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Supervisors' Prompt Corrective Action: Is There a
Case for a Banking Standard in the European Union?

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Abstract: Over the past years, several countries around the world have adopted a system of prudential prompt corrective action (PCA). The European Union countries are being encouraged to adopt PCA by policy analysts who explicitly call for its adoption. To date, most of the discussion on PCA has focused on its overall merits. This paper focuses on the preconditions needed for the adoption of an effective PCA. These preconditions include conceptual elements such as a prudential supervisory focus on minimizing deposit insurance losses and mandating supervisory action as capital declines. These preconditions also include institutional aspects such as greater supervisory independence and authority, more effective resolution mechanisms, and better methods of measuring capital.

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Preconditions for a successful implementation of supervisors' Prompt Corrective Action: Is there a case for a banking standard in the EU?

Introduction

Over the past years, Japan, Korea and, more recently Mexico have adopted a system of predetermined capital/asset ratios that trigger structured actions by the supervisor inspired by Benston and Kaufman's (1988) proposal for structured early intervention and resolution (SEIR), a version of which was adopted by the US as prompt corrective action (PCA) in the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA).¹ In all these countries, authorities must resolve the bank through sale, merger or liquidation at a predetermined minimum regulatory capital ratio. The positive effect of FDICIA in creating the appropriate incentives for banks, the deposit insurer and the prudential supervisor is reflected in the increasing number of recommendations to introduce PCA type provisions in other countries. Goldstein (1997) presents a case for an international banking standard in which one of the key operational issues is an incentive compatible safety net and prudential supervision whose principles are inspired in FDICIA-like features to combat moral hazard and supervisory forbearance.² In emerging economies, Goldstein and Turner (1996) propose PCA as a policy aimed at improving incentives for bank owners, managers and creditors as well as bank supervisors.³

Against the background of the launching of the Euro and the expectation of a gradual increase in cross border banking activity in the EU, the European Shadow Financial Regulatory Committee (ESFRC) made a proposal aimed at dealing with problem banks.⁴ One of the recommendations in their proposal was to establish a SEIR regime that call for predictable supervisory action in cases of excessive risk taking. More recently, the ESFRC argues that implementation of PCA in each individual Member State would contribute to host country supervisors' trust in home country supervisors.⁵ Benink and Benston (2005) also propose SEIR

as a mechanism to protect deposit insurance funds and tax payers from losses in the EU as part of a more broad based regulatory reform.⁶ Along similar lines, Mayes (2005) proposes intervention at prescribed benchmarks (ideally above economic insolvency) as a measure to have plausible bank exit policies for systemic risk banks in the EU.⁷

The literature and the proposals to implement SEIR/PCA have mainly focused on certain aspects of its economic rationality and little attention has been paid to the preconditions for its successful implementation. However, the institutional framework at the time of the adoption of PCA in the US was very different from the institutional framework of prudential supervision and deposit insurance in other countries. PCA was adopted in order to make bank supervision more effective in reducing deposit insurance losses. Before PCA can be successfully adopted, policy makers need to evaluate the merits of several important characteristics of the US bank supervisory system in addition to evaluating the merits of PCA within a US style supervision system.

The purpose of this article is two-fold: (1) to identify and evaluate key conceptual approaches and institutional structures needed for PCA to be effective, and (2) identify the changes needed to adopt an effective version of PCA in general and, in particular, in Europe. In order to better understand what is required for an effective PCA, the first part of this paper considers PCA's roots, especially focusing on the origins of PCA in the US, the reasons why the US adopted PCA and the US experience under PCA. The second part considers the major conceptual changes that PCA brought to US bank supervision and the extent to which these would represent changes for European bank supervision. The next section focuses on the institutional preconditions for a successful implementation of PCA. The last part provides

summary remarks. As the paper's objective is to stimulate discussion, it focuses on presenting the economic arguments.

1. The US Experience

1.1 Prompt Corrective Action: Creating the conditions for passage

Prompt corrective action (PCA) was part of package of measures adopted with the 1991 passage of FDICIA. The problems that lead to FDICIA were revealed in the late 1970s-early 1980s as US monetary policy tightened to slow the rate of price inflation, and the resulting high interest rates and reduced inflation produced large losses at thrifts and many banks. These losses caused economic insolvencies at the so-called “zombie” thrifts that were not resolved until the late 1980s.⁸ Throughout most of the 1980s, the US thrift supervisors and Congress compounded the inability of historic cost accounting to recognize interest–rate-related losses with changes in regulations that gave an additional artificial boost to thrifts’ supervisory capital ratios as well as reducing the required levels of those ratios.

The bank supervisors’ response to large banks’ already low capital ratios and the further losses on less developed countries (LDCs) loans was mixed. On the one hand, the supervisors did not require and in some cases even discouraged recognition of the losses on LDCs loans. On the other hand, they implemented numerical capital adequacy requirements that forced many of the largest banks to issue new capital.⁹ Moreover, the bank supervisors effectively nationalized one of the largest banks, Continental Illinois, in response to domestic loan losses and resolved hundreds of smaller banks that became insolvent, primarily in energy producing and agricultural areas.¹⁰

After years of supervisory and congressional and administration denial of thrift insolvency problems, Congress moved to address the problem, appropriating \$10.875 billion in

1987 and additional \$132 billion in 1989.¹¹ Shortly thereafter, new problems emerged in the credit quality of many large commercial banks' loan portfolios, especially their loans to the commercial real estate sector. By the early 1990s, the combination of a depleted insurance fund due to past failed bank resolutions and the threat of additional losses due to new insolvencies led some to predict that Congress would be required to make another large appropriation of funds.¹² In 1991 the Congress moved to limit taxpayer exposure to losses at failed banks with the passage of FDICIA. The PCA provisions of FDICIA create a structured system of supervisory responses to declines in bank capital, culminating in the bank being forced into receivership within 90 days after its tangible equity capital dropped below two percent of total assets.¹³

1.1 *Intellectual history*

The US has a long history with the basics required to implement PCA: binding capital adequacy standards and the ability to take substantial actions against banks that failed to meet the standards. The supervisors had the authority to adopt many of the provisions of PCA using their pre-existing powers if they had so chosen.¹⁴ However, the experience of the 1980s had clearly indicated that US supervisors valued discretionary responses targeted at keeping some banks (especially thrifts and large banks) in operation after they had become financially distressed.

Benston and Kaufman (1988) developed a system of mandatory responses to changes in capital with a proposal they came to call structured early intervention and resolution (SEIR).¹⁵ 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.¹⁶

1.2 Adoption in FDICIA

Congress adopted a variant of SEIR in 1991 with the inclusion of the PCA provisions in the FDICIA.¹⁷ PCA creates five capital categories for banks: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.¹⁸ Congress ordered the supervisory agencies to set minimum requirements for a bank to be classified in each of the top four capital categories, with the constraint that a bank must be classified as critically undercapitalized if it has a tangible accounting equity-capital-to-asset ratio of less than 2 percent. Congress further required that the minimum requirements for each category must include both minimum leverage requirement and a minimum risk-based capital requirement. Unlike the Benston and Kaufman’s (1988) proposal, the supervisory standards include both minimum tier one (equity capital) and total capital (including subordinated debt) requirements for each category. The original SEIR proposal would only have set a minimum

total capital requirement for each category but SEIR would have required higher levels of capital.

Unlike SEIR, PCA distinguishes between well capitalized and adequately capitalized banks, albeit the difference in supervisory treatment is small. However, the set of supervisory actions under PCA, both mandatory and discretionary, is substantially greater than that sketched out in SEIR. No bank may make a capital distribution (dividend or stock repurchase) if after the payment the bank would fall in any of the three undercapitalized categories unless the bank has prior supervisory approval. All undercapitalized banks must submit a capital restoration plan and that plan must be approved by the bank's supervisor. All undercapitalized banks also face growth restrictions. Significantly undercapitalized banks must restrict bonuses and raises to management. Critically undercapitalized banks must be placed in receivership within 90 days unless some other action would better minimize the long-run losses to the deposit insurance fund. Supervisors are also given a variety of discretionary actions they may take. For example, the supervisors may dismiss any director or senior officer at a significantly undercapitalized bank and may further require that their successor be approved by the supervisory agency.

1.3 *Analysis of the US PCA*

On first appearances, the adoption of PCA in the US appears to have been extremely successful. Predictions that US bank failures would force the US Congress to appropriate additional money so that the FDIC could resolve failing banks were not borne out. Instead, the US bank failure rate fell dramatically during the 1990s, with, for example, only one bank failing in 1997. Indeed, not only did bank failures not drain the fund, but banks paid sufficient insurance premiums to rebuild the insurance fund and over the same period raise their capital adequacy ratios to the

point where almost all banks (including virtually all large banks) are currently classified as well capitalized.¹⁹

Although the banking industry's performance was very impressive during the 1990s, a closer reading of the record reveals that a variety of factors are responsible for the improvement. Another clearly important factor in the turnaround was the relatively strong economic conditions that prevailed in the US during the 1990s. Moreover, in some important respects one could argue that PCA has not yet been adequately tested. In particular, none of the largest US banks suffered sufficiently large losses to the point where the bank should have been classified as undercapitalized.

