a pan-European banking crisis.¹¹⁹

The proposal is for the EU to set up a standing committee or high-level group with adequate representation of the interested parties: the ECB and NCBs, supervisory authorities, Ministers of Finance, the EC Commissioner for Competition Policy and the EC Commissioner for the Internal Market. This Standing Committee could meet at very short notice. Though the meeting would typically take place over the phone (or video conference), the physical location of the Committee could be in Frankfurt, the headquarters of the ECB. The composition of this Committee would vary depending on the number of countries affected by the crisis. The rule for the composition of the Committee could be based on $3n + 3$ members, with n being the number of countries affected by the crisis. Hence, there would be a tripartite representation from the national central bank, supervisory authority and Ministry of Finance for each Member State affected, and the other three members would be the EC Commissioner for Competition Policy, the EC Commissioner for the Internal Market and a representative of the ECB.

Since time and an expedient course of action are of the essence in any support operation and since it difficult to calculate *ex ante* the extent of the crisis, the rules of this Committee must be characterized by speed, efficiency and flexibility. So how would it work in practice? Suppose that a bank or a group of banks in a Member State get into trouble. The supervisory authority in that country, together with the national central bank (if supervision is separated from the central bank) would take the lead in the procedure, keeping the Treasury/MoF informed. The NCB would immediately inform the European Central Bank, which, in turn, would communicate with the Commissioner in Charge of Competition Policy and the Commissioner for the Internal Market and with the authorities in the country/countries where spill-over effects are expected.

The rules and procedures of the European Standing Committee for Bank Crisis Management ought to be made public and known *ex ante*, even though the actual details of the institution or institutions that receive support as well as the information about the level of such assistance ought to remain confidential.

A European Standing Committee for Bank Crisis Management, such as the one proposed, would not be exempt from problems.¹²⁰ Baxter points out that there is always a potential for conflict amongst supervisors from different countries, and this potential becomes ominous when a bank weakens.¹²¹

¹¹⁹ See Chapter 10 of *Legal Foundations of International Monetary Stability* (Oxford University Press, 2006). My approach has been adopted as a recommendation by the European Shadow Financial Regulatory Committee, ESFRC (of which I am a member) in its Statement 23, available at www.aei.org

¹²⁰ For instance the issue of burden sharing, the *ex post* allocation of the fiscal burden of the costs of recapitalization, is fundamental, as Goodhart and Schoenmaker have pointed out. But that would be the subject for another paper. ‘He who pays the piper calls the tune’ could be the motto for the allocation of costs. On the important issue of ‘who pays for banking failures?’ see generally David Mayes and Aarno Liuksila (eds.), *Who Pays for Bank Insolvency?* (Hampshire and New York: Palgrave, MacMillan 2004).

¹²¹ See Baxter (2004)

Societas Europaeae, Lex Specialis for bank insolvency, and PCA with institutional competition

The proposal based on Lastra (2006) for requiring international and very large banks to incorporate under European Company Law and be subject to a European *Lex Specialis* and EU PCA procedures, can be modified to alleviate the disadvantages associated with EU wide authority and legislation as discussed above. Specifically we propose that a bank would obtain a Single Banking license either by incorporating under the European Company Law or under national law provided the country has credible and effective PCA procedures and bank insolvency law. The Standing Committee on the EU level could be assigned the task of certifying national PCA procedures and bank insolvency law. With this certification EU members would have to accept branches of “certified” home countries or be subject to penalties.

The advantage of this construction is that institutional competition is strengthened in the areas of PCA procedures and bank insolvency law. Furthermore, cross border banking under a Single License cannot be hindered by arbitrary decisions in host countries.

National Authority over single entities subject to certification

This proposal is similar to the previous one but it removes EU legislation with respect to bank insolvency law and PCA procedures. It simply says that an EU body certifies the credibility and quality of national PCA rules and bank insolvency law as prerequisites for Single Banking license for banks incorporated in the country. Host countries would face penalties if they do not allow or discourage certified foreign banks from opening up branches. This proposal builds on Goldberg, Sweeney and Wihlborg (2005) who argue that a country could establish acceptance as a home country for foreign branches by establishing PCA-and insolvency procedures in law. Certification of procedures as a prerequisite for a Single Banking license, has been proposed by Eisenbeis and Kaufman (2006). The certification would reduce the ability of host countries to obstruct the establishment of branches.

An interesting issue is whether the European Court of Justice could be entrusted with this ‘certifying competence’, whether a separate EU body certifying these laws and procedures should be created or whether such certifying competence (which requires specific technical expertise) could be exercised by some other existing body at the EU level.¹²²

Concluding observations

The three proposals presented above would alleviate the incentives within the current framework for banking regulation and supervision in Europe to bail-out banks in distress by strengthening the procedures for dealing with such banks. Thereby, market discipline in banking would be enhanced with reduced likelihood of banking crises as a consequence.

The second and third proposals would contribute directly to making reality of the European vision of banks competing across Europe with a single license under home country control by providing countries with incentives to develop credible procedures for Prompt Corrective Action (PCA) and legislation for bank insolvency resolution in accordance with international law principles. We consider PCA and insolvency law for banks as complementary on the grounds that PCA enhances the credibility of insolvency law and vice versa. Without well-designed insolvency law PCA

¹²² In his comments to our paper, Daniel Gluch argues that a formal certifying competence could be exercised by some of the existing bodies, such as the DG Internal Market and Services of the European Commission.

procedures need not reduce the likelihood of bail-outs for distressed banks. Without PCA procedures the burden on insolvency law may be so great that it does not reduce the likelihood of bank runs substantially.

The design of a *lex specialis* for banks is an important issue if it is to succeed in achieving trust that banks can be closed down and liquidated without disruptions to the payment system and with predictability of outcomes for creditors. In this paper we only discussed some necessary characteristics of bank insolvency law. The following substantive elements ought to be considered in a bank insolvency regime: clear definition of the triggers for the commencement of insolvency proceedings including PCA rules, provisions concerning the role of supervisors, courts and other authorities,¹²³ rules on minimum rights and obligations of debtors and creditors, clear rules on set-off, netting and treatment of financial contracts, rules concerning burden sharing, protection of the payment systems and prompt resolution.

¹²³ Eva Hüpkes (2003) notices that ‘given the realities of the bankruptcy law, it can be observed that bank supervisors supervise branches of foreign banks differently, according to the way such branches would be treated in a bankruptcy proceeding in the supervisor’s country. Whereas a host supervisor in a single entity jurisdiction tends to act in the interests of the bank as a whole, a host country supervisor in a separate entity jurisdiction is likely to place greater emphasis on the protection of creditors transacting business with the host branches. Thus, bank insolvency resolution is very much a matter of international supervisory concern and, therefore, should not be left to bankruptcy courts’.

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Dealing with Distress in Financial Conglomerates

Dr. Thomas F. Huertas¹²⁴

Abstract

In dealing with distressed conglomerates, the less the public authorities do, the better. Markets are capable of providing funds to distressed conglomerates, either after distress occurs or, on a contingent basis, before distress materialises. Both regulators and conglomerates need to factor this into their planning, and the Pillar 2 provisions of new Basel Framework afford an opportunity for them to do so.

Market participants need to take into account the severe legal and political constraints that public authorities now face on providing lender-of-last resort facilities to institutions, including conglomerates. Market participants also need to take into account that the financial infrastructure has become more robust. Payments, clearing and settlement systems are now built to withstand the failure of even their largest participant. Such robustness might reduce the likelihood that the public authorities would consider the failure of a financial conglomerate to be a threat to financial stability.

Public authorities need to assure that they continue to strengthen the financial infrastructure, that they continue to improve supervision, and that they take full advantage of their early intervention powers to cure distress at the outset, rather than allowing problems to fester. If a conglomerate should fail, the public authorities may wish to consider whether they should use their liquidity-creating powers to prevent the second failure, but not necessarily the first.

¹²⁴ The author is Director, Wholesale Firms Division and Banking Sector Leader at the Financial Services Authority (UK). The comments in this paper are made in the author's personal capacity and do not necessarily reflect the views or position of the FSA. This version of the paper is being presented to the conference "Prompt Corrective Action and Cross-Border Supervisory Issues in Europe" hosted by the Financial Markets Group of London School of Economics on 20 November 2006.

Financial conglomerates, especially large, internationally active ones, account for the bulk of financial assets in most economies, especially developed countries. Dealing with distress in financial conglomerates is therefore an issue which affects the conglomerates themselves as well as market participants generally and the public authorities (supervisors, central banks and finance ministries). Whether distress erupts suddenly or emerges gradually, the sooner it is dealt with the better. Distress rarely, if ever, cures itself. Action is required. This paper sketches the options open to managements of financial conglomerates and to policymakers.

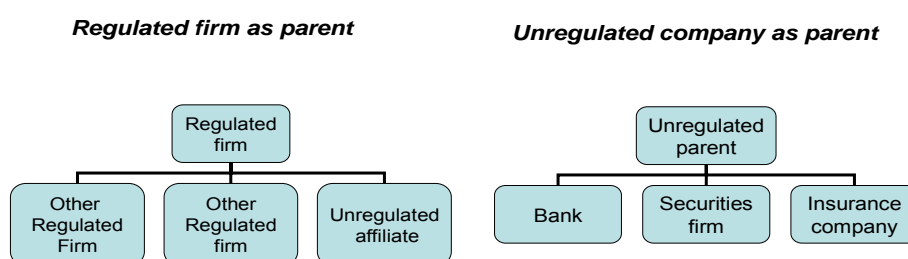
Definitions

A financial conglomerate is an entity containing two or more different types of regulated financial firms (bank, securities firm, insurance company). Financial conglomerates are therefore exposed to two or more sector-based regulatory regimes.

Financial conglomerates may take two forms:

1. *Regulated firm with other regulated firms as subsidiaries.* In this case, a regulated firm is the parent, and this regulated firm has investments in other regulated firms as subsidiaries. The regulator of the parent firm is the consolidated supervisor of the entire conglomerate.
2. *Unregulated parent holding company with regulated firms as subsidiaries.* The liabilities of the parent holding company are structurally subordinate to the liabilities issued by its subsidiaries, the regulated firms. The conglomerate will generally be subject to consolidated supervision.¹²⁵

Financial conglomerates take two forms

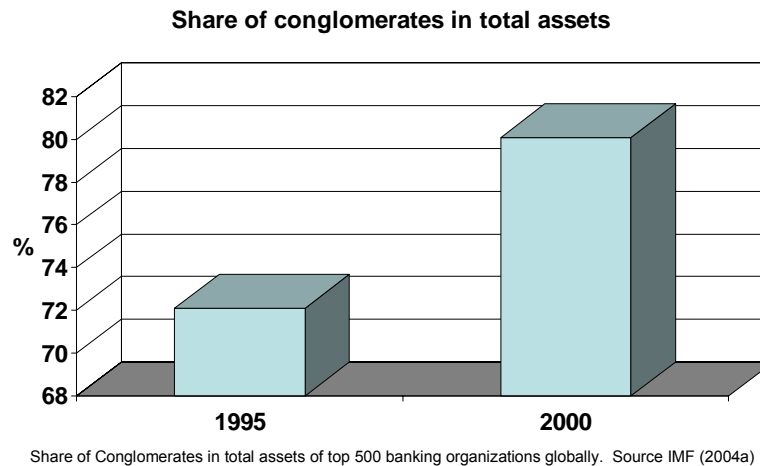


Many of the world's most prominent financial firms are conglomerates. In the year 2000, over 80% of the assets of the largest 500 banking organizations were controlled by conglomerates. Among the

¹²⁵ In the United States, conglomerates that contain an insured bank as a subsidiary are deemed to be financial holding companies, and are subject to 'umbrella supervision' by the Federal Reserve Board. In the European Union, financial conglomerates are generally subject to supplementary supervision in addition to the solo supervision of each sector (banking, investment firms, insurance). See Gruson (2004).

largest 50 banking organizations, the proportion was 94%. The share of banking assets controlled by conglomerates is increasing in both developed and developing countries¹²⁶ Most of these large conglomerates are active internationally. This exposes conglomerates to multiple winding-up (bankruptcy) procedures and to multiple schemes for protection of liability holders (depositors, policyholders, investors) in the event of bankruptcy. Conceptually, the conglomerate may also have access to multiple lenders of last resort.

Conglomerates are on the rise



Distress may result from firm-specific or general market disturbances.¹²⁷ This paper focuses on firm-specific financial distress. This is defined as deterioration in the credit of the conglomerate. This may result in reduced access to capital markets or to other sources of funding for the conglomerate as a whole or one or more of its constituent parts. Such a deterioration may be sudden (e.g. as a result of a fraud that is uncovered) or extended (e.g. as a result of several years of poor returns).