Although the performance of the banking industry may not be sufficient to clarify the impact of PCA, its likely long-run impact may be evaluated by looking at two issues: (1) would PCA have prevented some of the mistakes in the 1980s and (2) are the supervisors implementing PCA in a way that suggests supervisors will behave differently next time the US banking system is under stress? The extent to which PCA would have reduced the problems in the 1980s is unclear. The supervisors took a variety of measures designed to make failing depositories look better and to allow supervisory forbearance including failing to include interest rate risk losses in their measures of regulatory capital, failing to require large banks to recognize loan losses to LDCs, and, lowering thrift capital standards and changing accounting policy to allow thrifts to report higher capital. PCA would not have forced the supervisors into more timely recognition of interest rate or credit risk problems. Further, PCA would have had only a limited impact on the lowering of capital standards, as the supervisors have discretion over all of the capital requirements except for the two percent tangible equity to assets ratio used to classify banks as critically undercapitalized. Where PCA would unquestionably have been effective is in

preventing the thrift regulators from adopting regulatory accounting principles that were weaker than generally accepted accounting principles (GAAP) used for financial reporting by US nonfinancial firms, albeit PCA could not have prevented Congress from adopting measures that weaken GAAP as it did with net worth certificates.²⁰

The difficult part to judge of FDICIA is its provisions to discourage supervisory forbearance. PCA requires that the inspector general of the appropriate supervisory agency prepare a report whenever a bank failure results in material losses. The report addresses why the loss occurred and what should be done to prevent such losses in the future. A copy of the report is to be provided to the Comptroller General and to any member of Congress requesting the report.²¹ FDICIA also provides for public release of the reports upon request, but such requests are generally unnecessary as these reports are typically posted on agencies' web site.²² One effect of such a report would be to subject the supervisory agency to additional "ex post" Congressional, media, banks and academic scrutiny.²³ Also, the reports often contain recommendations to avoid future losses, recommendations that both provide the supervisors with a chance to learn from their mistakes and create the potential for increased accountability after future failures if the supervisors fail to implement appropriate changes.

The effect of the change in incentives may be seen by looking at the implementation of FDICIA, both how the Act was implemented at small banks that did fail and in the preparation for dealing with large banks when one of them becomes distressed. The good news in the implementation of FDICIA is that the FDIC is enforcing least cost resolution and that the inspector generals of the respective agencies are carrying through on their responsibility to review material loss cases. The bad news is that the bank supervisory agencies do not appear to have worked to implement the intent of PCA. PCA encouraged (and SEIR would require)

market value accounting which the US supervisors have not sought to implement. Moreover, if PCA was being faithfully implemented, any losses on recent bank failures would have been small. Yet Eisenbeis and Wall (2002) find that the losses at the banks that have failed after FDICIA are still substantially larger than should have occurred if the bank supervisors had followed the spirit of PCA.²⁴

2. Conceptual Issues in Adopting PCA

SEIR and PCA are based on a clear philosophy of the role of bank supervisors that of minimizing deposit insurance losses. This philosophy is in many ways different from that which guided the establishment of most bank supervisory authorities in general and in Europe in particular. An effective system of PCA may be established without accepting all of the philosophy underlying SEIR; for example one can view bank supervision as having legitimate functions beyond protecting the deposit insurer, unlike Benston and Kaufman (1988). However, in order to have a fully effective system of PCA, the banking supervisory system has to incorporate some key elements of the SEIR/PCA philosophy. The following subsections analyze three key elements of that philosophy.

The first of those elements, that bank prudential supervisor's primary focus should be on protecting the deposit insurance fund and minimizing government losses is discussed in the first section. The second core element, that supervisors should have a clear set of required actions to be taken as a bank becomes progressively more undercapitalized, is discussed in the second section. A controversial third part of SEIR/PCA, that undercapitalized banks should be closed before the economic value of their capital becomes negative, flows from the two core elements but is sufficiently controversial to merit discussion in the third subsection.

2.1 *Should supervisor's goal be to minimize government losses?*

Both SEIR and PCA give prudential supervisors a single goal in carrying out their provisions, to limit government losses, rather than a list of public policy concerns to be addressed as a part of their prudential supervision (i.e. efficiency and competitiveness of the financial system).²⁵ The rationale for this choice is two-fold. The standard motivation for focusing on limiting losses is that bank failures have imposed large losses on taxpayers in systems that have not followed SEIR. However, a more compelling motivation is to reduce the misallocation of resources that arises from banks facing the dual problems of having distorted incentives for managers and owners, and being run by inefficient managers.²⁶ This approach contrasts with the rationale for adopting PCA in other countries where PCA is aimed at restoring prudential supervisors' institutional credibility by ensuring strict enforcement of prudential requirements (see the case of Mexico in Table 1).²⁷

Hüpkens, Quintyn, and Taylor (2005) note that bank prudential supervisors are often given multiple goals, and indeed, the single goal given to US supervisors in PCA only applies to carrying out PCA's provisions.²⁸ However, most other goals of prudential supervision could be pursued in ways that do not significantly raise expected losses to the deposit insurer. The one other goal that, according to some authors, might be in conflict is that of limiting the damage to the real economy from bank failure. PCA can result in the resolution of a bank that if given sufficient time might recover, thereby avoiding any failure related costs to the real economy.

Benston and Kaufman (1995) argue that the failure of a bank in a system with multiple substitutes is no more costly than the failure of many other types of firms, such as the failure of firms that supply proprietary information technology that is widely used.²⁹ This argument is perhaps partially qualified by several papers that have found evidence that the failure of a bank

imposes costs on the bank's borrowers.³⁰ There are two hypotheses as to which types of bank borrowers are adversely impacted: (1) the customers suffering the harm were good borrowers who were paying a market rate for their loans (the rate that a good bank would have charged if it had had a relationship with the borrower), and (2) the customers suffering harm were borrowers that were receiving credit at a below market rate (including bad customers that should not have received loans) because the failed bank was not demanding adequate compensation for the risk that it was taking. The existing studies do not distinguish between these hypotheses, albeit structuring a test that could distinguish between the hypotheses is likely to be difficult and perhaps impossible.

A longstanding concern is that the failure of a bank could lead to deposit runs at healthy banks, which would fall like dominoes, and lead to the collapse of the banking system. A more recent concern is that the failure of some very large banks or a large number of banks on the payment system markets would have a substantial adverse impact on the operation of the real economy. A narrow focus on limiting deposit insurance losses may not be appropriate if such a focused policy were to risk a systemic crisis.

Although a case may be made that systemic concerns should override limiting the losses of the deposit insurer, that case has several weaknesses. First, the analysis of systemic concerns typically takes the risk of bank failure as independent of bank supervisory policies. However, bank supervisory policies that try to prevent bank failure by exercising forbearance towards failing banks and their creditors reduces the cost of risk-taking to a bank and its owners. The resulting market prices for debt and equity are likely to create moral hazard by encouraging bank managers to take additional risk. Moreover, PCA provides for early intervention to reduce the probability of failure in a variety of ways, including optional authority for the supervisors to

remove ineffective bank officers and directors, and a mandatory requirement that the bank develops a capital restoration plan.

Second, the argument that bank failures are likely to lead to systemic crisis is often overstated. The historic case for deposit runs has been overstated, at least in the US, with the bulk of the runs occurring at insolvent banks according to Kaufman (1988).³¹ Moreover, concerns about runs at healthy banks may be mitigated by an active lender of last resort.³²

Third, allowing insolvent banks to continue in operation runs the risk that they will accumulate even larger losses leading to even greater market disruption when the bank's continued operation is no longer tenable. In contrast, if a bank is required to be closed before its losses exceed the bank's equity and subordinated debt then depositors and other creditors should not be exposed to any loss. Moreover, prompt resolution reduces the probability that more than one systemically important bank will be insolvent at the same time.³³ In sum, a supervisory focus on limiting deposit insurance costs is unlikely to result in significantly higher expected losses due to systemic financial problems and may well result in lower expected costs.

In Europe, the European Shadow Financial Regulatory Committee (ESFRC) proposal of SEIR to deal with problem banks implicitly recognizes the importance of supervisor's goal being to minimize deposit insurance losses.³⁴ Nonetheless, although policy makers have not explicitly addressed the relative importance of minimizing deposit insurance losses, the relevant Directive on deposit insurance is fully compatible with such a focus. Directive 94/19/EC of the European Parliament and of the Council of 30th May, 1994 (Official Journal of the European Communities L 135, 31st May, 1994) on deposit guarantee schemes harmonizes minimum deposit insurance coverage, but also in its Preamble discourages governments from providing funding to their deposit insurer:³⁵ “ ... *the cost of financing such schemes must be borne, in principle, by credit*

institutions themselves” At the same time, there are limitations, imposed by the EC Treaty, on the ECB and/or the Euro area national central banks’ lending to governments or institutions (article 101), which limit the possibility of central bank financing of deposit insurance schemes. There are also limitations on the EU Community’s ability to "bail out" governments and/or public entities (article 103). Against this background, the case for minimizing the deposit insurers’ losses is even stronger in Europe, as recognized by the European Shadow Financial Regulatory Committee's (ESFRC) in its proposal to deal with problem banks.³⁶

Nonetheless, governments’ continue to bail out depositors, and even shareholders, remain as shown in a recent survey on forms of intervention by European deposit insurance schemes, which shows that nineteen percent of interventions involved transfers of assets or other type of assistance in addition to depositors pay-off in the period 1993 to 2003 (De Cesare, 2005).³⁷ As a result, the moral hazard problem remains as shown in the cases of Banco di Napoli and Sicilcasa, which involved the use of public funds of approximately half a percent of Italy’s year-2000 GDP.³⁸

Although a compelling case may be made for restructuring deposit insurance in the EU, the potential weaknesses in the structure could be mitigated by a supervisory focus on minimizing deposit insurance and ultimately taxpayers’ losses. The weaknesses in the provision and funding of deposit insurance would become less important if banks were resolved before they could impose significant losses on the insurer.

2.2 *Should prudential supervisors’ discretion to exercise forbearance be reduced?*

A key component of any regulatory and supervisory arrangement is the nature, timing and form of intervention (Llewellyn 2002).³⁹ Any supervisory system must determine what discretionary measures may be taken by the supervisors and who has authority to authorize those

measures. It must also determine (at least implicitly) whether supervisors should be required to intervene in a prespecified manner at a predetermined point. PCA accepts long-standing US policy that gives the supervisors broad powers to intervene at their own discretion. The key innovation of PCA is that it recommends a reduction of supervisory discretion to exercise forbearance by proposing a series of capital adequacy tranches with a set of mandatory supervisory actions for each of the undercapitalized tranches. Mandatory supervisory actions are intended to override the incentives supervisors would otherwise have to engage in forbearance.

In the US, the greatest opposition to PCA came from bank supervisors, who perceived it as a reduction in their power, visibility and freedom to control banks (Horvitz, 1995).⁴⁰ This opposition could not prevent the passage of PCA, however, in large part because the supervisors' credibility had been weakened greatly by the large thrift crisis and was further weakened by the perception that additional costly failures were also likely in the banking industry.