¹²⁶ IMF (2004)

¹²⁷ The following table provides an overview of the possible sources of distress:

	General market		Firm-specific	
	Financial	Technical	Financial	Technical
Description	Collapse of a specific market or failure of a critical infrastructure (e.g. payments or settlements system)	General market disturbance due to external event such as power failure or terrorist attack	Deterioration in the firm's credit rating and/or reduction in the firm's ability to access liquidity	Firm-specific failure in technology or infrastructure
Mitigation	Steps to improve robustness of markets and systems	Steps to improve market-wide resiliency and redundancy so as to assure business continuity	<i>The subject of this paper.</i>	Steps to assure firm-specific resiliency and redundancy so as to assure business continuity

The Role of Capital Markets

Distress need not spell the end of a financial conglomerate. Capital markets can fund distressed firms after distress hits. Capital markets can also generate funds that provide protection, should distress occur at a later date. Managements of financial conglomerates, as well as policymakers, need to take these factors into account in designing policies to deal with distressed financial conglomerates.

Capital markets can provide access to funds after distress hits

Over the past twenty years, markets have provided large amounts of funds to distressed firms to facilitate their restructuring. Capital markets have been especially effective, where the distress emerges gradually as a result of poor business results over an extended period of time, rather than when distress erupts suddenly (e.g. as a result of massive legal settlement against the company, or the uncovering of a major fraud).

For the distressed firm to attract capital from the markets, it must convince investors that it has an attractive on-going business strategy as well as a means of correcting past errors. Investors must be able to evaluate what has caused the distress, whether the source of the distress can be isolated from ongoing business, and whether the restructured/recapitalised firm will generate sufficient cash flows to service its debt and earn an adequate return on equity. Both equity and debt market investors require appropriate and adequate disclosure from distressed firms seeking to raise new funds, including disclosure concerning the risks to their investment that may be posed by regulatory and supervisory action. To convince investors that the distressed firm has truly drawn a line under past mistakes, the distressed firm may find it necessary to approach the markets with new management, or a clearly outlined plan for succession.¹²⁸

Recently, the economic environment has caused varying degrees of distress at several major financial institutions. Following 9/11/2001 claims for property and business interruption insurance and reinsurance rose dramatically, whilst equity prices fell sharply. The market for investment banking services took a nosedive, as did the volume of retail and institutional brokerage activity. Finally, credit arrears and write-offs rose sharply, particularly in countries, such as Germany, that experienced negative or sluggish growth for an extended period. However, none of major distressed firms have to date have failed, in part because the institutions were able to recapitalise themselves in the markets and use the proceeds to restructure themselves.

Distressed firms can raise funds in a variety of forms, including common equity, mezzanine financing (preferred stock and subordinated debt) as well as in securitization and other forms of structured finance. Distressed firms may also issue high-yield debt. Finally, distressed firms can access the market for corporate control to sell either the conglomerate itself or one or more of its subsidiaries.

Infusion of common equity underpins a firm in distress and allows the firm breathing space to execute its restructuring programme, but dilutes existing shareholders. Allianz's 2003 deeply discounted rights issue of €4.4 billion in common equity is a case in point. Following its purchase of Dresdner Bank in 2001 Allianz became a conglomerate with significant insurance and banking businesses in Germany and around the world. Post-September 2001, Allianz was adversely affected in practically every line of business: insurance claims rose dramatically; investment losses surged on its sizeable equity portfolio; credit losses mounted at Dresdner, and new investment banking and trading activity fell sharply at DKW, Dresdner's investment banking arm. By 2003, Allianz's equity

¹²⁸ Aghion, Bolton and Fries (2004): 407.

market capitalization had fallen sharply and its credit and claims-paying ratings faced the prospect of significant deterioration. If such downgrades had brought Allianz's credit and/or claims-paying ratings below investment grade, this would have severely compromised Allianz's ability to write new insurance business, particularly for large companies, and/or Dresdner's ability to act as counterparty in transactions, such as derivatives. To forestall this eventuality, Allianz turned to a group of investment banks to underwrite a new issue of common equity at a price of €38 or better. The successful fund-raising allowed Allianz to retain its AA credit rating and to continue to meet its own internal targets for capital adequacy.¹²⁹

Subordinated securities (e.g. preferred stock and subordinated debt) may provide a similar underpinning to a distressed firm. In the case of distressed firms, such issues are generally convertible into the issuer's common stock. From an investor's standpoint such securities have lower risk and a somewhat lower potential reward than common stock. Such securities are senior to common stock and therefore have a "last-in, first out" aspect to them, should the distressed firm ultimately face liquidation. Return is capped at the coupon payable on the issue plus the option value of any convertible feature attached to the issue. Conversion may be at the option of the investor, or mandatory.

From the issuer's perspective, such subordinated securities avoid the immediate dilution that would result from a new issue of common equity whilst offering a reduction in cash interest costs relative to senior debt.¹³⁰ As Standard & Poor's have commented,

Convertible debt is attractive because it enables issuers to promise investors equity upside while keeping cash interest expenses very low. This cash-preservation feature of convertible debt makes it a very useful feature, especially for relatively lower rated borrowers.

*Issuers positioned at this cusp between investment ('BBB-' and above) and speculative grade ('BB+' and below) territory are likely at a stress point, and are therefore more apt to use this alternative funding mechanism. On the demand side, the deepening of the convertible bond market and improved evaluation techniques have fuelled a broader base of investor interest from diverse domains, such as equity funds, insurance companies, and pension funds in addition to traditional players such as hedge funds.*¹³¹

Mandatory convertibles may offer particular advantages to financial conglomerates in distress. First issued in 1993, such securities must convert into common stock at a predetermined ratio at a specified date in the future regardless of the share price prevailing at the time of conversion. Mandatories are therefore well suited to support any recapitalization and/or restructuring

¹²⁹ According to press reports, "investors expressed confidence that the insurer had secured a sound financial base on which to rebuild profits." Indeed, the stock price of Allianz rebounded after the rights issue. Other institutions raising common equity included ING, Commerzbank and Hypovereinsbank.

¹³⁰ This saving in cash interest results from the lower coupon on the issue itself plus (potentially) a reduction in the spread that the issuer needs to pay on its own senior debt (since the subordinated issue provides additional underpinning to the senior debt).

¹³¹ Standard & Poor's (2004)

programme that a distressed conglomerate may undertake.¹³² In 2005 there were over \$60 billion in mandatory convertibles outstanding. Financial institutions accounted over 40% of this total.¹³³

Such subordinated convertible securities can be a very effective means of dealing with distress. For example, in 2002 Credit Suisse Group issued CHF 1 billion in mandatory convertible securities as a means of bolstering its capital ratios. Like Allianz, Credit Suisse was a financial conglomerate with significant businesses in insurance and investment banking. Like Allianz, Credit Suisse had been adversely affected by the concurrence of significant increases in insurance claims, substantial losses in its equity portfolios, and a dramatic fall-off in investment banking activity. In addition, Credit Suisse had incurred large losses in its loan portfolio. Its credit rating was downgraded from A+ to A, putting pressure on its ability to act as a counterparty in wholesale transactions, such as derivatives.¹³⁴

High-yield markets also offer firms in distress the opportunity to raise funds. Although relatively few financial conglomerates have become 'fallen angels', it is likely that a financial conglomerate in distress would also have access to the high-yield debt markets similar to that enjoyed by non-financial firms that become distressed. Indeed, Merrill Lynch includes 22 banks/thrifts and 21 insurers in its high-yield index.¹³⁵

Securitisation offers the distressed financial conglomerate the possibility of raising funds based on the credit rating of the assets being securitised rather than the credit rating of the conglomerate itself. This may result in a lower all-in cost of funding for the conglomerate as well as an improvement in its capital ratios (provided the bank does not retain an interest in the "equity" tranche).

Securitisation need not be restricted to fully performing assets. Securitization of distressed loan portfolios allows the conglomerate to divest itself of "past mistakes." Such a tactic makes particular sense, if the securitised line of activity forms no part of the conglomerate's plans for the future. The conglomerate sells the distressed loans to a third party, who places these loans into a separate legal vehicle and securitizes the cash flows from the loans. The third party generally retains an equity interest in the vehicle.¹³⁶ This allows the conglomerate to focus on its ongoing business, and leaves the new investor with the task of collecting the loans that are in arrears. Similar procedures have been used by insurance companies which have put certain lines of business into run-off, and then sold the run-off company to a third party investor.¹³⁷

In addition, the distressed conglomerate may sell assets or businesses outright in order to raise funds and/or concentrate its managerial activities on a smaller range of activity. Today, saleable

¹³² Although mandatories may not count toward Tier 1 regulatory capital, they may receive equity recognition for rating agency purposes. For example Standard & Poor's (2004) stated that, "Mandatories offer ... issuers a credit advantage because at shorter maturities (three years or less) they are not counted toward debt; instead they are counted as 'equity credit' in calculating leverage ratios."

¹³³ Data on mandatories outstanding was provided to the author by UBS.

¹³⁴ Other issuers of mandatory convertible securities included Swiss Life and Banco Commercial Portugues (Dow Jones Newswires, 27 November 2002).

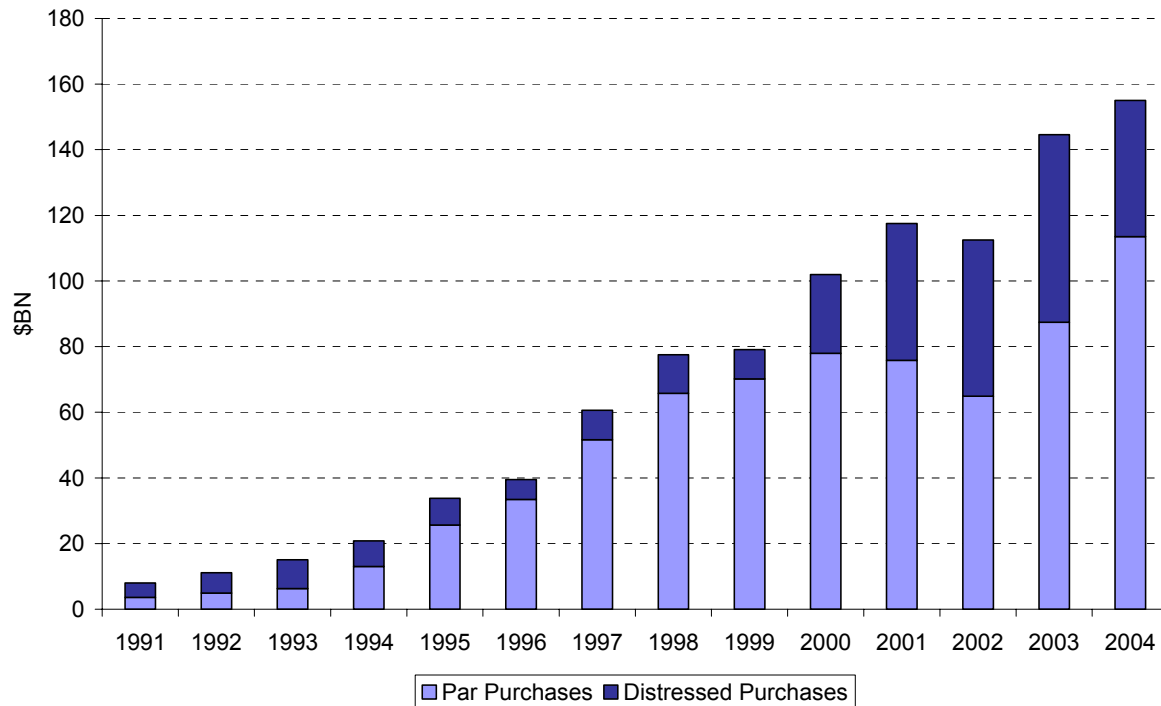
¹³⁵ Source: Bloomberg.

¹³⁶ See Fitch Ratings (2003). Italian banks (aided by tax concessions) have active participants in the securitization of NPLs. Private equity firms have been particularly active in the purchase of distressed loan portfolios and insurance companies in run-off, such as closed life funds.

¹³⁷ A recent example of an insurer run-off sale was the sale by Royal & Sun Alliance of its closed life book by to Resolution Life (Sept 2004). Total consideration was £850m. In the UK, more than 200 non-life general insurance companies are in run-off, of which 33 have been sold to third party investors (Source: UK FSA).

assets include far more than just marketable securities. In particular, the loan market has become much more liquid, for both investment-grade and distressed loans. In the United States, for example, trading in loans has grown over 20% per annum over the past decade, and in 2004 such trading amounted to over \$150 billion at major banks, including \$41 billion in distressed loans.¹³⁸

Trading in Loans at Major Banks in the United States, 1991 - 2004



Source: Loan Pricing Corporation (2005)

The sale of distressed loans (either as whole loans or via securitization) may also make it simpler for the conglomerate to raise equity or subordinated capital for the ongoing business, since investors in such securities only need to evaluate the "clean" company and its business plan.

Distressed conglomerates may access the market for corporate control. The distressed conglomerate has the option of selling itself or one of its constituent businesses to third parties.¹³⁹ Deregulation and globalisation in financial services has vastly expanded the number of potential acquirers of financial businesses.

Finally, in the case of conglomerates organised as parent holding companies with regulated entity subsidiaries, recourse to double leverage may be a supplemental way to strengthen the regulated subsidiaries and protect the liabilities (e.g. deposits) that form the rationale for public policy concerns. Such parent company debt is structurally subordinate to the liabilities of the regulated entities. Raising debt at the parent level and down-streaming the proceeds of this debt as equity into the regulated subsidiary strengthens the protection afforded to depositors and/or policyholders.

Capital markets can provide protection in advance of the occurrence of distress

¹³⁸ The market for distressed loans is also growing in other countries, such as Germany. See Bowman (2005).

¹³⁹ The sale of Abbey in the UK to Banco Santander is an example. Abbey had come under pressure as a result of a failed expansion into corporate banking and severe losses in its investment portfolio of high yield bonds. Although Abbey had embarked on a restructuring programme, the sale to Santander assured and accelerated the success of this programme.

In addition to providing capital after distress hits, capital markets can provide protection in advance. Over the past decade, capital markets have developed various instruments that provide firms with access to liquidity and/or capital, should distress occur at some point in the future. Such instruments are, in effect, a partial, 'pre-packaged' restructuring. Although they do not provide the same protection against distress as that provided by common equity, they may be an effective means of limiting the impact of distress on the issuing firm (and on the rest of the financial system), should the issuing firm become distressed at some point in the future. Essentially, the issuance of contingent capital allows the conglomerate to raise funds post-distress at pre-distress levels plus a premium reflecting the probability that the firm may become distressed at some point during the life of the contingent capital instrument.¹⁴⁰ Access to funds is generally based on the triggering of a defined event, and may be contingent on the conglomerate retaining positive net worth. If the defined event does not occur, the funding would not be provided to the conglomerate.

Contingent capital may be provided on an unfunded or funded basis. Unfunded arrangements include contingent loan commitments and contingent capital facilities, but these involve a credit risk on the counterparties undertaking the commitment. In a funded facility, the capital is raised immediately at inception, and the proceeds are placed in a trust, which invests the cash in highly rated securities pending the occurrence of the trigger event. If the trigger is breached, the trust liquidates its investments, pays the proceeds to the conglomerate, and receives newly issued obligations of the conglomerate in return. Such newly issued securities may be debt, equity or hybrid securities such as convertible preferred stock.

For example, insurance companies issue contingent surplus notes. The first such note, a \$400 million issue by National Mutual in 1995, mandated that the proceeds be invested by a trust in a portfolio of highly rated securities and allowed National Mutual to call for the issue of surplus notes, in the event that its state insurance commissioner placed a restriction on National Mutual paying principal and/or interest to policyholders.¹⁴¹

Catastrophe bonds form a way to provide capital to insurance companies in case an insured event exceeds a particular level. Such bonds are essentially a derivative that pays out if losses exceed a certain trigger coupled with a fund invested in low risk securities pending the occurrence of the extreme event (this eliminates the counterparty risk that would otherwise be associated with the derivative).¹⁴² The first sizeable catastrophe bond was issued in 1997 by USAA to protect against extreme losses from hurricanes in the United States. Since that date various insurance and reinsurance companies have publicly issued \$8.7 billion in catastrophe bonds in 59 separate issues. In addition, there has been considerable private placement issuance, particularly in the last few years. The total amount of catastrophe bonds has risen steadily, reaching a peak of over \$4 billion at the end of 2004.

Although this market is relatively small, it is already showing elements that could well lead to further growth. A separate investor base has emerged, which looks to invest in catastrophe bonds as a means to diversify its portfolio (event risk is generally not correlated with credit risk). The

¹⁴⁰ There may also be further underwriting and/or placement fees, if the capital is actually drawn. See Banks (2005): 131.

¹⁴¹ Banks (2005): 128 at n. 27.

¹⁴² Banks (2005): 111 – 146. Note that catastrophe derivatives provide the same protection as catastrophe bonds, albeit with credit risk on the counterparty.

number of issuers is increasing, and the technique has been extended from property and casualty (general) insurance to life insurance. Although Swiss Re continues to be by far the largest single issuer, a stream of first-time issuers is now tapping the catastrophe bond market. As a result, pricing on catastrophe bonds has begun to mirror more closely the yields on similarly rated corporate bonds as well as to become more competitive with traditional reinsurance.¹⁴³

Taking the Capital Markets into Account

Pillar 2 of the new Basel framework provides a means for both regulators and managements of conglomerates to take into account the role that capital markets could play in alleviating distress. Under Pillar 2 banks, and therefore the conglomerate of which the bank may be a part, must conduct stress tests and outline the capital plan that they would implement if the bank were to suffer distress.

Lender of last resort is harder to access

In contrast to capital markets, lenders of last resort have become more difficult for distressed financial firms to access. For example, recent changes in legislation and/or regulation in the United States and the United Kingdom have made it much more difficult for public authorities (such as deposit insurance agencies) to provide open bank assistance or for central banks to provide lender of last resort facilities to distressed banks (including banks that are owned by conglomerates). Essentially, such aid is no longer exclusively a decision of the central bank or the deposit insurance agency, but can only be granted after consultation with (and in most cases approval of) the Ministry of Finance. Any provision of credit to a conglomerate in distress must be based on a demonstration that such credit is necessary in order to preserve financial stability. Under such a process, there can be no assurance that such approval would be forthcoming at all or in a timely manner.

In the United States, legislation constrains the FDIC from providing open bank assistance. The FDIC must demonstrate that the open bank assistance satisfies the least cost (to the Fund) requirement. The FDIC must further demonstrate that the proposed assistance would not, in any manner, benefit the bank's shareholders.¹⁴⁴ The only exception to this rule is where the failure of the bank "would have serious adverse effects on economic conditions or financial stability".¹⁴⁵ In such an exceptional case, the Secretary of the Treasury, "in consultation with the President" can make such a recommendation, provided that the Treasury Secretary had previously received a recommendation to such effect that was endorsed by two thirds majorities of both the Federal Reserve Board and the FDIC's Board of Directors.¹⁴⁶ Plainly, open bank assistance (or, in more common parlance, a bail-out) is difficult to arrange.

¹⁴³ MMC Securities (2005)

¹⁴⁴ 12 U.S.C. §§ 1821(a)(4)(B), 1823(c)(4); Macey, Miller and Carnell (2002:368)

¹⁴⁵ 12 U.S.C. §§ 1821(c)(4)(G)

¹⁴⁶ Macey, Miller and Carnell (2002): 369. Such a recommendation must be documented by the Treasury, and it is subject to further review by the General Accounting Office (including potential for exception to create moral hazard). The FDIC must levy a special assessment to recoup the additional cost of deviating from the least cost resolution. Such assessment applies not only to insured institutions' domestic deposits but also to their foreign deposits and to their non-deposit liabilities.

The situation in the United Kingdom is similar. With the transfer of banking supervision from the Bank of England to the FSA in 1998, a memorandum of understanding was published which set out a framework for co-operation between those two organisations and the UK Treasury. This includes the arrangements for implementing any support operations. The MOU notes that in exceptional circumstances there may be a need for support operations but these are "expected to happen very rarely and would normally only be undertaken in the case of a genuine threat to the stability of the financial system to avoid a serious disturbance in the UK economy". In such cases, the three bodies would work closely together but ultimately the Chancellor of the Exchequer has "the option of refusing support action".¹⁴⁷

For internationally active conglomerates, additional considerations arise. Although central banks may agree among themselves as to who should be the relevant lender of last resort, the final deliberation as to whether assistance should be provided may hinge on the degree to which foreign, as well as domestic, parties would be the beneficiary of such assistance.

Financial systems are more robust

Although adverse impacts on financial stability may serve as a rationale for providing public funding for a distressed financial conglomerate, it is increasingly unlikely that the financial infrastructure would collapse as the result of the failure of a conglomerate, even if the distressed conglomerate were very large.

Why? The financial infrastructure has become more robust. Over the past decade, industry participants and public authorities have considerably strengthened the financial infrastructure. The key components of this infrastructure are now robust, in the sense that the system would continue in operation, even if the largest participant in the system were to fail.

Major payments systems are robust

Payment systems are the foundation of the financial infrastructure. They serve as the basis for settlement in all financial markets as well as the settlement of transactions in goods and services. Hence, "robust payments systems are a key requirement in maintaining and promoting financial stability".¹⁴⁸

Over the past two decades industry participants and public authorities have moved to make systemically important payment systems robust in all developed and many emerging economies. Key milestones in this effort were the publication of principles for multilateral netting (the so-called Lamfalussy principles)¹⁴⁹ and the development of real-time gross settlement systems.¹⁵⁰ In 2001 the

¹⁴⁷ Memorandum of Understanding between HM Treasury, the Bank of England and the Financial Services Authority. <http://www.fsc.gov.uk/>. A recent review confirmed these arrangements ("Do we need new statutory powers?" Report of the task force on major operational disruption in the financial system, December 2003. <http://www.fsc.gov.uk/>). Eddie George (1993), Governor of the Bank of England, described the issues that the authorities would consider in the event of such a disruption. The objective of any support would be to support the financial system as a whole and not to rescue a specific institution. The aim is to provide liquidity and not to prop up an insolvent institution. Before having recourse to the lender of last resort, the authorities would first, explore a commercial solution, such as looking for support from shareholders, prospective buyers and creditors; and second, assure that any support was not a public subsidy and would be offered only on penal terms.

¹⁴⁸ Committee on Payments and Settlement Systems (2001): 1.

¹⁴⁹ Bank for International Settlements (1990)

Committee on Payments and Settlements Systems published core principles for systemically important payments systems.

Three principles deserve mention here:

- i. *"The system should provide prompt final settlement on the day of value, preferably during the day and a minimum at the end of the day."* To achieve such prompt final settlement, each step along the payments process has to be final. In other words, the system requires:
 - a. Sender finality. The payment is final and irrevocable, as far as the sender is concerned, the moment that the sender sends its instruction into the system.
 - b. Receiver finality. The payment is final as far as the ultimate beneficiary is concerned, as soon as the system credits the beneficiary's bank (the receiver bank) with the payment. Any risk on the payment system or the sending bank is for the account of the receiving bank. The ultimate beneficiary only has an exposure to its own bank.
 - c. Settlement finality. The system settles on schedule. There is no possibility of a system unwind (ex post cancellation of the payments made over the system), even if one of the largest senders of payments into the system becomes bankrupt. Any exposure of receiving banks or the system operator to the failed sending bank is resolved outside the payment system itself.

Real-time gross settlement systems (RTGS) operated by central banks meet these criteria. Under RTGS the central bank guarantees each payment made through the system. Even if one of the senders of a payment were to fail, the system would remain in operation. Central banks limit their risk under such systems by limiting the intra-day credit that they extend to any one bank sending payments over the system. For example, the Federal Reserve sets a limit on the intra-day credit that it is willing to extend to any bank utilizing the Fed Wire system. The ECB also sets a limit on intra-day credit for banks using the Target system. Before a sender is allowed to send a payment onto the Target system, a check is conducted to assure that the sending bank has enough funds in its reserve accounts (or collateral) at one or more of the central banks in the ECB. If there are insufficient funds, the payment is not admitted to the system, but queued until such funds are available. In the UK, the CHAPS system operates in a similar fashion.¹⁵¹

- ii. *"A system in which multilateral netting takes place should, at a minimum, be capable of ensuring the timely completion of daily settlements in the event of an inability to settle by the participant with the largest single settlement obligation."* To assure that this is the case, the payment system should:

¹⁵⁰ Committee on Payment and Settlement Systems (1997)

¹⁵¹ For further information on CHAPS see www.apacs.org.uk/about_apacs/htm_files/chaps1.htm.

- a. Create final settlement arrangements, generally with the relevant central bank, for transfer of net balances due to/due from participating banks to the system.¹⁵²
 - b. Establish, and monitor in real time, a credit limit for each sending bank on the net amount that the sending bank can owe to all other members on the system. For example, CHIPS sets the credit limit for each sending bank to be a fraction of the sum of the bilateral credit limits that each sending bank receives from the other participants in the system. The EBA uses a similar approach for its euro payments system.
 - c. Have on hand at all times liquid collateral greater than or equal to the largest net debit sender cap on the system. If one of the sending banks were to fail, the system operator would liquidate the collateral and use the proceeds to meet the obligations of the failed sending bank to the system. This allows the system to settle, and the payment system to continue to in operation (without the further participation of the failed sending bank).
- iii. *"The system should have a well founded legal basis under all relevant jurisdictions."* To assure sender and settlement finality, one has to insulate the operations of payments and settlement systems from the bankruptcy of the participants. This involves assuring that the administrator cannot reverse payments made into the system as well as assuring that the administrator cannot lay claim to the collateral provided by the failed sending bank to the payments system. To accomplish these objectives, it has been necessary in many jurisdictions to exempt payments entered into a payments system from the so-called zero-hour rule and other aspects of the bankruptcy code. The netting arrangements underlying many payments and securities settlement systems have been given similar exemptions, as have the collateral pledged to payments and settlement systems. Together these measures provide legal certainty for payments and settlement systems.¹⁵³

Practically all systemically important payments systems in developed countries meet these criteria. This is also the case for payment systems in many emerging economies. Over forty countries have implemented real time gross settlement systems for high value payments. Notable examples are Fed Wire in the United States, Target in the euro-zone and CHAPS for sterling payments. Netting-based payment systems in major currencies also meet the core principles for systemically important payment systems. Notable examples are CHIPS, the dollar payment system operated by the New York Clearing House, and the EBA system for euro payments.