One argument against mandating supervisory actions in certain circumstances as is done in PCA is that retaining supervisory discretion to exercise forbearance increases the probability that a distressed bank will be able to recover without being forced into resolution. This lack of discretion is particularly criticized with respect to mandatory reorganization which eliminates any prospect that banks with very low capital will recover. The problem with this analysis, as noted above, is that implicitly assumes that PCA will have no affect on the probability that a bank will become financially distressed.

The general concept that supervisors should intervene promptly is reflected in three of the four principles in Pillar II of the new Capital Accord. Principle 2 of Pillar II calls for supervisory evaluation of bank's internal procedures for maintaining adequate capital and take appropriate supervisory action if they are not satisfied. Principle 3 states that supervisors should expect

banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to operate above the minimum. Principle 4 establishes that supervisors should intervene at an early stage to prevent individual bank's capital from falling below the minimum requirements and require rapid remedial action. These principles were largely enacted in the PCA provisions of FDICIA in the US, although PCA goes well beyond them because it establishes leverage ratios that require minimum supervisory action. Moreover, Pillar II contains neither mandatory nor discretionary provisions to replenish capital and turn trouble institutions around before insolvency. Also, it does not contain a closure rule.

The new Capital Accord has been adopted by the EU and that would require the transposition to national regulations/legislations of the Recasting of Directive 2000/12/EC of the EU Parliament and the Council of March 2000 relating to the taking up and pursuit of the business of credit institutions and Council Directive 93/6/EC of 15 March 1993 on the capital adequacy of investment firms and credit institutions; referred to as "Capital Requirements Directive" (CRD).⁴¹ Principles 3 and 4 of Basle's Pillar II are broadly dealt with in article 124 of the CRD.⁴² This article is developed in the so called Supervisory Review Process (SRP).⁴³ SRP requires a review and evaluation of the banks' risk profile and management system and calls for prudential measures to be applied promptly.⁴⁴ Those prudential measures include setting a capital requirement above the Pillar 1 (own funds or Tier 1) although the Guidelines emphasize that they "should not be interpreted as resulting in automatic capital add-ons". Other measures contemplated in the Guidelines are: Requiring an improvement of the institution internal and risk management controls; applying specific provisioning policy or treatment of risk assets in terms of regulatory capital requirements; restricting the business operations and/or reducing the risk profile of its activities. The specific own funds requirement is envisaged only if the above

mentioned imbalances cannot be remedied by other prudential measures within an appropriate time frame. These remedial actions establish the principle of early intervention, but do not significantly reduce supervisory discretion as to when to intervene or establish minimum supervisory actions.

The SRP as well as the Article 124 of the CRD constitute a step in the right direction to reduce forbearance and bring about timely corrective action by supervisors when banks fail to meet prudential requirements. Nonetheless, in line with the new Capital Accord, they fall short of a structured early intervention mechanism in the EU as envisaged by the European Shadow Financial Regulatory Committee (ESFRC). The present proposal may succeed in reducing the moral hazard behavior by banks, which should expect supervisory reaction to their excess risk taking. However, a more structured prudential performance benchmark would make the imposition of sanctions more credible, further discouraging poor agent behavior of prudential supervisors. In this context, market discipline should play even a more important role in putting a backstop to prudential supervisory action in the EU.

2.3 Should banks be closed with positive regulatory capital?

Both SEIR and PCA call for timely resolution, which is a policy where banks with sufficiently low, but still positive, equity capital are forced into resolution. In the US context, resolution is understood to include: (1) the government assuming control of the failed bank, firing the senior managers and removing equity holders from any governance role, and (2) the government returning the bank's assets to private control through some combination of sale to a healthy bank or banks, new equity issue, or liquidation.⁴⁵

Timely resolution provides two important benefits. First, forcing a bank into resolution while it still has positive regulatory capital truncates if not eliminates the value of the deposit

insurance put option, reducing the incentive of the bank's shareholders to support excess risk taking. Second, timely resolution is critical to limiting deposit insurance losses. If insolvent banks are allowed to continue in operation then the potential losses from failure can be very large.

Timely resolution in the US was perceived by some authors as the government taking private property (Horvitz, 1995).⁴⁶ The key argument against the claim that timely resolution involves taking shareholders' property is that PCA provides the shareholders with an opportunity to recapitalize the bank before the bank is forced into resolution. If the shareholders are unwilling to recapitalize the bank and unable to sell it to a healthy bank, that suggests that the owners and other banks agree the bank is no longer financially viable. The timely resolution provision of PCA has been employed by the FDIC and has not been found to be contrary to the US constitution.

In Europe, as highlighted by Mayes, Halme and Liuksila (2001), with only limited exceptions and contrary to the case in the US, supervisors have often limited legal powers to intervene if a bank becomes critically undercapitalized or its net worth turns negative.⁴⁷ In these authors' opinion, which is shared by Hadjiemmanuil (2004) as well as the authors of this article, what is often missing is a delegation of legislative authority to the prudential supervisor as parliament's designated agent to reorganize and liquidate banks.⁴⁸

3. Institutional preconditions for a successful PCA

The primary effect of PCA was not to give US supervisors new powers but rather to limit their ability to forbear in using the powers that they largely already had been given. The Member States of the EU have developed a variety of bank supervisory systems reflecting their individual political systems; the needs of their banking system; and their legal traditions. In

order to effectively implement PCA, many of the bank supervisory systems will need to provide their supervisors with additional authorities and resources. This section considers a number of important prerequisites for PCA to be an effective policy. Our goals are two-fold, first to explain why the authority or resource is necessary and second to show that those preconditions are, in most instances, already called for by the Core Principles of Banking Supervision issued by the Basel Committee, although none of the Core Principles for Effective Bank Supervision prescribe PCA.

3.1 *Supervisory independence and accountability*

PCA retained US bank supervisors' authority to intervene in a variety of ways if the bank was violating a specific statute or regulation, or if the supervisors concluded it was being operated in an unsafe or unsound manner. The US supervisors did not need political or judicial approval prior to PCA to intervene at a troubled bank or to force an insolvent bank into resolution.⁴⁹ The major change in supervisory practice resulting from PCA is that after PCA the supervisors were required to intervene as a bank's supervisory capital ratios deteriorated.

The independence of supervisory action provided to supervisors before PCA is critical to the effective operation of PCA.⁵⁰ A system that requires the prior approval of political authorities creates the potential for delay and forbearance in supervisory intervention to the extent that the political authorities do not follow the supervisors' recommendations. Moreover, if this condition is not met, the requirement of prior political approval reduces the effectiveness of PCA in discouraging banks from taking excessive risk.

Similarly, requiring prior judicial approval would limit the effectiveness of PCA. A court could be asked to certify that a bank is undercapitalized and remedial action is appropriate, but the determination of whether a bank is undercapitalized is likely either: (1) trivial in that the

court merely uses available data to verify the supervisors arithmetic, or (2) calls for the court to undertake actions outside its qualifications, such as determining the correct value of the bank's capital or evaluating whether the supervisor has chosen the appropriate discretionary actions to help the bank recover.

The requirement for supervisory independence does not imply that supervisors should be free to operate outside the political and legal system in a representative democracy. SEIR does not challenge the principal that the supervisory agencies should be accountable for their actions and, as discussed above, PCA sought to strengthen that accountability. The key is that the supervisors should be accountable *after supervisory intervention* to the judicial system for the legality of their actions and to the political authorities for the appropriateness of their actions.

The Basel Committee on Banking Supervision recognized the importance of supervisory independence by making independence part of its first "Core Principle for Effective Bank Supervision:"⁵¹

Basel Core Principle 1: *"An effective system of banking supervision will have clear responsibilities and objectives for each agency involved in the supervision of banks. Each such agency should possess operational independence and adequate resources ..."*

European countries broadly comply with this principle since the political independence of the banking supervisors is generally adequate in spite of the fact that, in some countries, the presence of the government representatives on their supervisory boards could potentially raise the issue of independence from the government. Moreover, in Germany, although the supervisory authority is independent in its operations, BaFin is subject to the legal and supervisory control of the Minister of Finance.⁵² In Switzerland, there appears to be a lack of

administrative independence with regard to the supervisory authority's budget, which is incorporated into the Finance Ministry's Budget.

The extent to which the supervisors are able to act independent of the judiciary varies by country. In some countries, such as France, the prudential supervisor is an administrative judiciary authority when imposing sanctions and its decisions and sanctions can only be challenged before the highest administrative judicial authority. However, in other countries, such as Austria, the legal system puts in some cases the burden of the proof on the supervisors before they can take remedial action, which is likely to delay prompt corrective action. The legal protection of supervisors for their actions taken in good faith in their office varies from country to country. In Italy, the law does not provide such legal protection to its supervisors against court proceedings. See Table 1 for a description of objectives, autonomy and remedial measures of prudential supervisors in the EU and selected countries outside the EU.

The European Shadow Financial Regulatory Committee (ESFRC) recognized the importance of complying with the requirement that supervisors have operational independence. The Committee argued that for SEIR to be credible the political independence of the supervisory agencies should be strengthened.⁵³

3.2 Adequate authority

PCA requires that the prudential supervisors be given authority to intervene in undercapitalized banks, both as a deterrent to risk taking by healthy banks and to try to rebuild capital at undercapitalized banks. If a bank's capital drops below minimal acceptable levels, PCA requires that the bank be placed in resolution.

The need for adequate authority is also recognized by the Basel Committee on Banking Supervision:

Basle Core Principle 22: *"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 would include the ability to revoke the banking license or recommend its revocation"*

The PCA policy applied in the US goes beyond Basel Core Principle 22 only in that supervisors have direct authority to revoke the license, whereas the Core Principle allows for the possibility that the supervisor may only be able to recommend revocation. This difference is crucial to the extent that political authorities may not follow supervisors' recommendations.