¹⁵² For example, the CHIPS system, the system operated by the New York Clearing House and used to clear international dollar-based payments, has a special zero-balance account with the Federal Reserve Bank of New York. Participating banks that owe funds to the system must transfer money from their central bank reserve account into this zero-balance account before the settlement deadline. CHIPS then transfers from this zero-balance account the funds due to the banks that are net receivers for that settlement cycle. This returns the balance in the special account to zero and completes the settlement.

¹⁵³ For example, the European Union has created a general carve-out for payments and settlement systems from the insolvency laws of the Member States. EU Directive (1998/26 OJ L 166, 11/06/1088) on Settlement Finality in Payment and Securities Settlement Systems takes precedence over normal insolvency law, protects netting in payments and securities settlement systems, and insulates collateral given to operators of those systems or central banks in the performance of their functions from the effect of bankruptcy of the participant. EU Directive (reference) on Financial Collateral Arrangements provides a uniform conflict-of-laws treatment of book-entry securities used as collateral in a cross-border context and protects these arrangements from the effect of bankruptcy. See also Wessels (2003): 26–27.

The foreign exchange market is more robust

The foreign exchange market is also more robust. The introduction of CLS Bank in 2002 has vastly reduced so-called Herstatt risk, the risk that banks would settle one leg of a foreign exchange transaction in advance of the other and therefore be exposed for the full amount of the other leg, should the counterparty bank fail before settlement of the second leg became final. CLS Bank is a special purpose bank, established and owned by a group of large banks to settle foreign exchange transactions on a continuous linked basis.

CLS Bank matches the foreign exchange transactions of its participating banks, provides for multilateral netting of the payment obligations of participating banks in accordance with the Lamfalussy principles, and then arranges for the settlement of the net obligations of the banks to each other on a payment-versus-payment basis. The final settlement of the net obligations occurs over the real time gross settlement systems of central banks in the currencies covered by CLS. CLS estimates that approximately 90% of the gross exposure is eliminated through the multilateral netting arrangement, and that the remaining 10% of the risk is materially reduced through the daily net settlement on a payment versus payment basis.¹⁵⁴

Participating banks post collateral with CLS Bank. If one of the participating banks fails, the collateral is liquidated, and the proceeds of the collateral are used to meet the obligations of the failed bank to the settlement system. The settlement can occur, even if a participating bank fails.

To facilitate the reduction in risk accomplished through CLS, countries have amended national laws to grant legal certainty to the multilateral netting arrangement employed by CLS. Nations have also extended the opening hours of their national RTGS systems so that, for a number of hours each day, all RTGS systems in participating currencies are open at the same time. This permits the final settlement to occur on a payment-versus-payment basis.

Currently, CLS Bank covers 15 major currencies, including the dollar, euro, yen, sterling and Swiss franc. Over 55 banks are participants in CLS, including all the major participants in the foreign exchange market. Overall, CLS settles nearly \$2 trillion in foreign exchange transactions per day, over 50% of the estimated total FX market. Thanks to CLS, and the underlying adjustments in law and in the operation of national payment systems, Herstatt risk has largely been eliminated. The foreign exchange settlement system is more robust.

The derivatives markets are more robust

The derivatives markets are also more robust. Over the past two decades market participants have acted, principally through their trade association, the International Swap Dealers Association (ISDA), to create standard documentation for bilateral, close-out netting of derivative transactions. Although the standard ISDA contract has by no means eliminated counterparty risk from the derivatives markets, it has substantially reduced that risk.¹⁵⁵

Public authorities have strongly supported this process. In many jurisdictions, they have changed laws to create legal certainty for netting. Today, the standard ISDA contract can be used to document most derivative contracts, including interest-rate, cross-currency, equity and credit default swaps. This allows for bilateral close-out netting not only within each product line but also

¹⁵⁴ For further information see CLS website at www.cls-group.com.

¹⁵⁵ Harding (2004)

across products, not only within each country but across all countries where netting is legally valid. Today, the standard ISDA contract is valid in 45 jurisdictions around the world, including the US, Japan, the UK and practically every other developed country/financial centre.¹⁵⁶

ISDA has also facilitated, through the development of standardised documentation, the collateralisation of exposures remaining after giving effect to netting. This has led to a steady increase in the share of residual exposure that is collateralised (generally with either cash or government securities). In 2005, fifty-five percent of OTC derivative exposure was supported by collateral, up from twenty-nine percent in 2003.¹⁵⁷

Finally, the industry has worked with regulators to eliminate the risks posed by unauthorised assignments and by mounting backlogs in confirmations for credit derivatives. It is now turning to improving the back office for equity derivatives.

The securities markets are more robust

In addition, the securities markets are more robust. Clearing and settlement of securities – the process by which the ownership of securities is transferred finally and irrevocably from one investor to another, typically in exchange for a corresponding transfer of funds – is central to all securities markets activity and is thus a linchpin of any financial system.¹⁵⁸ Over the past two decades, market participants, together with public authorities, have made vast strides in reducing the risk associated with the clearing and settlement of securities.

In 1989 the Group of Thirty developed a series of recommendations for improving the efficiency and reducing the risk in clearing and settlement systems.¹⁵⁹ In the ensuing decade industry participants and public authorities made considerable progress in implementing these recommendations in leading securities markets around the world. In 1999 the Committee on Payments and Securities Systems and the Technical Committee of IOSCO formed a Task Force on Securities Settlement Systems that developed minimum standards that securities settlement systems should meet. These reinforced and extended the original Group of Thirty recommendations.¹⁶⁰ In 2003 the Group of Thirty established a further set of recommendations, going far beyond the minimum standards set by the CPSS and IOSCO. The goal of the new recommendations is to make the world's fifteen leading securities markets into an efficient, safe and interoperable global network.¹⁶¹

Progress falls under five headings:

- i. *Dematerialization.* Paper-based trading and settlement has practically disappeared. Central securities depositories (CSDs) have immobilised, if not entirely dematerialized, securities

¹⁵⁶ See www.isda.org.

¹⁵⁷ ISDA (2005)

¹⁵⁸ Group of Thirty (2003): 2.

¹⁵⁹ Group of Thirty (1989)

¹⁶⁰ Committee on Payment and Settlement Systems and Technical Committee of the International Organization of Securities Commissions (2001) and (2002)

¹⁶¹ Group of Thirty (2003). A progress report may be found in Group of Thirty (2005).

certificates. Trading in practically all securities in major markets is on an electronic, book-entry basis.¹⁶²

- ii. *Automation and acceleration of trade matching and confirmation.* Market participants have largely agreed among themselves and implemented common technical and communications standards at national level to facilitate trade matching and confirmation. Generally, trade confirmation occurs on the trade date itself (T + 0) as soon as possible after execution. Market participants and public authorities are now, under the auspices of the Group of Thirty, embarked on an ambitious plan to harmonize messaging standards and communications protocols cross major markets in order to facilitate cross border trading. This is making the most progress within the European Union.¹⁶³
- iii. *Reduction in interval between trade date and settlement date.* Significant strides have been made in reducing the interval between trade date and settlement date. Generally, such intervals have been reduced to three days or fewer. (At the end of the 1980s the interval had been as long as fourteen days.) As this interval shrank, so too did the risk that one of the counterparties to a trade would fail between the trade date and the settlement date, leaving the other counterparty short of either cash or securities.
- iv. *Delivery versus payment.* Practically all major securities markets have implemented a delivery versus payment as the mode of settlement for securities transactions. This assures that each of the counterparties to a trade cannot send value to the other, unless it is simultaneously receiving equivalent value from the other in return.
- v. *Introduction of a central counterparty (CCP)* creates a single entity that is a buyer to every seller and a seller to every buyer. The CCP takes the counterparty risk that the buyer will not deliver cash, and that the seller will not deliver securities in a timely fashion. The CCP facilitates anonymous trading. Indeed, without a CCP, it is difficult, if not impossible, to assure implementation of best-execution rules.

However, the CCP also concentrates risk. A risk management failure by a CCP has the potential to disrupt securities markets and the settlement systems serving those markets. Consequently, a CCP must observe a number of principles to assure that the CCP is robust, i.e. that it can survive the failure of even its largest participant(s) to pay on time and/or to pay at all.¹⁶⁴ To achieve this, the CCP needs to limit its exposure to each of its participants and to require participants to collateralise any remaining exposure with highly liquid instruments.

¹⁶² Group of Thirty (2005): 16 states that the removal of paper stock certificates from the clearing and settlement process "has largely been achieved through dematerialization in a few markets and immobilization of physical certificates in the rest".

¹⁶³ Group of Thirty (2005): 3 - 4 and 16 – 18.

¹⁶⁴ Committee on Payments and Settlements Systems and Technical Committee of the International Organization of Securities Commissions (2004) sets as a minimum the ability of the CCP to survive the failure of its largest participant. The Group of Thirty (2003) and (2005) aims to achieve an even higher standard.

CCPs have already been established in all major markets for cash equities, and existing CCPs are extending their range of services into the derivatives markets, including the clearing of OTC derivative contracts.¹⁶⁵

Taken together, the improvements described here have considerably strengthened the financial infrastructure. Although further improvements can undoubtedly still be made, the financial system is much more robust than had been the case as recently as 1990.

Implications for conglomerates and their institutional creditors

Conglomerates cannot count on their being rescued, if they come under distress. Access to the lender of last resort is severely restricted. Although the immediate adverse impact of a failure on financial stability could provide a rationale for providing such emergency funding to a distressed conglomerate, the financial infrastructure is now much more robust. Indeed, its most important pillars – payments and settlement systems -- have been reinforced to withstand the failure of even their largest participant. This may lessen the likelihood that public authorities would conclude that they had to aid the distressed conglomerate in order to preserve financial stability. Indeed, public authorities might conclude that allowing the conglomerate to fail would reduce moral hazard, strengthen market discipline and thereby lessen the probability of future financial crises.

Creditors of conglomerates should realize that they are at risk when they lend to conglomerates. Although regulators and supervisors have the authority to intervene early to help the conglomerate resolve financial stress, there is no guarantee that the regulator will be able to spot the distress in time, or that the regulator will be able to work out a solution that will leave creditors whole. Creditors, especially institutional creditors, have the responsibility to exercise due diligence before they invest in financial instruments issued by conglomerates.

This is especially true for creditors of an unregulated parent holding company at the top of a conglomerate. Such creditors are structurally subordinate to the creditors of the operating and regulated subsidiaries, such as banks and insurance companies. Creditors of the operating subsidiaries, such as depositors and policyholders, have first claim on the cash flows of those subsidiaries. Such subsidiaries are also subject to constraints on the amount of cash that they can upstream to the parent holding company in the form of dividends and/or extensions of credit to the parent.

Moreover, in the case of distress, public authorities in some jurisdictions may, in order to protect depositors and/or policyholders, sell such operating subsidiaries to third parties without the consent of the parent holding company, should the parent company be unable or unwilling to recapitalize the subsidiary.¹⁶⁶ Needless to say, the public authorities will not necessarily have uppermost in their minds the interests of the parent holding company's shareholders or creditors, when deciding on the

¹⁶⁵ Group of Thirty (2005): 18.

¹⁶⁶ Parent holding companies have limited liability with respect to their regulated entity subsidiaries. Regulators generally cannot compel the parent holding company to act as a source of strength for the regulated entity (Macey, Miller and Carnell [2002]: 366). However, the regulator may insist that the regulated entity be adequately capitalised at all times and require the parent company to guarantee any recapitalisation plan proposed for the regulated entity subsidiary. If the parent company does not agree to recapitalise the subsidiary or fails to perform on its guarantee, the regulator may, subject to various procedures, rule that the parent holding company is no longer a fit and proper controller of the regulated entity. Such a finding may further result in a forced sale of the regulated entity subsidiary to a third party.

price at which to sell the bank or insurance company subsidiary. The public authorities' primary concern will be to assure that the new owner adequately capitalises its new entity so as to protect depositors and/or policyholders.

There is ample evidence that investors appreciate the difference between the parent holding company and its operating subsidiaries. Rating agencies generally assign a lower rating to the parent holding company relative to its operating subsidiaries, and parent holding companies generally fund themselves at rates higher than those paid by operating bank subsidiaries. This is consistent with the fact that the liabilities of the parent holding company are structurally subordinate to those of the operating bank.

**Ratings of selected parent holding companies and operating bank subsidiaries
(May 2005)**

Parent Holding Company	Rating	Operating bank	Rating
Citigroup	AA-	Citibank, N.A.	AA
Bank of America Corp.	AA-	Bank of America N.A.	AA
HSBC Holdings PLC	A+	HSBC Bank PLC	AA-
JPMorgan Chase & Co	A+	JPMorgan Chase Bank N.A.	AA-
Credit Suisse Group	A	Credit Suisse	A+

Source: Standard & Poor's

Implications for public authorities

In light of the above, what should public authorities do? They should focus, in my view, on three things: further strengthening the financial infrastructure, further improving supervision, and further sharpening remedial measures, should a conglomerate become distressed. If a distressed conglomerate should actually fail, the public authorities should stand ready to provide abundant liquidity to the market, either through open market operations or through loans to individual institutions at penalty rates.

Further strengthening the financial infrastructure

Although payments, clearing and settlement systems have become more robust, further improvements can still be made, generally by public authorities' working together with industry participants. In the payments area, a Task Force, chaired by the Committee on Payments and Settlement Systems, will develop, after consultation with market participants, general principles that should be satisfied by remittance systems, providers and financial intermediaries. In the securities settlement area, the Group of Thirty (a public-private group) has embarked on an ambitious programme to transform the leading fifteen securities markets into an interoperable global network. This would increase the efficiency and further improve the safety of the securities markets.¹⁶⁷

There is also work to be done to assure the effectiveness of the measures taken to strengthen the financial infrastructure. In particular, there is evidence that major market participants are not taking sufficient care to confirm their derivatives trades. In the event of a default by a major market maker, there is a danger that counterparties will not perform, or be required to perform, on unconfirmed

¹⁶⁷ Group of Thirty (2003) and (2005).

trades. Protection would evaporate and there could be serious knock-on effects for the market as a whole. Although industry and supervisors have made significant progress in correcting this problem, particularly with respect to credit derivatives, much remains to be done both by firms and their supervisors.

Further improving supervision

Over the past decade regulators have worked intensively to improve the quality of supervision of financial institutions around the world. In banking,¹⁶⁸ securities¹⁶⁹ and insurance,¹⁷⁰ regulators have established Core Principles for Supervision. The IMF and the World Bank have jointly reviewed scores of countries with respect to their adherence to these principles, identified gaps, and examined, together with national authorities, how these gaps might be closed.¹⁷¹

Most of the principles are basic to all financial institutions, whether or not they are part of conglomerates. These include the maintenance of minimum capital requirements,¹⁷² limits on large exposures,¹⁷³ and requirements for the accurate valuation of assets and liabilities (and therefore capital).¹⁷⁴

Two principles have particular relevance to the supervision of conglomerates. The first is a restriction on the exposures that a regulated entity (bank, securities intermediary or insurance company) may have to related counterparties. Such exposures should be limited in amount and on arms' length terms. For example, Core Principle 10 of the Core Principles for Effective Banking Supervision states that:

In order to prevent abuses arising from connected lending, banking supervisors must have in place requirements that banks lend to related companies and individuals on an arms' length basis, that such extensions of credit are effectively monitored, and that other appropriate steps are taken to control or mitigate the risks.

Although most countries have strong controls in place, a significant minority do not comply with this Core Principle on connected lending. According to the IMF and World Bank, over 40% of the countries evaluated under the FSAP programme were "not compliant" with Core Principle 10 on connected lending. The reasons for non-compliance varied: in some countries there were no regulations at all with respect to connected lending. In others the regulations existed, but lacked a

¹⁶⁸ Bank for International Settlements (1997)

¹⁶⁹ International Organization of Securities Commissions (2003)

¹⁷⁰ International Association of Insurance Supervisors (2003)

¹⁷¹ International Monetary Fund and the World Bank (2005). In light of this experience, public authorities are updating the Core Principles in banking. See also The Joint Forum (2001).

¹⁷² For example, Core Principle 6 for Banking states that, "Regulators shall impose minimum capital requirements on banks. For internationally active banks, these must not be less stringent than those in the Basel Capital Accord."

¹⁷³ For example, Core Principle 9 for Banking states that "Banking supervisors must be satisfied that banks have management information systems that enable management to identify concentrations within the portfolio, and supervisors must set prudential limits to restrict bank exposures to single borrowers or groups of related borrowers."

¹⁷⁴ For example, Core Principle 8 for Effective Banking Supervision states that "Banking supervisors must be satisfied that banks establish and adhere to adequate policies, practices and procedures for evaluating the quality of assets and the adequacy of loan loss provisions and reserves." Aghion, Bolton and Fries (2004) illustrate the importance of adhering to this principle. According to their study, the failure of banks to make adequate loan loss provisions, coupled with the tolerance of such practices by bank supervisors, increases the frequency and severity of bank failures. Strict accounting forces both bank managements and supervisors to intervene early to correct problems.

legal basis. In others, the definition of connected parties was inadequate or overly rigid. Plainly, there is room for significant improvement here, especially in emerging economies.¹⁷⁵

Consolidated supervision is the second of the principles particularly relevant to conglomerates. Such supervision alerts the supervisors of the regulated entities to problems that may arise as a result of lack of capital, liquidity and/or control in the rest of the enterprise outside the supervisor's immediate control. For example, Core Principle 20 for Effective Banking Supervision states that "An essential element of banking supervision is the ability of supervisors to supervise the banking group on a consolidated basis." The emphasis is on assuring that the banking supervisor has sufficient information about the rest of the group, not necessarily on imposing bank capital requirements on the group on a consolidated basis.

Although major jurisdictions, such as the United States and the European Union, meet this principle for banking groups¹⁷⁶, nearly half the countries assessed under the FSAP programme do not. The major reasons are the lack of any requirement for consolidation or consolidated supervision as well as the lack of a legal basis to require consolidated reporting. In some cases of non-compliance, consolidated reporting does exist, but its scope is too narrow.¹⁷⁷ Plainly, there is room for further improvement here, especially in emerging economies.

Further sharpening remedial measures

What should supervisors do, if a conglomerate does become distressed? Early intervention is the answer. Time alone will not heal distress. New infusions of capital and/or liquidity generally will.¹⁷⁸ If the conglomerate does not raise capital on its own, the supervisor should force it to do so or force the sale of the regulated entity to a new owner who will recapitalise the regulated entities.

This concept is well recognized. Core Principle 22 for Effective Banking Supervision states,

Banking supervisors must have at their disposal adequate supervisory measures to bring about timely corrective action when banks fail to meet prudential requirements (such as minimum capital adequacy ratios), when there are regulatory violations, or where depositors are threatened in any other way. In extreme circumstances, this should include the ability to revoke the banking license or recommend its revocation.

Nearly two-thirds of the countries reviewed under the FSAP programme complied with this Core Principle. They had given their supervisors the power to take timely corrective action.¹⁷⁹

¹⁷⁵ IMF (2004): 30. In major markets, there are strict controls on connected lending. In the United States, for example, Section 23A of the Federal Reserve Act limits the amount of lending that an insured bank may extend to its affiliates and requires that such lending be collateralised. Section 23B of the Act requires that bank contracts with its affiliates be on arms' length terms.

¹⁷⁶ In the United States financial conglomerates (financial holding companies) are subject to the umbrella supervision of the Board of Governors of the Federal Reserve System. In the European Union financial conglomerates are subject to consolidated supervision

¹⁷⁷ IMF (2004): 30.

¹⁷⁸ Note that the conglomerate may need to reform its business strategy and/or its execution as a means of attracting the new capital.

¹⁷⁹ IMF (2004): 30. Thirty five percent of the countries assessed did not comply with this Principle. The reasons varied (insufficient legal basis, enforcement ineffective, forbearance, limited range of measures, proactive action not possible, and court intervention).

However, the power to take action does not necessarily imply that the supervisor will take action. There are numerous examples of supervisors' allowing problems to fester, of exercising forbearance rather than bearing down on the institution to force it to resolve its problems in a timely manner. Such forbearance policies diminish market discipline and increase moral hazard.

The experience of the savings and loan industry (thrifts) in the United States in the 1980s is a clear case in point. Thrifts had been allowed to run massive exposures to interest rate risk, and many became insolvent, when the Fed increased interest rates to combat inflation. Rather than close these institutions or subject them to constraints on new business, the US supervisors allowed insolvent thrifts to continue in operation and to fund themselves through the issue of insured deposits. The insolvent thrifts used this stay of execution to "play for resurrection" by investing in high-risk, but potentially high return, assets. In practically all cases, the risk outweighed the return, and the federal deposit insurance agencies were left with the bill. In the end this amounted to over \$150 billion.

In response to this, the United States passed legislation restricting the ability of distressed institutions to access the lender of last resort (see above) and limiting the ability of the deposit insurance agencies to provide open-bank assistance. Indeed, FDICIA bill required bank regulators to employ what might be called a "bear-down" policy on weak banks, whereby the regulators are required to step up their intervention as the bank's condition deteriorates. Insurance regulators in the United States have similar powers of early intervention and similar requirements to use these powers.¹⁸⁰

These "bear down" policies are triggered at the first signs of distress. The regulators mandate that management document and implement a plan to remedy the deficiencies in capital, liquidity and/or conduct of business. Failure to implement such a plan within the agreed time frame may lead to more a formal Memorandum of Understanding between the supervisor and the firm and/or to the issuance of corrective action orders. If the institution's capital falls below the minimum required level, the institution may be placed under regulatory control, with the regulator empowered to take whatever decisions are necessary to protect the interests of depositors and/or policyholders.

If the public authorities do decide, for whatever reason, to adopt a policy of forbearance or open-firm assistance toward a distressed conglomerate, it is vital that such assistance be accompanied by

¹⁸⁰ In the United States, the NAIC has adopted a formula and model law designed to determine minimum capital requirements and to raise the level of protection that statutory surplus provides for policy holder obligations. The RBC law provides for four levels of regulatory action. The extent of regulatory intervention and action increases as the level of surplus to minimum Risk Based Capital (RBC) falls:

Surplus/RBC	Regulatory Action
Greater than 200%	None
Less than 200%	The insurer to submit a corrective action plan.
Less than 150%	<u>Regulatory action level.</u> Relevant insurance commissioner to perform an examination or other analysis and issue a corrective order.
Less than 100%	<u>Authorized control level.</u> Relevant insurance commissioner to take whatever regulatory actions considered necessary to protect the best interests of the policyholders and creditors of the insurer. Such actions may include placing the insurer under regulatory control (rehabilitation or liquidation).
Less than 70%	<u>Mandatory control level.</u> Relevant insurance commissioner must place the insurer under regulatory control. Regulator decides whether insurer is to be rehabilitated or liquidated.

restrictions on the conglomerate and its management so as to prevent the conglomerate from "playing for resurrection". Any liquidity provision from public sources should be strictly limited in time. If the conglomerate cannot work out a recapitalisation plan within this time frame, and longer term assistance (rather than liquidation) is judged to be socially necessary, such assistance should impose costs on shareholders, and possibly, creditors of the conglomerate. For example, if the authorities were to provide capital to the distressed conglomerate and/or to one of its regulated entities, this should be done on a last-in, first-out basis so that the public authorities' claims on the cash flows (if any) from the restructured institution are senior to the current shareholders (and possibly to one or more classes of creditors). Aid from public authorities should dilute existing shareholders and the public authorities should benefit disproportionately from any recovery of the institution (e.g. through obtaining warrants). In other words, infusions of capital from the public authorities should take approximately the same form as would a private provider of capital to a distressed firm.

In the case where the conglomerate is headed by an unregulated parent holding company, the shareholder of the regulated entity is that parent holding company. By focusing the assistance at the level of the regulated entity and limiting the up-streaming of dividends and/or other cash flows from the regulated entity to the parent, the regulator can readily restrict assistance to the parent holding company and/or its creditors. In an extreme case, the regulator can rule that the parent holding company and/or its management is no longer a fit and proper shareholder for the regulated entity and force the parent holding company to sell the regulated entity.

Preventing contagion

Should a conglomerate fail, this may have an adverse impact on market confidence. To offset this potential impact, the public authorities (usually the central bank) should stand ready to provide liquidity temporarily to the market, either through open market operations or through loans to other institutions. Such temporary infusions of liquidity could allow the market to return to normal. During this 'temporary' period, the public authorities should not impose penalty rates on such loans; lest the mere application for or granting of such a loan indicate to the market that the borrower was in trouble (in other words deter those most in need of liquidity for applying for it). However, the public authorities should announce, prior to the end of the 'temporary' period, that loans remaining outstanding at the end of the temporary period would indeed attract penalty rates. This would give all firms ample time to arrange alternative sources of funding. Those still needing to borrow at penalty rates would in all likelihood require some further supervisory attention, and this should be provided at that time.

From the standpoint of financial stability, the market should know that the public authorities will prevent the failure of the second institution, not necessarily the first.

Summary

In dealing with distressed conglomerates, the less the public authorities do, the better. Markets are capable of providing funds to distressed conglomerates, either after distress occurs or, on a contingent basis, before distress materialises. Both regulators and conglomerates need to factor this into their planning, and the Pillar 2 provisions of new Basel Framework afford an opportunity for them to do so.

Market participants need to take into account the severe legal and political constraints that public authorities now face on providing lender-of-last resort facilities to institutions, including conglomerates. Market participants also need to take into account that the financial infrastructure

has become more robust. Payments, clearing and settlement systems are now built to withstand the failure of even their largest participant. Such robustness might reduce the likelihood that the public authorities would consider the failure of a financial conglomerate to be a threat to financial stability.