As shown in Table 1, European countries' degree of compliance with this Principle varies country to country.⁵⁴ In a number of countries, the banking law provides supervisors with a wide range of possible corrective actions depending on the severity of the situation. Moreover, if the prudential supervisor does not take immediate action, firms and/or individuals may raise this in a proceeding against them under the general jurisdiction of the courts and Tribunal. In some other countries, such as Finland, Sweden and Iceland, prudential supervisory powers do not contemplate provisions for approval of new acquisitions, the ability to restrict asset transfer or to suspend payments to shareholder and/or to purchase banks own shares. In still other countries, such as Italy, Austria, and Sweden, legislators do not provide prudential supervisors with authority to bar appointment of individuals from banking once the person has been hired and

passed the initial fit and proper test. Although, the decision to revoke a bank license corresponds to the supervisory authority, in a number of countries the government must formally approve the license withdrawal or adoption of specific crisis procedures. Last but not least, in some of the recent entrants in the EU, the ability of the supervisor to address safety and soundness issues in banks is significantly encumbered by its institutional capacity and resources.

3.3 *Adequate resolution procedures*

Confidence in the resolution procedure is critical if bank prudential supervisors are to enforce the timely resolution embedded in PCA. Bank supervisors are likely to resist forcing a bank into resolution if they know it will result in major disruption, such as when the deposit insurer lacked adequate funds to honor its commitments or the resolution procedures were likely to result in severe market disruption. Supervisors would resist both because of concerns about the costs that the closure would impose on society and on the likely parliamentary response to a bank closure that severely disrupted the economy. One example of the resistance to timely action is that of the US thrift industry, where even after the supervisors accepted the need to resolve many failed thrifts, they did not do so because they lacked adequate resources to honor the deposit insurance commitments.

In the US, the bank insolvency procedure is administered by the Federal Deposit Insurance Corporation. FDICIA built upon previously developed US procedures for handling failing banks with a goal of providing supervisors with sufficient tools to allow timely closure of banks at minimal cost to the deposit insurance fund. If a private sector resolution cannot be worked out without government intervention, the FDIC has several options under US law including: (1) act as a conservator and operate the bank under its existing charter, or (2) ask the chartering authority to revoke the charter and appoint the FDIC as receiver.⁵⁵ In practice the FDIC's

intervention has taken the form of receivership. As receiver the FDIC can limit creditors' ability to withdraw funds and can allocate losses in excess of equity to the uninsured creditors.

Once the FDIC is appointed receiver of a failed bank, the agency has three options. First, the FDIC may provide assistance to a healthy bank that purchases most or all of the failed bank's assets and assumes the failed bank's insured deposits and some uninsured liabilities. Second, the FDIC may decide to liquidate the bank. Third, it may create a new bank which it temporarily manages pending the sale of part or the entire bank to a healthy bank and liquidates whatever is not sold. Regardless of which option the FDIC chooses, the agency typically provides insured depositors with immediate access to their funds and uninsured depositors at domestic offices with access to at least part of their funds.⁵⁶ The FDIC's ability to act expeditiously in resolving a failed bank outside the bankruptcy courts reduces the period of uncertainty for the bank's creditors, borrowers and other customers and may help to reduce the impact of the failure on the financial system.

In Europe, although there is considerable variation across countries, European prudential supervisors have, in principle, a more limited set of options in dealing with a distressed bank, which, generally, are defined by the banking and/or bankruptcy laws. Hüpkes (2003) discusses two alternatives for resolving bank problems in Europe, neither of which are in some aspects as flexible as those available in the US, primarily because of the limited range of supervisory measures to bring about early resolution without applying to the courts and the rigidities imposed by the general insolvency procedures applied to banks.⁵⁷

As described in section 3.2, bank supervisors are empowered to different degrees to employ a range of measures, some of which can be very intrusive, in order to take remedial action. In contrast to the US, some European prudential supervisors (Germany, Italy and Switzerland),

have the power to impose a moratorium against debt enforcement prior to the bank being declared insolvent and placed into bankruptcy. However, not all supervisors have this power and in countries, such as the United Kingdom, France, Spain and Luxembourg, bank supervisors have to apply to the courts. Such measures are typically accompanied with some form of direct or indirect control via by a provisional administrator on bank's management. Hüpkes (2003) describes the suspension and appointment of a provisional administrator as a “quasi-insolvency” procedure, which gives the provisional administrator wide ranging powers to bring about a resolution, including the sale of new stock and the transfer of ownership.

If a bank cannot be made viable under a payments suspension and the appointment of provisional administrator, the alternative is liquidation. Hüpkes (2003) notes that the administration of bank insolvency proceedings is regarded as a judicial function in most European jurisdictions. In some countries such as the United Kingdom, the courts rely entirely on general corporate bankruptcy procedures; whereas in other countries, such as Austria, Belgium, Germany, Italy, Luxemburg, the Netherlands and Portugal, special rules or exemptions to the general bankruptcy law are established in the banking law. These approaches are consistent with a “marked trend toward providing the supervisor with wider powers and to either complement or replace powers previously exercised by judicial authorities” (Hüpkes, 2003 p.8). Some countries, such as France, allow for the coexistence of administrative proceedings controlled by the prudential supervisors and court judicial proceedings. The court allows the bank to continue operating, while trying to rehabilitate it, or to simply liquidate. Hüpkes (2003, p. 23) notes that a bank reaching this point is likely to be liquidated as “all corrective measures available under the banking law as well as mediation attempts will have already been exhausted.”

Hüpkes (2003) analysis suggests that the existing legal framework offers European prudential supervisors two suboptimal options for addressing an insolvent bank: (1) limited provisional administration, which may not be sufficient to bring about efficient resolution, or (2) turning the problem over to a bankruptcy court, which in some jurisdictions is an administered bankruptcy proceeding under the banking law. These options are unlikely to fully benefit from the supervisors' understanding of the banking system and, in some instances, risk conflict between judicial and supervisory authorities arising from disparate assessments and recommendations.

Not only are failed banks typically resolved through regular corporate bankruptcy proceedings, but the Directive 94/19/EC on deposit guarantee schemes does not require that depositors will have immediate access to their funds. Estonia, Hungary, Poland and Slovenia are the only European countries whose legislators have set more ambitious timing for the receipt of compensation (Garcia and Nieto, 2005).⁵⁸ The potential delay in providing depositors with access to their funds may have macroeconomic consequences that would encourage authorities with responsibility for macroeconomic conditions to strongly encourage supervisory forbearance. Dermine (1996, p. 680) stated that:

The issue is not so much the fear of a domino effect where the failure of a large bank would create the failure of many smaller ones; strict analysis of counterparty exposures has reduced substantially the risk of a domino effect. The fear is rather that the need to close a bank for several months to value its illiquid assets would freeze a large part of deposit and savings, causing a significant negative effect on national consumption.⁵⁹

Although resolution policy has largely been left to its Member States, the EU has addressed some of the potential problems with reorganizing and winding up credit institutions that operate across member boundaries. The Reorganization and Winding up Directive for EU Credit Institutions (Directive 2001/24/EC of the European Parliament and of the Council of 4

April)⁶⁰, which only applies to cross-border banking crisis, has harmonized the rules of private international law applicable to bank collective proceedings with the aim of ensuring the mutual recognition by Member States of the national measures relating to the reorganization and administrative or court-based liquidation of EU banks which have branches in other Member States.⁶¹ Hence, the Directive has not harmonized the national banking and bankruptcy laws on those aspects dealing with banks' reorganization and liquidation procedures.⁶² The Directive recognizes intervention into third party rights by administrative or judicial authorities as valid reorganization measures. In fact, it defines "reorganization measures" (Title II) as measures which are intended to preserve or restore the financial situation of a credit institution and which could affect third parties' pre-existing rights, including measures involving the possibility of a suspension of payments, suspension of enforcement measures or reduction of claims.

The Directive's provision recognizing the powers of administrative and judicial procedures to intervene in third party rights may have important implications for quasi-judicial procedures. Hüpkes (2003) points out that the European Court of Justice may have limited the ability of quasi-insolvency procedures to bring about effective resolution in EU Member States as a result of its 1996 opinion in *Panagis Pafitis and other v. Trapeza Kentrikis Ellados AE and others* ("Pafitis case").⁶³ This view is shared by Mayes, Halme and Liuksila (2001) who argue that the *Pafitis* case made intervention at positive benchmarks impossible in Europe.⁶⁴ However, the wording in the 2001 Directive appears to endorse quasi-insolvency proceedings raises the possibility that the Court might now reach a different conclusion were it to be presented with a similar case.

Although the Directive will provide some minimum basis for resolution after a bank is declared insolvent, it does little to create a common framework for determining when a bank will

be forced into resolution. In particular, the Directive fell short of creating 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 common decision-making structures across Member States, which adds complexity to the notification among Member States' authorities.

3.4 *Accurate and timely financial information*

Arguably, the biggest weakness of PCA is its reliance on regulatory capital measures of a bank's capital, measures which may significantly deviate from the bank's economic capital. Banks that are threatened by PCA mandated supervisory actions have a strong incentive to report inflated estimates of the value of their portfolios. The extent to which banks are allowed to overestimate their capital under PCA depends in part on the accounting rules and in part on the enforcement of the rules. Thus, if bank prudential supervisors want to preserve their discretion despite the requirements for mandatory actions in PCA, supervisors need only accept a troubled bank's inflated estimates of its regulatory capital adequacy ratio.

In the US, PCA is vulnerable to problems both in the accounting principles and their enforcement. The weakness in the principles is that US generally accepted accounting principles (US GAAP) generally do not permit the revaluation of assets and liabilities for changes in market interest rates, the exception being securities held in a trading account or available for sale if they are traded on a recognized exchange. This problem was well understood at the time of the adoption of PCA, which encourages but does not require the supervisors to adopt market value accounting. However, the supervisors have chosen not to take up this part of PCA, or even to use the fair value balance sheets that are available in publicly traded banks.

The first line of defense in the US for enforcing compliance with accounting rules, especially loan loss provisioning rules, are the external auditors of a bank.⁶⁵ The total impact of external auditors is hard to judge, as there is rarely any public disclosure when a bank changes its asset valuation in response to its external auditor's comments.