Public authorities need to assure that they continue to strengthen the financial infrastructure, that they continue to improve supervision, and that they take full advantage of their early intervention powers to cure distress at the outset, rather than allowing problems to fester. If a conglomerate should fail, the public authorities may wish to consider whether they should use their liquidity-creating powers to prevent the second failure, but not necessarily the first.

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The Politics of Prompt Corrective Action and The Leverage Ratio*

Gillian G. H. Garcia

***The author thanks Maria Nieto and Larry Wall for their helpful comments.**

The Politics of Prompt Corrective Action and The Leverage Ratio

It is eminently sensible for bank supervisors to apply a set of increasingly stringent measures to a bank as its capital ratios deteriorate. The objective is to force owners and managers to correct the bank's deficiencies before it becomes non-viable. Such a process can be seen as "Prompt Corrective Action (PCA) light." For decades U.S. supervisors had sufficient authority to practice PCA light, but they "had a tendency to discard (it) under pressure," (Carnell, 1995, p. 314). Some supervisors in the European Union today, such as those in the UK, claim that they voluntarily conduct PCA already. The European Shadow Financial Regulatory Committee (ESFRC, 2006) is proposing that supervisors in the EU adopt a more exacting model of PCA—somewhat similar to that in use in the U.S., but adapted to make it suitable for the European Union (EU). PCA, in the U.S. and as proposed by the ESFRC, is mandatory and therefore more onerous for supervisors. In fact, no EU member is listed as practicing PCA in Table 1 of the paper by Nieto and Wall (2006).

At the press conference at the start of the day a reporter asked if, and when, prompt corrective action (PCA) would become mandatory in Europe. This paper argues that PCA was enacted in the U.S. in response to a particular set of severe circumstances that existed in the early 1990s that allowed Congress and the Administration to join together in a bipartisan effort that overcame opposition from the nation's banking regulators.¹⁸¹ It has often been said that it takes a crisis to engineer financial reform in the U.S. One step toward answering the reporter's question would be to find out whether banking regulators in the EU would be opposed to mandatory PCA—they might well be because it would diminish their discretion.¹⁸² In this case, a banking crisis in the EU might be a prerequisite to overcoming their opposition. If national regulators in the EU are indeed opposed to mandatory PCA, then answering the reporter's "\$64,000 question" requires assessing whether circumstances in the EU are similar to those in the U.S. in the period leading up to its crises 20 years ago.

Section I compares PCA as enacted in the U.S. with that proposed by the ESFRC for the European Union (EU). Section II describes the unusual situation that led to PCA's enactment in the U.S. Section III offers some thoughts on the role of the leverage ratio in the capital measures that are used to implement U.S. PCA. Section IV concludes by noting differences between, and similarities to, the financial environment in the U.S. 20 years ago and the European Union today.

1. PCA as Enacted in the U.S. and Proposed for the E.U.

Prompt Corrective Action, as it is conducted in the U.S. where it originated and as proposed by the ESFRC, is a more much more demanding construct than PCA light. The features that make U.S. and ESFRC PCA more onerous for supervisors are enumerated in Table 1. In particular U.S. PCA is enshrined in legislation—the FDIC Improvement Act (FDICIA) of 1991—and requires supervisors to take specified actions when a bank becomes less than well-capitalized and to take increasingly punitive corrective measures as the bank falls below further capital trigger ratios. Supervisors are held accountable for their actions.

¹⁸¹ Horvitz (1995) discusses that opposition.

¹⁸² One well-respected European regulator expressed opposition to compulsory PCA during the conference. Moreover, PCA is not practiced in many countries in the world today. Of those that have adopted it, Canada had experienced serious financial problems with its deposit insurance system, while Japan, Korea and Mexico had undergone costly banking crises.

Table 1

PCA Attributes

	<i>U.S. PCA</i>	<i>PCA in the ESFRC Proposal</i>
1	Supervisors are required to apply increasingly severe measures as a bank's capital declines	Supervisors would apply increasingly severe measures as a bank's capital declines
2	The nature of the corrective measures are mandated in legislation (FDICIA)	Similarly in a new EU directive and in national laws and regulations that implement the directive
3	Banks are divided into 5 groups: from (1) well-; (2) adequately; (3) under-; (4) significantly under-; to (5) critically under-capitalized	Banks could be similarly divided into 5 groups: ranging from well-capitalized to critically under-capitalized
4	Legislation requires two capital measures: the leverage ratio and a risk-based measure. Supervisors added a second risk-based measure by regulation	Groupings would be based on two capital measures: a risk-based and a leverage ratio
3	Increasingly severe corrective steps are taken when a bank fails to meet any of the 3 trigger ratios	Corrective steps would be taken when a bank falls below either of the trigger capital ratios
4	Closure is mandated at or below 2% capital to total assets (leverage ratio)	At the fifth stage the bank should be treated as insolvent under national law, if possible
5	Supervisors are held accountable by their agency's inspector general, Congress, and GAO	Make the EU's single banking license conditional on effective PCA, as adjudicated by an EU body.

Source: author's analysis of FDICIA (1991) and the ESFRC proposal.

PCA was resisted by the regulators when it was mooted in the U.S.—they opposed the diminution of their discretion (Carnell, 1993 and Horvitz, 1995).¹⁸³ Moreover, supervisors have subsequently demonstrated a reluctance to implement it (Eisenbeis and Wall, 2002). PCA light is meritorious, although they had the power to so, however, banking and thrift supervisors did not practice it before or during the banking debacle, as Carnell notes. This paper argues that PCA was enacted only because of the severity of the problems in the banking and thrift industry in the U.S. during the 1980s and early 1990s. The cost to the taxpayer of compensating the depositors of failed institutions was enough to overcome the opposition and allow the authorities to adopt a version of structured early intervention and resolution (SEIR) being proposed at that time by Professors Benston and Kaufman and their colleagues on the U.S. Shadow Financial Regulatory Committee. In fact section 38(a) of FDICIA states that its purpose “is to resolve the problems of insured depository institutions at the least possible long-term loss to the deposit insurance fund.”

In addition to requiring a rather detailed sequence of corrective measures that are described in Table 10 of Eisenbeis and Kaufman (2006) U.S., PCA is notable first in that it was made mandatory for U.S. supervisors under FDICIA. As will be argued below, PCA was mandated because during the bank/thrift debacle in the 1980s and early 1990s Congress and the public lost confidence that the actions of U.S. supervisors would serve the public interest. This distrust overcame supervisors' opposition to the diminution of their discretion. Making PCA mandatory in the EU would be contentious, because reducing national supervisors' discretion would be seen as a repudiation of their integrity and judgment. Moreover, as argued by Thomas Huertas at this conference, enshrining mandatory action in legislation might weaken the set of corrective measures already available to supervisors.

¹⁸³ The author observed this opposition when she worked on the 1989 Financial Institutions Reform, Recovery and Enforcement Act (FIRREA) and the 1991 FDIC Improvement Act (FDICIA) as a member of the Chairman's staff on the Senate Banking Committee.

PCA in the U.S. is also notable on a second account in that, although only two ratios are required under the legislation to categorize banks into five specified groups, supervisors use three different capital ratios. Two of these are risk based while the third—the leverage ratio—is not, being required in the legislation and defined as the ratio of tangible equity capital to total assets. The ESFRC proposes to use a risk-based and a leverage measure for European PCA.

The third notable feature of U.S. PCA is that it requires supervisors to close an institution within 90 days when its leverage ratio declines to 2 percent (the 90 days can be extended twice to give owners a fair opportunity to recapitalize their institution). Experience during the U.S. bank/thrift crisis had shown that allowing institutions to continue to operate and gamble without their own capital at risk, added substantially to the losses that they, and hence the insurance fund, incurred. The idea here was also that the market value of the capital to assets ratio would already be negative by the time the book value ratio had reached 2 percent. Hence the institution should be closed and quickly resolved by placing it into FDIC receivership.¹⁸⁴ A large bank could become a temporary bridge bank, other banks would be sold promptly in whole or in parts to new private owners or, as a last resort, liquidated. The objective of the resolution process is to minimize the cost of resolution to the Bank Insurance Fund while at the same time avoiding spillover and keeping the bank's services available to its customers.

Large size did not present a major problem in resolving most (albeit not all) of the failed banks and thrifts in the U.S. in the 1980s and early 90s. The banking industry in Europe is more concentrated today than that of the U.S. 15 to 20 years ago. It is well known that resolving a failed mega institution is a major challenge to the authorities, who may be tempted to bail it out, i.e. recapitalize it without punishing its owners and managers/mis-managers. PCA, requiring owners to recapitalize before insolvency, would appear to be a valuable alternative to bailouts in the EU. The EU may be unable to replicate this early closure notion, should it wish to do so, because removing owners before book-value insolvency is illegal, even unconstitutional, in some Member countries as the paper by Lastra and Wihlborg (2006) presented at this conference points out.

A fourth feature of PCA in the U.S. is that financial regulators, while formally independent of the executive branch, are accountable to their agency's own inspector general and to Congress, which has oversight responsibility for the regulatory agencies. These agencies appear before Congress in periodic oversight hearings and for special investigations. Congressional oversight is boosted by the efforts of its research bodies, in particular those of the Government Accountability Office (GAO). GAO audits supervisory budgets, can, and does conduct investigations of supervisory deficiencies. In addition, Inspectors General of the regulatory agencies have set high standards in their "material loss reviews" that are mandated by FDICIA when the FDIC suffers a material loss in covering the insured deposits of a failed bank or thrift.¹⁸⁵ The Treasury Department's IG report on the failure of Superior Bank in 2002 is, for example, highly critical of the Office of Thrift Supervision and, in particular of its trust in the owners' commitment to recapitalize the troubled institution (Rush, 2002).

Accountability is aided by the Federal Financial Institutions Examination Council (FFIEC), which was created in 1978 among other things, to standardize the quarterly "call report" balance sheet and income data that every insured depository institution reports to their supervisor (FDIC, 1997). The primary regulator collects the information and conveys it to the FDIC, which then consolidates and

¹⁸⁴ Technically conservatorship is also possible, but the FDIC uses it only for thrifts not commercial banks.

¹⁸⁵ A loss of \$25 million or 2 percent of the failed institution's assets is deemed to be material.

collates it and makes it publicly available. GAO had access to, and used, these time series data in its accounting and investigative reports. During the crisis, private data companies were created to provide user-friendly software, data series and analysis so that the public—and Congressional staffs—could conduct their own inquiries. Congressional staffs were then able to analyze the condition of weak and failing thrifts and to call forbearing supervisors, who might otherwise have concealed the information, to order. Supervisors, knowing Congress had these data, were correspondingly more circumspect.

Currently, accountability varies in the EU from member country to member country. The ESFRC proposes to have an EU body assess a country's conformance with a new directive mandating PCA and to make the availability of the single banking license conditional on certification. Eisenbeis and Kaufman (2006, p. 44) propose to grant a single license only to banks that agree to be "subject to a legal closure rule at a positive capital ratio established by the EU or the home country." Standardizing call report data and making it publicly available in the EU would facilitate accountability and would seem to be a *sine qua non* for the success of whatever body is tasked with certifying conformance with PCA.

The fifth notable feature of the FDIC Improvement Act is the way in which it characterizes the relevant capital standards as "a leverage limit" and "a risk-based capital requirement." Section 38(c) allows the federal banking regulators, by regulation, to choose the risk-based measure, "to establish any additional relevant capital measures" and to set the numerical boundaries for the ratios defining the capital groups. Table 2 reports the numerical ratios currently in effect in the U.S. It is quite explicit, however, with regard to the leverage limit, which it defines as the ratio of tangible equity to total assets and sets the lower boundary to identify a critically undercapitalized bank at not less than 2 percent. Finally, the FDIC is given the final "say" with regard to capital requirements, because the other regulators are required to obtain its concurrence.

Table 2**PCA Capital Measures**

Capital Measure	Well Capitalized	Adequately Capitalized	Under Capitalized	Significantly Under Capitalized	Critically Under Capitalized
Total capital to risk assets	10 and	8 and	<8 or	<6 or	
Tier 1 capital to risk assets	6 and	4 and	<4 or	<3 or	
Tangible equity to assets	5	4	< 4	< 3	2 or less

Source: FDIC at www.fdic.gov.

2. The Historical Background to PCA in the U.S.

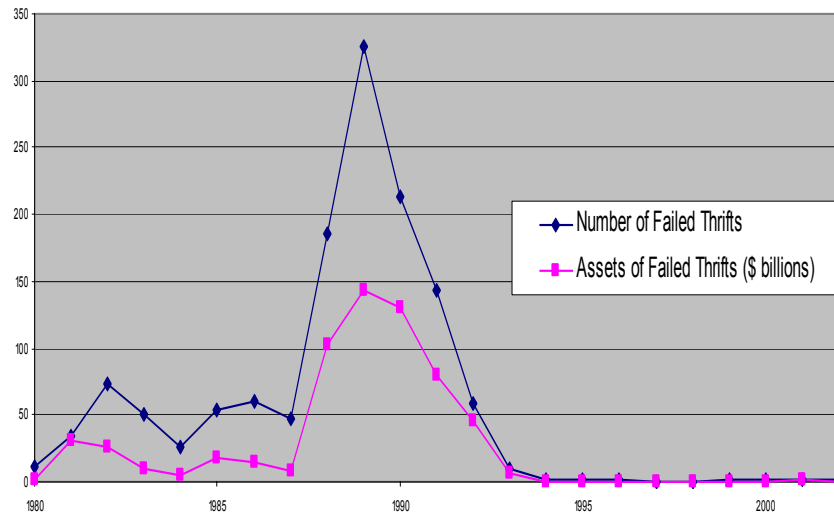
The U.S. financial sector experienced a “double whammy,” being confronted with debacles in both the banking and thrift industries in the late 1980s and early 1990s. After World War II the banking and thrift industries were profitable and experienced a period of calm that bred complacency among their regulators. FDIC data show that supervisors allowed the banking industry’s capital-to-total assets ratio to decline from 8.1 percent in 1960 to 5.7 percent in 1974 in order to promote competition at home and abroad and allow the industries to expand. That ratio remained low until the 1990s, rising and subsequently remaining above 8 percent only in 1995. Capital ratios in the thrift industry were lower—indeed negative when market values were used.

The Thrift Debacle

At same time that bank and thrift capital ratios were falling, the economic environment was changing. Inflation caused market interest rates to rise, especially after the Federal Reserve tightened monetary policy sharply in 1979 to combat price escalation. The authorities deregulated deposit rates to allow banks and thrift to compete with mutual funds that were not subject to interest rate regulation. Thrifts incurred losses as their deregulated interest outlays rose faster than their receipts, which were constrained by the long duration of their assets. Moreover, under both generally accepted and regulatory accounting standards, thrifts could not recognize the losses they were incurring in the market value of their portfolios. In an unsuccessful attempt to avert disaster, Congress enacted laws in the 1980s to allow them to broaden their asset base beyond their traditional 30-year fixed-rate mortgages and to conceal their deteriorating capital positions under regulatory accounting gimmicks.

Figure 1

Number and Assets of Failed Thrifts Since 1980



Source: FDIC's Historical Statistics.

Helped by an over-generous and moral-hazard-inducing increase in deposit insurance coverage to 9 times per capita GDP in 1980, weak and insolvent thrifts continued to attract deposits. Many gambled for recovery but lost and became insolvent, even under relaxed regulatory accounting standards. The Federal Savings and Loan Insurance Fund (FSLIC) was already under-funded in the early 1980s and by the mid-1980s became unable to cope with the losses the industry was then incurring.

Thrift trade associations played a part in concealing the extent of the scandal developing in the thrift industry. They focused on the role the industry played in providing American-dream housing, and assured supervisors, Congress and the Administration that the industry was viable, especially if granted whatever help they requested. Moreover, the trade associations pressured supervisors to be lenient with the industry. Their actions explain, in part, the fact that the press was slow to comprehend the nature and extent of the thrift problem and so did not alert the public until very late in the debacle.

Congress was ineffective in its oversight of the supervisory agencies and this served to encourage forbearance. Some Congressmen and Senators were indebted to the thrift industry for campaign contributions. They interfered in the regulatory agencies, thwarted effective oversight, and encouraged forbearance. The GAO sent a succession of reports to Congress in the 1980s that described the nature and the extent of the problems, with little effect. The author has characterized the report-to-Congress process as like “throwing a pigeon to the cats”—after an initial flurry of activity when the cats pounced on, killed and devoured it, the bird would disappear without trace and not a feather would remain.¹⁸⁶

¹⁸⁶ After testifying before the House Financial Services Committee on one of these reports, Deputy Comptroller General, told the author that he had never in his very long career at GAO experienced such a hostile reception.

At the same, the Administration wanted to delay facing the outlays necessary to deal with failing thrifts because its economic policies had already led to a large budget deficit. It did not, therefore, encourage thrift regulators to deal promptly and firmly with the industry's problems. Arguably it discouraged them from doing so.

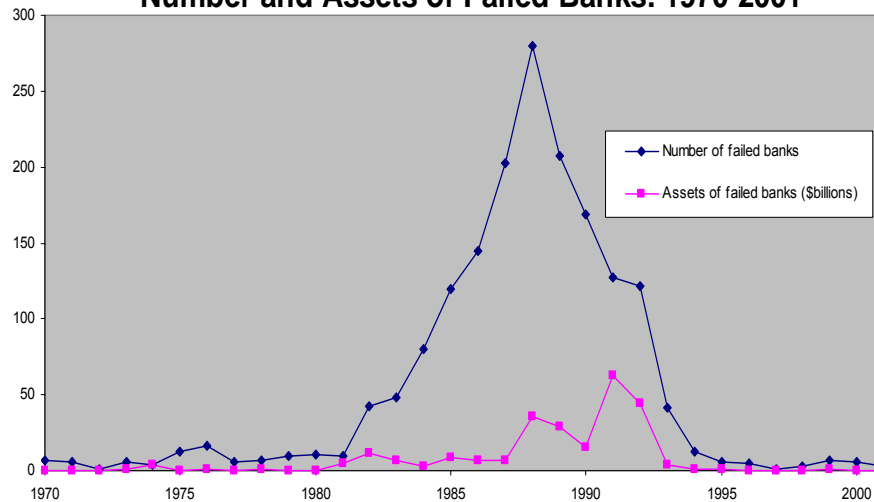
Supervisors, themselves, showed marked signs of regulatory capture—putting the interests of the industry they were overseeing above those of the public at large. Instead, supervisors practiced forbearance, which is widely believed to have exacerbated the losses and resulted in insolvency of FSLIC in 1988. Moreover, the U.S. has different regulators for different types of depository institution. They were accused in the 1980s of competing with one another—competing in regulatory and supervisory laxity—thus weakening oversight and the industry they were overseeing.

It would take a change of Administration and new Chairman of the House Financial Services Committee to allow the authorities to confront the thrift scandal. After the Senate's series of 'expose' hearings in 1988, Congress and the Administration could no longer ignore the crisis. Consequently, when the new Administration came into office in January 1989 it joined with Congress in a bipartisan effort to craft legislation to deal with the thrift industry's problems. Congress enacted the Financial Institutions Reform Recovery and Enforcement Act (FIRREA) in August, but that was not the end of the U.S. problems with its depository institutions.

Problems in the Banking Industry

Banks were also experiencing serious problems during the 1980s and early 1990s. The Latin American debt crisis in the early 1980s weakened some of the nation's very large banks. Interest rate deregulation and tight monetary policy increased bank costs across the board. The localized structure of the U.S. banking industry placed restrictions on branching within many states and inhibited banks from crossing state borders. This made the industry geographically undiversified and exposed it to regional problems. These regional problems ranged from farm failures that weakened agricultural banks, industry closings that bankrupted banks in the old industrial states, rapid declines in oil prices that caused bank insolvencies in oil-producing states, and busts following real estate booms that weakened banks in the Northeast and Southwest.

Regulators granted forbearance to large banks with capital depleted by the debt crisis. Most recovered slowly but the FDIC was unprepared to deal with the deluge of banks that failed during the regional recessions. Figure 2 shows that the FDIC was coping with a similar number of bank failures as those facing the FSLIC, although the value of failed bank assets was lower.

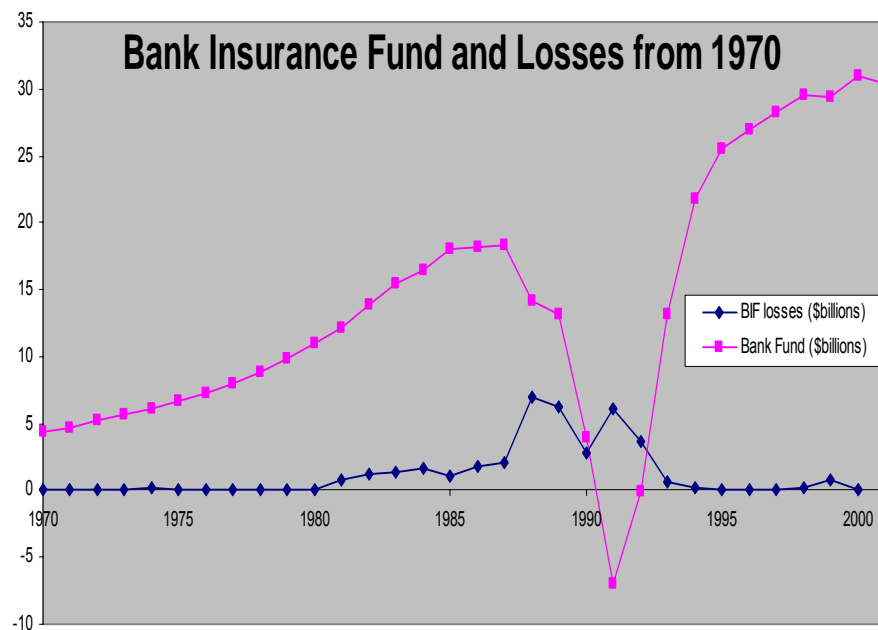
Figure 2**Number and Assets of Failed Banks: 1970-2001**

Source: FDIC's Historical Statistics

Although the level of reserves in the Bank Insurance Fund was higher than that of FSLIC, it was still insufficient. Congress and the Administration delayed dealing with problems in the banking industry until the Bank Insurance Fund became technically, and temporarily, insolvent in 1991 and needed a loan from the Treasury in order to meet its obligations.

The need to provide funds to cover insurance obligations in both the banking and thrift industries gave rise to bipartisan effort to ensure “never again!” Cleaning up the bank/thrift mess required the Administration and Congress to agree on a solution, while the need for the taxpayer to cover the deficiencies in the deposit insurance funds elicited a search for those to blame. The Administration was naturally reluctant to admit its mistakes. While Congress held spectacular “Keating Five” hearings on legislative interference with the regulators, it was otherwise unwilling to acknowledge its contribution to the debacle.¹⁸⁷ It was easier to blame regulatory capture and supervisory forbearance. Mandatory PCA and least cost resolution were enacted to minimize forbearance and to reveal, and so diminish, political interference in the future. At the same time funding arrangements for deposit insurance were sharply revised to reduce the likelihood of a subsequent call on the taxpayer.

¹⁸⁷ Senator Proxmire, Chairman of the Senate Banking Committee until he retired at the end of 1988, was an exception. He admitted his entirely honest mistakes in his farewell speech to the Senate Chamber.

Figure 3

Source: FDIC's Historical Statistics.

3. The Leverage Ratio

The measurement of time and space has progressed far over the centuries—from Stonehenge to atomic clocks and beyond in the case of time and from measuring rods to global positioning systems for distance. The measurement of capital still has a long way to go before it can meet the goal of using fundamental physical quantities as standards. Instead, it is constructed as a difference between two accounting measures that are only beginning to be internationally agreed. Moreover, despite advances in measuring distance and time, we still use measuring rods, quartz clocks and watches because they are easy to understand and use. Similarly, there is a role for a possibly technically inferior measure of capital (the leverage ratio) to add to the transparency of bank capital and so to promote market discipline.

As noted above, FDICIA allows the regulators to choose which risk-based capital measure to use and to determine numerical values for the trigger ratios. But it is quite specific with regard to the leverage ratio—requiring it to be used, defining it, and making it the sole numerical arbiter for closure. (Supervisors retain their long-standing rights to close an institution for other prudential reasons, such as being “unsafe and unsound.”)

There are at least three reasons for the U.S. penchant for the leverage ratio. First, it is easy to understand—easy not just for regulators but also for the press, the public and Congress to comprehend. Consequently, it helps to keep the regulators accountable for their actions. Second, there is a long history of its use in the U.S. The FDIC, for example, publishes capital/assets data for the industry going back to 1934 and has similar data for individual banks available over a very long period. Third, FDICIA was enacted at the time when new measures of capital, now known as Basel I, were being introduced to compensate for bank's proficiency in securitizing assets and so placing them off-balance sheet in order to increase their measured capital ratios. Bank's increasing use of

off-balance sheet activities was making the traditional capital/total assets ratio decreasingly reflective of bank risk. But the Basel I risk based measures were controversial. It was recognized that they were only a first approximation to bank risk, and would need to be revised significantly in the future in order to capture risk more effectively. Moreover, risk-based measures were new—there was no historical time series available to facilitate historical comparisons. Consequently, Congress included a capital measure that was well understood, well-used, and would contribute to keeping supervisors accountable for their actions.

The situation is somewhat similar today. New international capital standards (Basel II) have been proposed and are about to be implemented in Europe. They are, however, controversial, poorly understood, lack historical comparability and in certain cases appear to let large banks choose their own required levels of capital.