Dahl, O'Keefe and Hanweck (1998) find evidence that external auditors on average exerted an influence over bank loan loss provisioning during the 1987 to 1997 period.⁶⁶ However, that study is not designed to indicate whether external auditors were effective in forcing loss recognition that would result in a bank becoming undercapitalized. There are cases prior to PCA which raised questions about the effectiveness of external auditors, such as their real estate loan valuations at many banks in the northeast in the early 1990s that differed substantially from supervisory valuations.⁶⁷ In the post PCA period, reviews of bank failures that caused material losses to the FDIC by the offices of inspector general of the respective agencies have found several cases where external auditors did not adequately verify the correctness of asset valuations.⁶⁸ The official policies of the supervisory agencies call upon them to review the work of the external auditor, primarily to streamline the work of the bank examiners but also to assess the adequacy of the audit.⁶⁹ To the extent that outside auditors are unable or unwilling to force banks to recognize losses in their asset portfolios, PCA depends on the effectiveness of bank examinations by the supervisory agencies. Yet relying on the supervisors to enforce honest accounting creates a contradiction in PCA. PCA is designed to limit supervisory discretion in enforcing capital adequacy, yet PCA will only be fully effective if the bank supervisors use their discretion in conducting on-site examinations to force timely recognition of declines in portfolio value.

The vulnerability in enforcement is highlighted by Eisenbeis and Wall's (2002) finding that deposit insurance losses at failed banks in the US did not decrease as a proportion of the failed bank's assets after the adoption of PCA as should have happened if the supervisors were following timely resolution.⁷⁰ Their findings suggest that bank supervisors do not always enforce timely recognition of losses. Moreover, these weaknesses in PCA are not limited to the US. Japan adopted a version of PCA in 1998, but did not impose sanctions on banks widely thought to be undercapitalized or even insolvent because the banks reported adequate regulatory capital ratios.⁷¹

The EU is addressing the problems in obtaining accurate and timely information. Although in the EU, Member States have traditionally had different supervisory requirements and accounting rules, harmonization has taken place in the recent years to comply with the International Financial Reporting Standards (IFRS).⁷² Most importantly, IFRS requires fair value accounting which takes account of changes in portfolio value due to interest rate changes. In addition, EU bank prudential supervisors aim at streamlining financial reporting under IFRS, focusing on harmonization of reporting formats and convergence of supervisory reporting requirements. In the first stage, efforts have been oriented towards the primary reporting formats, such as balance sheet and profit and loss accounts. Moreover, EU bank supervisors have also developed a common reporting framework for the implementation of the new solvency ratio under Basle II.

With very few exceptions, EU banks are required to present audited financial statements. Most, but not all, EU supervisors also supplement bank auditing with on-site examinations to verify banks' reported financial condition.⁷³ The on-site inspections provide supervisors with the opportunity to enforce timely loan loss recognition, but it is only an opportunity. Losses may not

be recognized in a timely manner if the supervisors fail to use their discretion to enforce timely recognition

One way of reducing the vulnerability of PCA to over-estimates of capital is to supplement regulatory capital ratios with market data in setting the tripwires between different PCA categories. Such market signals could be derived from the debt or equity markets for banks that have (or could issue) actively traded debt or equity obligations. For example, Evanoff and Wall (2002) propose using the spread between the yield on subordinated debt and other debt securities of comparable maturity as a trigger for PCA sanctions at the largest US banks.⁷⁴ Evanoff and Wall's (2002) analysis found that subordinated debt yield spreads produced more accurate predictions of upcoming confidential supervisory ratings than did bank's risk-based regulatory capital ratios.⁷⁵ However, because they also found that both risk measures contain substantial noise, they suggest limiting the use of subordinated debt only as a failsafe mechanism to identify critically undercapitalized banks.⁷⁶

In the EU, in spite of the fact that there is a lack of statistical reliable data; according to the BIS (2003), retail investors seem to play a larger role given the relatively high number of small banks that issue subordinated debt. To the extent that institutional investors are better placed to exercise market discipline, this may pose a limitation to market discipline of EU banks. Furthermore, Benink and Benston (2005) show that the level of subordinated debt over total assets of EU commercial banks increased little over the period 1999-2003.⁷⁷ Nonetheless, EU banks and in particular German, British and Spanish banks are large issuers of subordinated bonds. Moreover, the concentration of debt issues per most issuing bank is relatively low in the EU as compared to the USA or Japan.⁷⁸

Sironi (2001) empirically tested the risk sensitivity of subordinated debt spreads of over 400 fixed rate subordinated bonds of EU banks, using publicly available information such as ratings and market variables. Sironi found that investors appear to rationally discriminate between the different risk profiles of European banks and that the sensitivity of the subordinated debt spreads has been increasing overtime "suggesting that implicit guarantees such as TBTF policies were present in the first half of the nineties and became weaker or vanished during the second part of the decade." ⁷⁹ However, Sironi as well as most other empirical studies of risk sensitivity of subordinated debt lacked access to confidential supervisory ratings and, thus, was forced to implicitly assume that publicly available information reflects a bank's risk profile in a timely and adequate manner.

4. Conclusions

Prompt corrective supervisory action seeks to minimize expected losses to the deposit insurer and taxpayer by limiting supervisors' ability to engage in forbearance. Along with reducing taxpayer losses, PCA should also reduce banks' incentive to engage in moral hazard behavior by reducing or eliminating the subsidy to risk-taking provided by mispriced deposit insurance. These potential benefits from PCA appear to have been recognized, as reflected in the increasing number of recommendations to policy makers to introduce PCA type of provisions in their national legislation. Japan, Korea and, more recently Mexico have adopted this prudential policy. However, an effective PCA policy requires on one hand the acceptance of key aspects of the philosophy underlying SEIR/PCA, on the other, an institutional framework supportive of supervisors' disciplinary action. This article attempts to identify the changes needed to adopt an effective PCA in general and, in particular, in Europe.

Three aspects of the philosophy underlying SEIR/PCA are critical to its effective operation. First, the primary goal of prudential supervisors should be to minimize deposit insurance losses, a goal which is also likely to result in a reduction in the expected social costs of systemic financial problems. The 94/19/EC Directive on deposit insurance schemes, as well as the EC Treaty (articles 101 and 103) discourage governments and limit central banks from providing funding to the deposit insurance. Hence, this regulation is in line with this element of the SEIR/PCA philosophy. A second critical part of their philosophy is that prudential supervisory discretion to engage in forbearance should be limited. PCA requires mandatory intervention at an early stage of a bank's financial problems. Such intervention may prevent insolvency by (a) contributing to an early recognition by banks' managers of the banks' problems; (b) putting pressure on banks' managers to build capital and avoid excessive risk taking. Pillar II of the proposed new capital accord contains three principles that require prompt supervisory intervention. These principles are broadly dealt with in the recently approved CRD. However, the resemblance to the PCA should not be overstated. The PCA policy applied in the US goes beyond those three principles of Basle II in that it limits even further supervisory discretion as to when to forbear from intervening by specifying capital/asset ratios that require minimum and automatic supervisory action. The third critical part of PCA follows from the first two parts, banks should be subject to mandatory closure at positive levels of regulatory capital ratio. This provides an incentive to banks' managers to recapitalize the bank or look for a healthy merger partner and, ultimately, contribute to reduce the cost of deposit insurance. In the EU, contrary to the case in the US, prudential supervisors have a limited range of legal powers to bring about early resolution without applying the general insolvency procedures to banks.

Regarding the second element for an efficient implementation of PCA, an institutional framework supportive of prudential supervision disciplinary action is based on four preconditions, which, are in most instances called for by the Core Principles issued by the Basle Committee on Banking Supervision although they do not prescribe PCA.

First, supervisors must have operational independence from the political and judicial systems. In the EU, prudential supervisors are either central banks or independent agencies that have achieved increasing political independence over the past two decades, which, through accountability, has been reconciled with the demands of democratic legitimacy. However, in some countries, formal consultation with government is required in matters of internal procedure. Also, the extent to which the supervisors are able to act independently of the judiciary varies by country.

Second, supervisors must have access to a broad range of supervisory measures to bring about timely corrective action is another requirement for an effective PCA. In some countries, supervisors do not have a full range of corrective actions, such as restricting asset transfers or suspending dividends. In the recent entrants to the EU, the ability of the supervisor to address safety and soundness issues in banks is significantly encumbered by its institutional capacity and resources. Furthermore, in a number of EU countries, government must formally approve the license withdrawal although the decision corresponds to the supervisor. Hence, the “prompt” part of the PCA is not present.

Third, the supervisors must be provided with adequate resolution procedures. In the EU, Member States’ bank resolution procedures generally lack the flexibility of those available in the US, because of (1) the above mentioned limited range of supervisory measures to bring about resolution without applying to the courts and (2) the rigidities imposed by the general insolvency

procedures applied to banks, which in some jurisdictions are an administered bankruptcy proceeding under the banking law. In the case of credit institutions with cross-border activity within the EU, Directive 2001/24/EC on the Reorganization and Winding up addresses some of the potential problems by enshrining the principles of mutual recognition, unity and universality. Nonetheless, the Directive falls short of creating a framework of commonly accepted standards of bank resolution practice and, in particular, a common definition of bank insolvency and a fully-fledged single legal framework across the EU.

Finally, prudential supervisors must have access to accurate and timely financial information on banks' financial condition is also a pre condition for an effective PCA. The accuracy of banks' financial information depends on both the accounting principles used to measure capital and the enforcement of those principles. The EU is addressing this question by requiring banks to comply with the IFRS, developing common reporting requirements, and implementing methods for the data transmission in real time. The more difficult problem to solve relate to giving the supervisors appropriate incentives to engage in timely action. The U.S. experience since the adoption of PCA suggests that it may need to strengthen its supervisors' incentives to demand honest accounting.

In sum, although the existing EU legal framework generally supports the underlying philosophy of PCA, particularly with regard to limiting deposit insurance losses and mandatory prudential supervision at an early stage of banks financial problems. However, PCA embeds some conceptual views about the operation of bank supervision and the mandatory closure at positive predetermined levels of regulatory capital ratios that have not been adopted by EU Member States. Moreover, substantial changes would need to be made to the Member States' institutional framework before the EU could adopt a version of PCA. These institutional

changes would be desirable even if the EU does not adopt PCA, but they are critical to the implementation of a PCA that is as effective as the PCA currently is in the US.