FDICIA makes the views of the FDIC particularly influential in determining the future of the leverage ratio in the U.S. Donald Powell (2005), former FDIC Chairman, expressed support for its continued use, stating that it is “simple and clear-cut and should remain an integral part of our system of capital regulation.” He argued that phasing it out would create “a significant expansion of the federal safety net.”¹⁸⁸ The new FDIC Chairman, Sheila Bair (2006), agrees, seeing the leverage ratio it as “a critically important component of our regulatory capital regime,” especially because tests suggest Basel II could seriously reduce capital ratios in the U.S. and Europe.

At the time of writing—at the end of 2006—the future of Basel II in the U.S. is still to be determined. But this author expects that the U.S. will continue to use the leverage ratio as a reality check on whatever risk-based measures are adopted. She does not anticipate an amendment to FDICIA to end the leverage ratio’s role in PCA in the foreseeable future.

4. Conclusions

The author would not be surprised if regulators in the European Union opposed the introduction of mandatory PCA in Europe. It is indicative of opposition that the opportunity to incorporate PCA into Pillar 2 of the Basel II capital accord was not taken. Nor is there any role for the leverage ratio in the new accord or in the European system of capital regulation. Thus the likelihood of enacting PCA in a new EU Directive, would seem to depend on the likelihood of banking crisis in the EU—unless, that is, the EU can reform its system in advance to reduce the likelihood of a crisis.

In some respects the situation in Europe today is different from that in the U.S. in the late 1980s and early 1990s. Economies are growing moderately and are not threatened with recession. Monetary authorities have tamed past inflation and are attempting to prevent its resurgence. There are few bank failures and little disquiet with the supervisors’ performance of their duties. There is no public outrage over taxpayer outlays to cover industry losses, so there is no political consensus in favor of PCA. Instead, there appears to be annoyance with the U.S. penchant for the leverage ratio, as was evidenced in audience participation at the conference.

¹⁸⁸ Powell notes that Basel II does not model all risks, or cope with the extreme tails of the loss distribution, that probability distributions may shift, that model inputs may be inadequate, and that regulators may judge that large banks need more capital than the banks do.

In many other respects there are parallels in the EU today with the U.S. two to three decades ago—in the period just before its banking and thrift debacles. The banking industry in Europe is quiescent, profitable, and liquid. It is undergoing consolidation, is utilizing new products and facing competition from new institutions (e.g. hedge funds). The new standards could reduce capital levels significantly, as the Quantitative Impact Studies for the U.S. and the EU have revealed. Analysts are concerned that there is competition in laxity between regulators and supervisors in different member states and that, while designed to promote their flagship banks, it will weaken the industry. The absence of standardized publicly available call report data places the EU into a similar information gloom that preceded the creation of the FFIEC in the U.S.—it is difficult to hold supervisors accountable in this situation and for the public to exercise effective market discipline.

There are concerns that failures, particularly among large complex institutions that span national borders, could be mishandled—a prospect made more likely by the unclear and multi-party process of containing possible contagion (Garcia and Nieto, 2007). The regulatory community is about to put new capital standards into place. There is uncertainty over whether this process will succeed. Moral hazard exists because of high coverage in some deposit insurance systems—many of which may be under-funded. It is feared that some governments may be unable or unwilling to cover the costs of deficiencies in their supervisory and deposit insurance schemes especially where the failed banks cross national borders. Forbearance and bailouts could ensue.

Readers are invited to assess whether these similarities suggest that there is risk of a crisis developing in the not-to-distant future in the EU, or whether they trust that the greater robustness of the banking system that Huertas (2006) described in his presentation to this conference will be sufficient to prevent crises from developing. In any event, adopting PCA could reduce the chances that a crisis will occur.

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European Shadow Financial Regulatory Committee

Basel II and the Scope for Prompt Corrective Action in Europe

Statement No. 25

London, November 20, 2006

The implementation of the Basel II Capital Accord in Europe in 2007 and 2008 through the Capital Requirements Directive (CRD) increases the need for additional safeguards for the banking system. Quantitative Impact Studies conducted by the Basel Committee show that many banks using the Internal Rating based approach to determine capital requirements under Basel II will be able to lower their capital requirements considerably. Reductions in required capital by this magnitude could increase the vulnerability of banks to major shocks and increase the likelihood of banking crises.

Prompt Corrective Action (PCA) procedures offer additional safeguards for the banking system in the new regulatory environment by mandating early supervisory intervention at pre-specified levels of capital before the banks face actual distress. The European Shadow Financial Regulatory Committee (ESFRC) has already addressed the importance of PCA and insolvency procedures for banks in its very first statement in 1998. In the present statement we propose that EU members be required to introduce legally binding PCA rules for supervisory action and we discuss how such procedures can be made effective within the new capital adequacy framework. The procedures should link the intensity of supervisory actions (including bank closure) to capital ratios in terms of both risk-weighted ratios and non-weighted capital ratios (leverage ratios).

PCA procedures should reduce the likelihood that the ultimate steps of either closing banks or bailing them out in cases of severe under-capitalisation must be taken. History shows that the tendency of supervisors to allow banks with low capital to continue to operate (forbearance) is associated with considerable danger to the stability of the banking system. The introduction of PCA procedures reduces the likelihood of banking crises, enhances market discipline and helps resolve home host country conflicts in crisis management.

We emphasise that PCA rules in Europe cannot be adopted without considering the regulatory and legal environment of individual countries.

The benefits of Prompt Corrective Action rules

PCA rules classify banks based on their levels of capitalisation and they mandate supervisory action of increasing severity as the level of capitalisation falls. The supervisory actions put restrictions and requirements on banks, mirroring and reinforcing market discipline. This system of trigger levels of capitalisation and associated supervisory actions provides a deterrent against regulatory forbearance, limiting the degree of discretion of the supervisor.

The Savings & Loan Association (S&L) debacle in the 1980s was the catalyst for the adoption of PCA rules within the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in the USA in 1991. The act was based on an academic proposal put forth by George Benston and George Kaufman that was adopted by the US Shadow Financial Regulatory Committee. According to FDICIA, banks are classified into five capital categories from well capitalized to critically undercapitalised with a number of required corrective actions and sanctions of increasing severity for banks that do not qualify as well capitalised. An institution that reaches a 'critical level of undercapitalisation' defined as 2 per cent of capital to total assets (leverage ratio) must be placed in receivership/conservatorship within 90 days. One of the major objectives of the FDICIA is the principle of least cost resolution, which requires the authorities to resolve problem banks in such a way as to minimise costs to the insurance funds.

Although the legal and institutional framework for deposit insurance and bank insolvency in Europe is different from the framework in the USA, the introduction of PCA rules in Europe would be an opportunity to establish explicit objectives for prudential supervision. The potential cost of bank failures to taxpayers is one objective but it must be assessed in relation to the objectives of stability of the financial system and the protection of depositors' and other creditors' confidence in the banking system.

The ESFRC is aware that current economic circumstances in Europe are very different from the ones in the US at the time of the introduction of FDICIA. We are enjoying benign economic times and banking systems across Europe appear relatively robust. Yet, the ESFRC considers this a good time for introducing PCA rules in Europe in view of the uncertainties associated with the implementation of Basel II and the need to have an adequate institutional framework in place to deal with a possible deterioration in banking conditions. Furthermore, PCA rules in Europe could help resolve conflicts of interest between home and host countries of international banks in times of crisis.

Uncertainties associated with the introduction of Basel II

As noted, the implementation of Basel II and its European version (CRD) increases the urgency of introducing PCA procedures for European banks. The difficult issue of defining the trigger points in terms of capital ratios for supervisory intervention is also affected by the introduction of Basel II.

The Quantitative Impact Studies conducted by the Basel Committee regarding the effects of implementing the Internal Ratings standard indicate that many banks will be able to lower their required capital as much as 25 percent while other similar banks will not be able to reduce their required capital at all. The variation in capital requirements across banks that seem to be similar in terms of risk-taking can become very large. This sensitivity of banks' required capital to their choice of assets could lead to distortions of banks' investments in risky assets. Banks will favour some assets over others in spite of similar risk and return because they can reduce the required capital without reducing the return on assets. One remedy for such distortions is to use PCA trigger ratios to introduce definitions that do not depend on Basel II risk weights. One possibility is to use

simple leverage ratios (equity to non-weighted assets) as trigger ratios. Another is to use the standardized risk-weights in Basel II based on evaluations of borrowers by external rating agencies.

Using these alternative capital ratios the PCA trigger points can be designed in such a way that each of the alternative ratios must be satisfied in order not to trigger the pre-specified supervisory action. The US PCA-procedures are designed this way with a simple leverage ratio complementing the Basel ratios.

Designing an adequate institutional framework

A number of issues must be considered when defining the ratios that trigger supervisors' intervention:

- (i) The PCA trigger points and supervisory actions at different ratios must be predictable in the sense that bank managers and other stakeholders can predict consequences and costs of losses at each point.
- (ii) The capital ratio defining closure of the bank must be enforceable and predictable.
- (iii) The trigger points before insolvency should be designed with the objective of making the likelihood of final insolvency small. Accounting procedures, risk of bank runs and risk of contagion through payment and settlement systems are factors that must be considered when defining the trigger points.

In order to achieve predictability of PCA procedures the supervisory authority in each country should be legally required to intervene at predetermined triggers based on capital ratios with mandated specific restrictions and requirements for the distressed bank.

The trigger points could be defined as in the USA with the following five capital zones:

1. Well-capitalised banks
2. Adequately capitalised banks
3. Undercapitalised banks
4. Significantly undercapitalised banks
5. Critically undercapitalised banks.

As soon as a bank enters into a capital zone below 'well capitalised' it should face restrictions and required actions by the supervisor. These restrictions should become increasingly severe and constraining on risk-taking and they should be aimed at turning around the situation. At the fifth stage the bank should be treated as insolvent according to the country's bank insolvency law.

It is important not only that the supervisor must take action at the trigger points but also that it has the legal means to impose sufficiently strong restrictions and requirements. The supervisor must also have the resources to intensify supervision of a bank as its capital declines from one zone to another.

The definition of "critically undercapitalised" and actions taken there are particularly important since incentives of shareholders and non-insured creditors depend on expected losses at this trigger. In some European countries insolvency law and constitutional provisions may prevent supervisors from treating a bank as insolvent while equity capital is positive. Thus, it is desirable that countries complement PCA procedures with a separate insolvency law for banks that lays out treatment of non-insured creditors. The existence of such insolvency law for banks --if operational and

enforceable--- can enhance the credibility of the PCA procedures. Thereby they also strengthen market discipline.¹⁸⁹

Home-host country conflicts in crisis management

The Banking Directive envisions that banks operate across the EU under a Single License and home country control. Yet there are no predictable procedures for crisis management. Instead host and home countries with conflicting interests face the problems of agreeing on burden sharing and guarding against discriminatory treatment of creditors from different countries. These factors in combination with the need for rapid intervention in a banking crisis imply that the most likely approach in a banking crisis is a bailout of creditors, for example in the form of a blanket guarantee. Since both home and host countries have interests at stake in a crisis, and resolution procedures are not predictable, host country supervisors cannot abstain from being involved in supervision of host country activities. The trust that home country supervisors will take host country interests into account and treat all creditors equally simply does not exist.

Predictable and effective PCA rules can be of great help in fostering trust and coping with the problematic relationships between home and host country supervisory authorities. These considerations are particularly important in countries where a large share of the banking market is foreign owned. Host authorities will feel more confident that the lead home supervisor will intervene in time if the soundness of the consolidated group deteriorates, putting at risk both branches and subsidiaries. We are aware of vast differences in national insolvency laws across the Member States of the EU and the implications of such differences in terms of the definition of the triggers for insolvency, the powers of supervisors, the rights of creditors and other issues, but yet we believe that the establishment of a system of PCA in Europe will represent a valuable contribution to the current ad hoc approach to bank crisis management in the EU.

To strengthen the incentives of the European countries to implement effective PCA and insolvency procedures for domestic banks the Single License can be made conditional on the existence of such procedures.

The need for a EU Directive

We recommend the adoption of a Directive requiring EU members to implement PCA rules incorporating trigger points for supervisory intervention and bank closure, as well as binding rules for these interventions. The interventions would specify the requirements and restrictions the supervisory authority must impose on banks at different levels of capitalisation.

The details of the PCA rules must largely be left to the individual countries since they must be specified taking national legal and regulatory principles and practices into account. Minimum capital ratios for the sequence of trigger points could be considered.

Legally binding rules for supervisory actions need to be enforceable or there must be incentives for supervisors to abide by the rules. Thus, the nature of penalties for the supervisor not abiding by the rules should be part of the PCA rules. Incentives to abide by the rules can be provided by a requirement that a country's banks cannot obtain a Single License for operating outside the home country without effective PCA rules. In this case an EU body is required to certify the effectiveness of each country's rules.

¹⁸⁹ See ESFR Statement No 1, "Dealing with Problem Banks in Europe", June 22, 1998.

FINANCIAL MARKETS GROUP
LONDON SCHOOL OF ECONOMICS
HOUGHTON STREET LONDON WC2A 2AE
Telephone: 020 7955 7002 Fax: 020 7852 3580
<http://fmg.lse.ac.uk>