Table 1. Objectives, autonomy and remedial measures of prudential supervisors: EU and rest of the world (*)

Country	Objectives and autonomy (BCP 1)	Remedial Measures (BCP 22)	Comments
EU			
Germany	The, Prud. Sup. Authority is independent in its supervisory operations, albeit accountable to the MoF. The assessment notes some issues where the scope of the role of the MoF is unclear, for instance its mandate to issue instructions to the Prud. Sup. Authority, and the requirement that the Prud. Sup. Authority must consult the MoF in matters of internal procedures.	The Prud. Sup. Authority has a broad range of remedial measures at their disposal to counter weaknesses in banks, and they use these measures frequently. There is an implicit presumption in the legislation that adequate remedial action is taken promptly. Authorities are encouraged to make this presumption more explicit, in particular in severe cases.	Authorities point out that overly prescriptive rules could be counterproductive because they would reduce the room and incentives for taking discretionary decisions, which are better adapted to the specific circumstances, especially as the correct use of discretion is determined by general rules and legal limits.
France	Independence of banking supervision is generally adequate although the presence of the Head of Treasury on the board of the Prud. Sup. Authority could raise the issue of independence from the Government. The legal protection of supervisors is a well recognized tenet of administrative law and is considered satisfactory.	The Prud. Sup. Authority has the legal power to impose a broad range of remedial measures that range from recommendation to withdrawal of the license with or without appointment of a liquidator. The Prud. Sup. Authority may impose the withdrawal of the voting rights of certain or all shares, the prohibition to pay dividends or other form of remunerations to shareholders and the obligation for the credit institution to disclose the disciplinary measures. When imposing sanctions, the Prud. Sup. Authority is an administrative judicial authority, and its decisions and actions can only be challenged before the highest administrative authority.	
Italy	The Prud. Sup. Authority takes the initiative in recommending regulatory and supervisory policy and it has operational independence on day-to-day application of supervisory methods. The enforcement powers of Prud. Sup. Authorities are satisfactory. The law does not provide legal protection to its supervisors against court proceedings stemming from measures adopted in the performance of their functions in good faith.	The Prud. Sup. Authority is able to activate a broad range of measures graduated according the seriousness of the problem bank's situation. Nonetheless, it lacks specific provision to require subsequent removal of a director or senior officer who may have become unfit.	
UK	The Sup. Authority is independent in its supervisory activity and accountable to the Treasury Minister, and, through them, to Parliament.	The Sup. Authority can take remedial action with immediate effect, using a supervisory notice. The Sup. Authority may cancel a bank's permission and it has the authority to take disciplinary action against a bank or an individual, including fines and public censure. It may also place requirements or restrictions on banks permission. This power can be used to require a bank to take (or refrain from taking) specified actions.	
The Netherlands	The Bank Act gives the Sup. Authority powers to exercise supervision of financial institutions in accordance with applicable legislation. The legislation also provides the Ministry of Finance powers to exercise certain supervisory measures. The objectives of the Sup. Authority are only implicitly embedded in the legislation rather than being explicitly set out and published. The new legislation will be an opportunity to strengthen this aspect and make accountability easier to measure.	Though the legal powers given to the Sup. Authority are wide ranging and would appear to cover almost all (if not all) eventualities, more formalized measures are rarely used in practice. Notwithstanding, there are established procedures on how to implement such measures if called for. These measures tend to be persuasive and confidential in nature including the use of the 'silent receiver' in cases of substantial concern. This system appears to work effectively. It can be questioned	

		whether 'penalties' can be applied to management rather than just members of the Supervisory and Executive boards.	
Austria	The Prud. Sup. Authority enjoys operational independence, and have a mandate clearly defined in law. There is legal protection for individual supervisors discharging their duties in good faith. Court decisions may find the federal government liable for losses in a bank failure due to shortcomings of an external auditor performing supervisory duties prescribed in the banking act.	A broad range of remedial powers is provided by law to the Sup. Authority, including explicit requirements to take prompt action in serious cases such as insolvency. The legal system puts a high burden of proof on the supervisor before action, which may subsequently be challenged in court.	
Sweden	The Sup. Authority is an independent authority in performing its regulatory and supervisory functions and it has its own board. The government yearly issues the Sup. Authority 's general objectives after consulting with the Sup. Authority. In order to achieve the overall objectives, Sup. Authority sets its operational goals and objectives without having to consult with the government. Sup. Authority 's employees can be considered to have legal protection for their actions taken in good faith in their office	The supervisor has a limited range of remedial actions available. In addition to issuing warnings and imposing conditional fines, the supervisor can revoke the license. However, the supervisor should be able to take a more proactive approach with respect to remedial measures. The supervisor is not empowered to take most of the measures enumerated in the essential criteria, e.g. restricting the scope of activities of a bank and suspending the payment of dividends. There are no laws or regulations that would mitigate against supervisory forbearance.	
Finland	The Sup. Authority has limited independence and accountability. Independence is limited as the responsibility for the licensing and revocation of a bank remains with the MOF. Accountability is limited as no authority is explicitly charged with supervising the Sup. Authority with regards to the effectiveness and appropriateness of its functions.	The Sup. Authority does not have the powers to require compliance with safety and soundness measures recommended by the supervisor; powers to establish criteria for reviewing acquisitions and investments; powers to assess the adequacy of loan loss provisions and reserves; powers to require a higher minimum capital ratio; powers to control connected lending; and powers to bring about timely remedial action. Although the Sup. Authority participates in the resolution process for problem banks; it lacks powers to take prompt remedial action. The Sup. Authority is for the most part focused on ex post reaction.	
Slovenia	The Prud. Sup. Authority must be commended for the actions undertaken to enhance the regulatory regime and its endeavor to meet international standards. However, the insufficiency of the salary must be addressed and the legal protection of the supervisory staff must be established.	The Prud. Sup. Authority has the legal power to restrict bank activity or a license or to revoke a bank license. Prud. Sup. Authority has, <i>inter alia</i> , powers to object to potential controllers or shareholders of banks, and to existing controllers or shareholders. In practice, the BoS seeks remedial action through informal means, principally through the use of moral suasion.	
Slovak Republic	The legal framework for banking supervision is suitable and provides supervisory independence. The banking Law has enhanced the supervisor's authority and ability to act, in part based on certain safety and soundness provisions. However, the ability of the supervisor to address safety and soundness issues in banks is significantly encumbered by its institutional capacity.	The banking Law provides a range of remedial actions to the supervisor, which if interpreted properly and affectively applied, offer the supervisor sufficient leverage and actions to oversee the banking sector. In order to accomplish this, the overall practice of supervision must continue to be strengthened. The willingness and capacity of the Sup. Authority to identify issues and to take timely and effective actions must still be demonstrated.	
Hungary	The respective laws fully empower the Prud. Sup. Authority to address compliance with laws and all significant concerns of soundness and prudent management. They empower, except for the extreme sanction of withdrawal of a license, the Prud. Sup. Authority to take or impose prompt remedial action whenever, in its judgment, a bank is not complying with laws and regulations	Although the Prud. Sup. Authority has remedial tools at its disposal; they are not directed at reinforcing the responsibilities of the board and senior management to prudently oversee the safe and sound operation of the bank and the consolidated company. Supervisors cannot remove board members and senior management. Recourse to remedial actions is predicated	

	or is (at risk of) engaging in any unsafe or unsound practice. Supervisors enjoy full protection under the civil service acts for all acts performed in exercising their professional duties. The MoF is responsible for the licensing and exit policies.	on an institution being in a crisis or pre-crisis mode.	
European non-EU			
Switzerland	There appears to be a lack of administrative independence with regard to the Prud. Sup. Authority 's budget, which is incorporated into the Finance Ministry's Budget.	<p>The banking Law provides a range of remedial actions, including the withdrawal of the bank's license. There is no mechanism for the automatic imposition of administrative or penal sanctions, as under Swiss law such sanctions require the conduct of legal proceedings. The proposed amendment to the banking Law will codify the Prud. Sup. Authority 's current practices and will explicitly empower it, for instance:</p> <ul style="list-style-type: none"> ○ To suspend/dismiss managers or directors if bank solvency is under threat ○ To alter reduce or terminate any activity that poses excessive risk, or restrict an institution's business activities; or ○ To impose temporary management and reorganization measures. <p>The Prud. Sup. Authority has no explicit legal basis for publicly disclosing enforcement actions naming institutions and individuals.</p>	
Norway	Laws provide a clear framework, objectives and responsibilities for carrying out bank supervision. However, the institutional arrangements among MOF and Prud. Sup. Authority need to be strengthened in order to preserve and increase the actual and perceived authority and independence of the Prud. Sup. Authority.	<p>Several remedial tools specifically backed by legal authority should be added:</p> <ul style="list-style-type: none"> ○ To force financial institutions to arrange good risk management practices. ○ To order explicit restrictions on financial institutions, in unsatisfactory condition withholding approval to open new offices, expand into new products, or acquire new businesses ○ To empower Prud. Sup. with authority to set adequate individual loan loss provisions. 	Authorities point out that decisions taken by the MoF will always be based on a recommendation from Prud. Sup. Authority, which always will be available to an applicant, and normally will be publicly available. Thus a decision taken by the MoF will be much more transparent than a decision taken by the Prud. Sup. Authority.
Rest of the World			
Canada	The banking Law provides legislated authority for the Prud. Sup. Authority to address compliance with laws and safety and soundness of banks. Legislation gives Prud. Sup operational independence. However, the MoF has some formal powers to overrule the Prud. Sup. Authority on chartering and some banking policy issues.	Although the Prud. Sup. Authority has a wide array of sanctions at his disposal; it does not have the authority to bar an individual from banking once the person has been hired. The Prud. Sup. Authority is subject to the external control of the General Accounting Office.	
Japan	Although the removal of responsibility for supervision from the MoF and the setting up of the unified Sup. Authority was a major step forward, there appears to be lack of operational independence. The constitutional framework of the Sup. Authority -with a minister who effectively has control over the operations of the supervisor- creates scope for the Sup. Authority to be subject to political pressures.	The Sup. Authority is authorized to take an appropriate range of actions against a bank that requires remedial measures. The actions range from submission of business improvement plans to revocation of the license. Sanctions apply also to the board of directors, auditors and managers for violation of the banking Law, including failure to observe corrective orders.	

Mexico	Even though the legal framework establishes the Prud. Sup. Authority as the single authority responsible for banking regulation and supervision, in reality the regulatory responsibility is shared with other institutions. This fragmentation of powers weakens accountability and enforcement of rules and regulations. Political interference in decision making and budgetary constraints undermine the operational independence of the Prud. Sup. Authority.	There is a system of prompt corrective action in place that would allow the Prud. Sup. Authority to take remedial action in a timely fashion.	
Korea	The operational independence of the Authority is embodied in law, however, in practice some practices such as the MoF interpretations of regulations, have called that independence into question. The Sup. Authority and its staff lack of statutory protection against lawsuits for actions performed while discharging their duties in good faith.	There is a full range of remedial actions that can be taken against banks. However, there is scope to strengthen and clarify the Sup. Authority powers to initiate enforcement actions. The Sup. Authority is not empowered to remove employees of financial institutions.	Authorities point out that the lack of clarity in the roles of agencies overseeing the financial sector promotes an effective system of checks and balances.

(*) Observance of the Basle Core Principles for Effective Banking Supervision. IMF-WB Assessments available in the web site (http://www.imf.org/external/ns/search.aspx?filter_val=N&NewQuery=basle+core+principles+banking+supervision&col=SITENG&collection=&lan=eng). These institutional arrangements may have changed since the date of the assessment.

¹ Benston, George J. and George G. Kaufman (1998) *Risk and Solvency Regulation of Depositor Institutions: Past Policies and Current Options*. New York: Salomon Brothers Center, Graduate School of Business, New York University.

² Goldstein, M. (1997) *The case for an International Banking Standard*. Policy Analyses in International Economics N. 47 April.

³ Goldstein, M. and Phillip Turner (1996) *Banking crises in emerging economies: origins and policy options*. BIS Economic Papers No 46 October.

⁴ European Shadow Financial Regulatory Committee Statement No. 1, *Dealing with problem banks in Europe*. Center for Economic Policy Studies, 22 June, 1998

⁵ European Shadow Financial Regulatory Committee Statement No.23, *Reforming Banking Supervision in Europe* . 21 November 2005.

⁶ Benink, H. and George J. Benston (2005) *The future of banking regulation in developed countries: Lessons from and for Europe*. Mimeo.

⁷ Mayes, D. (2005) *Implications of Basle II for the European Financial System* Presentation at the Center for European Policy Studies.

⁸ Kane, Edward J. (1985). *The Gathering Crisis in Deposit Insurance*. Cambridge, MA: MIT Press. provides an early discussion of the thrift problem. The banking problems of the 1980s, are summarized with an extensive literature review in Federal Deposit Insurance Corporation (1997) *History of the Eighties: Lessons for the Future. Volume 1: An Examination of the Banking Crises of the 1980s and Early 1990s*. Federal Deposit Insurance Corporation, Washington D.C. 167-188. Also available at <<http://www.fdic.gov/bank/historical/history/vol1.html>>. Chapter 4 of Federal Deposit Insurance Corporation (1997) addresses the thrift problems.

⁹ Wall, Larry D. (1989) *Capital Requirements for Banks: A Look at the 1981 and 1988 Standards*. Economic Review, Federal Reserve Bank of Atlanta, (March/April) 14-29.

¹⁰ Federal Deposit Insurance Corporation (ref. 8 above) discusses Continental Illinois failure in Chapter 7, the problems of banks that served agricultural areas in Chapter 8 and the problems of banks in the Southwestern U.S. (the primary energy producing region) in chapter 9.

¹¹ See Chapters 2 and 4 of Federal Deposit Insurance Corporation (ref. 8 above) for a discussion of the 1987 and 1989 legislative acts.

¹² Note, the US has separate insurance funds for commercial banks and savings associations (thrifts). For discussion of the condition of the FDIC's insurance fund in 1991 see: See Garcia, Gillian. (1991). *The condition of the Bank Insurance Fund: a view from Washington*. Proceedings of a Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago. pp. 50-69., Litan, Robert E. (1991). *Short and long snapshots of the U.S. banking industry*. Proceedings of a Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago. pp. 70-86. Bartholomew, Philip F. and Thomas J. Lutton. (1991). *Assessing the condition of the Bank Insurance Fund*. Proceedings of a Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago. pp. 87-111. and Bovenzi, John F. (1991). *BIF: still solvent after all these years?* Proceedings of a Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago. pp. 112-121.

¹³ The supervisors can take other actions if such actions would better achieve the goal of the act.

¹⁴ For an argument that supervisors routinely imposed many of the restrictions contained in FDICIA prior to its adoption see Gilbert, Alton R. (1991). *Supervision of undercapitalized banks: is there a case for change?* Review, Federal Reserve Bank of St. Louis. (May) pp. 16-30.

¹⁵ See Benston, George J. and George G. Kaufman (1988) in ref. 1 above. For a discussion of the intellectual history of PCA see Benston, G., and Kaufman, G. (1994) *The Intellectual History of the Federal Deposit Insurance Corporation Improvement Act of 1991*. In G. G. Kaufman (ed.) *Reforming Financial Institutions and Markets in the United States*, p 1-17. Boston: Kluwer.

¹⁶ 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 possibility that this ratio should be revised up.

¹⁷ The Federal Deposit Insurance Corporation Improvement Act (FDICIA) also includes significant changes in the way deposit insurance premiums are charged and the way the Federal Deposit Insurance Corporation (FDIC) resolves failed banks (see Chapter 2 of Federal Deposit Insurance Corporation (1997) for a brief summary of the deposit insurance reform parts of FDICIA. For a more detailed discussion of least cost resolution—especially as applied to the largest US banks) see Wall, Larry D. (1993). *Too-Big-To-Fail' After FDICIA*. Economic Review, Federal Reserve Bank of Atlanta, (January/February) pp. 1-14.

FDICIA replaced the flat-rate deposit insurance premiums that banks had paid since the FDIC was created with risk-based premiums. In practice, the risk measure used to set the premiums is crude, but it is nevertheless substantially more accurate than charging all banks a flat rate on deposits. The change in the way the FDIC resolves banks was contained in language ordering the agency to resolve banks in the way least costly to the insurance fund. Prior to FDICIA, the FDIC used a cost test in its bank resolutions but applied the test in a way that had the effect of almost always providing 100 percent deposit insurance for deposits exceeding the *de jure* coverage limit of \$100,000. FDICIA ordered a change in the cost test that would restrict coverage to \$100,000 in almost all cases.

¹⁸ PCA does not apply to the corporate owners of banks or their non-bank affiliates. However, the bank subsidiaries are the dominant assets of almost all holding companies that own banks. As such, the failure of the banking within the group is likely to trigger the failure of the holding company.

¹⁹ Moreover, the US supervisors set the requirements to be classified as well capitalized under PCA above the minimum requirements set by Basel 1. Well capitalized banks must have a Tier 1 risk-based capital ratio of 5 %, a total risk-based capital ratio of 10% and must also meet a minimum leverage (equity capital to total assets) requirement.

²⁰ Section 37 of FDICIA. SEIR would have imposed even stricter requirements on regulatory accounting, mandating the use of market values in the calculation of capital ratios.

²¹ The Comptroller General is the head of the General Accounting Office, the investigative arm of the US Congress.

²² For example, the FDIC Office of Inspector General’s report on material losses incurred at South Pacific Bank may be found at < <http://www.fdicig.gov/reports03/03-036-508.shtml> >. In discussing the role of PCA, the report states: “However, PCA was not fully effective due to the inadequate provision for loan losses that overstated SPB’s income and capital for several years.”

²³ Canada is the only other country in the OECD where the Office of the Auditor General does have similar responsibilities regarding the Superintendent of Financial Institutions (see www.oag-bvg.gc.ca).

²⁴ Eisenbeis, Robert A. and Larry D. Wall (2002). *The Major Supervisory Initiatives Post-FCICIA: Are They Based on the Goals of PCA? Should They Be?* Prompt Corrective Action in Banking: 10 Years Later edited by George

Kaufman, pp. 109-142. This book is volume 14 of Research in Financial Services: Private and Public Policy published by JAI.

²⁵ An almost equivalent way of viewing the problem is that of minimizing deposit insurance losses. The differences between the two arise from the differential treatment of government expenditures outside the deposit insurance system. A U.S. example of this is the use of tax credit by NCNB to acquire First Republic Bank Corporation in Texas in 1988. Another way in which such assistance may be provided is via bailouts of bank borrowers to prevent a bank from failing due to loan losses.

²⁶ Stern, Gary H. and Ron J. Feldman (2004) Too Big to Fail: The Hazards of Bank Bailouts, *The Brookings Institution*, Washington D.C.

²⁷ Mexico: Financial System Assessment Program. International Monetary Fund October, 2001 page 18 (<http://www.imf.org/external/pubs/ft/scr/2001/cr01192.pdf>).

²⁸ Hupkes Eva, Marc Quintyn and Michael W. Taylor (2005), *The Accountability of Financial Sector Supervisors: Principles and Practice*, IMF Working Paper, March, n.51.

²⁹ George J Benston and George G Kaufman (1995), *Is the Banking and Payments System Fragile?* Journal of Financial Services Research, December, v. 9, iss. 3-4, pp. 209-240.

³⁰ A recent paper finding evidence that bank failures reduced the value of their borrowers is Brewer, Elijah III, Hesna Genay, William Curt Hunter, and George G. Kaufman (2003), *The value of banking relationships during a financial crisis: Evidence from failures of Japanese banks*, Journal of Japanese and International Economies, 17 (September) pp. 233-262.

³¹ Kaufman, George G. (1988), *Bank Runs: Causes, Benefits, and Costs*, Cato Journal, Winter.

³² Eisenbeis and Wall (2002, ref .24 above) point out that the terrorist events of September 11, 2001 caused severe disruption to US financial system, including the inability to of some financial to accept or route payments, but that a potential crisis was averted when the Federal Reserve stepped in to provide adequate liquidity. Eisenbeis and Wall (2002) also argue that the temporary disruptions resulting from a bank's failure may be reduced by following appropriate resolution policies. For example, resolution policies may be structured in a way that transfers the viable operations, insured deposits and other good liabilities to a healthy bank as soon as possible.

³³ The likelihood that more than one bank would become insolvent at the same time is small unless if the banks were exposed to and suffered losses due to a single shock, such as excessive exposure to interest rate changes.

³⁴ European Shadow Financial Regulatory Committee Statement No. 1, (June, 1998). See ref. 4 above.

³⁵ Directive 94/19/EC was primarily designed with the aim of discouraging credit institutions within the EU from using protection's different features to compete with each other. To this end, it provides for a minimum harmonized level of protection of small depositors (€20,000 and transitionally below it in some countries that have recently joined the EU). See Garcia, G. and María J. Nieto (2005) *Banking Crisis Management in the European Union: Multiple Regulators and Resolution Authorities* Journal of Banking Regulation Vol. 6 N 3 pp.215-219 for a description of the features of the EU countries' deposit protection schemes.

³⁶ European Shadow Financial Regulatory Committee Statement No. 1, (June 1998). See ref. 4 above.

³⁷ The sample includes 32 European countries (24 EU members, 6 CEEC, Norway and Iceland). De Cesare, Manuela (2005). *Report on Deposit Insurance: An international Outlook*, Working Paper 8. Fondo Interbancario di Tutela dei Depositi.

³⁸ Italy: Detailed Assessment of the Compliance of the Basle Core Principles of Banking Supervision. International Monetary Fund. May 2004 (<http://www.imf.org/external/pubs/ft/scr/2004/cr04133.pdf>).

³⁹ Llewelyn, D.T. (2002) "Comment" in Prompt Corrective Action: Ten Years Later. G.G. Kaufman, ed. Amsterdam, JAI, pp. 321-333 (also published in Mayes, D. and D.T. Llewellyn (2003), *The role of market discipline in handling problem banks*, Bank of Finland Discussion Papers 21.) See also Carnell, Richard S., 1993. *The Culture of Ad Hoc Discretion*, in G. Kaufman and R. Litan (eds.), *Assessing Bank Reform: FDICIA One Year Later*. Washington: The Brookings Institution, pp. 113-121.

⁴⁰ Horvitz, P. M. (1995) *Banking regulation as a solution to financial fragility*, Journal of Financial Services Research, December, pp.369-380.

⁴¹ The CRD covers Pillar II in Articles 123, 124 and Annex XI as well as Article 22 and Annex V, which deal with internal governance. Directives are binding as regards the results to be achieved and the forms and methods, in general national legislation, for its achievement are left to member States.

⁴² Article 124 of the CRD: "*1- [T]he competent authorities shall review the arrangements, strategies, processes and mechanisms implemented by credit institutions to comply with this Directive and evaluate the risks to which the credit institutions are or might be exposed.*

3- On the basis of the review and evaluation referred to in paragraph 1, the competent authorities shall determine whether the arrangements, strategies, processes and mechanisms implemented by the credit institutions and the own funds held ensure a sound management and coverage of their risks. "

⁴³ SRP represents the collective views of EU supervisors on the standards that credit institutions are expected to observe and the supervisory practices that supervisory authorities will apply (<http://www.c-ebs.org/pdfs/GL03.pdf>, see page 37).

⁴⁵ Bank liquidation is generally as a last resort in the US because it imposes greater costs on the bank's customers and destroys any franchise value created by the failed bank. The FDIC acting as receiver will only liquidate a bank if doing so reduces the expected cost of resolution to the deposit insurance fund.

⁴⁶ See Horvitz, P. M. (1995) ref. 40 above.

⁴⁷ Mayes, D. G., L. Halme and A. Liuksila (2001) *Improving Banking Supervision*, Basingstoke. Palgrave.

⁴⁸ Hadjiemmanuil, Ch. (2004) *Europe's Universalist Approach to Cross-Border Bank Resolution Issues*, presented at the Conference on Systemic Financial Crisis: Resolving Large Bank Insolvencies, sponsored by the Federal Reserve Bank of Chicago.

⁴⁹ FDICIA does add a new requirement for approval of a political authority, the Secretary of the Treasury in consultation with the President. However, that requirement applies only if the FDIC wants to resolve a bank in a way that protects otherwise uninsured creditors of the bank at the expense of the insurance fund (often called the "systemic risk" exception). The FDIC is not required to obtain political approval for resolutions that are in accord with the least cost resolution provision of FDICIA.

⁵⁰ In theory, a requirement for political or judicial approval might not be a problem for effective PCA provided the approval was promptly and automatically given. However, there would also be no benefit to such a requirement.

⁵¹ The Core Principles were issued by the Basle Committee in September 1997, and endorsed by the international financial community during the annual meeting of the IMF and World Bank in Hong Kong in October, 1997 (<http://www.bis.org/publ/bcbs30.pdf>). Observance of the Basle Core Principles for Effective Banking Supervision. IMF-WB Assessments are available in the web site

(http://www.imf.org/external/ns/search.aspx?filter_val=N&NewQuery=basle+core+principles+banking+supervision&col=SITE NG&collection=&lan=eng). The present institutional arrangements may have changed since the date of the assessment.

⁵² See Germany Financial Stability Assessment, November 2003 (p.52)

<http://www.imf.org/external/pubs/ft/scr/2003/cr03343.pdf>

⁵³ European Shadow Financial Regulatory Committee Statement No. 1, ref. 4 above.

⁵⁴ Observance of the Basle Core Principles for Effective Banking Supervision. IMF-WB Assessments . See ref. 51 above.

⁵⁵ However, these special provisions in the US apply only to chartered banks. The nonbank corporate parent and nonbank affiliates of a US bank are subject to the corporate bankruptcy provisions of US law.

⁵⁶ Kaufman, George G. and Steven A. Selig, (2000), *Post-Resolution Treatment of Depositors at Failed Banks: Implications for the Severity of Banking Crises, Systemic Risk and Too-Big-To Fail*, Federal Reserve Bank of Chicago working paper WP 2000-16.

⁵⁷ Hüpkens, E. (2003) *Insolvency - why a special regime for banks?* in Current Developments in Monetary and Financial Law, Vol.3. International Monetary Fund, Washington DC.

⁵⁸ See Table 4 in Garcia, G. H. and M. J. Nieto (2005) ref. 35 above. The potential for delay in providing depositors with access to their funds could be even greater in the case of "ex post" funded deposit insurance funds.

⁵⁹ Dermine, Jean, (1996) *Comment*, Swiss Journal of Economics and Statistics, (December), 679-682.

⁶⁰ Official Journal of the European Communities L125, 5th May, 2001. At the time of writing this article, implementation was pending in four Member States: Czech Republic, Greece, Portugal and Sweden.

⁶¹ Financial institutions are excluded from the EU Insolvency Proceedings Regulation (Council Regulation EC N0 1346/2000 of 29 May, 2000 on insolvency proceedings) and the Winding-up Directive parallels in the banking field that regulation governing general corporate insolvency law. The Winding-up Directive does not apply to the insurance, securities and UCITS activities of the conglomerate.

⁶² This development has been possible because of the pre-existence of a heavily harmonized system of banking regulation and supervision in the EU. EU Policy makers have traditionally relied on regulatory harmonization to achieve the integration of financial markets. See Garcia and Nieto (2005) pp. 209-210 ref. 35 above.

⁶³ *Panagis Pafitis and other v. Trapeza Kentrikis Ellados AE and others* (Case C-441/93), CMLR, 9 July 1996.

⁶⁴ Mayes, D. G., L. Halme and A. Liuksila (2001) *Improving Banking Supervision*, Basingstoke: Palgrave.

⁶⁵ Bank regulations do not require audited financial statements of banks with less than \$500 million in assets and some smaller banks are not audited.

⁶⁶ Dahl, Drew, John P. O'Keefe, and Gerald A. Hanweck (1998), *The Influence of Auditors and Examiners on Accounting Discretion in the Banking Industry*, FDIC Banking Review, (Winter), v. 11, pp. 10-25. However, another study looking specifically at banks that restated their financial condition suggests that examiners have an impact after taking account of external auditors (albeit the paper only includes a binary audit variable in its model and does not focus specifically on restatements by banks that have been audited). See Gunther and Moore (2003) *Loss underreporting and the auditing role of bank exams*, , Journal of Financial Intermediation 12 (April) pp. 153-177.

⁶⁷ An example of the differences in valuations between those of the bank supervisors and the values in the financial statements (which were approved by the bank's auditors) is given by the United States General Accounting Office (1991) *Bank Supervision: OCC's Oversight of the Bank of New England Was Not Timely or Forceful* (GAO/GGD-91-128, Sept. 16) < <http://archive.gao.gov/d19t9/144822.pdf> >.

⁶⁸ Examples of cases where the relevant inspector general criticized the external auditors' performance or the supervisor's reliance on the outside auditor to catch valuation errors or both include: (a) Federal Deposit Insurance Corporation Office of Inspector General (2003) *Material Loss Review of the Failure of the Connecticut Bank of Commerce, Stamford, Connecticut* (Audit Report No. 03-017) < <http://www.fdicig.gov/reports03/03-017.pdf> >, (b) United States Treasury Office of the Inspector General (2002) *Material Loss Review of Superior Bank, FSB*, (OIG-02-040), < <http://www.treas.gov/inspector-general/audit-reports/2002/oig02040.pdf> >, and (c) United States Treasury Office of the Inspector General (2000) *Material Loss Review of The First National Bank of Keystone*, (OIG-00-067) < <http://www.treas.gov/inspector-general/audit-reports/2000/oig00067.pdf> >.

⁶⁹ Office of the Comptroller of the Currency (2003), *Internal and External Audits: Comptrollers Handbook* (April) < http://www.ffiec.gov/ffiecinfobase/resources/audit/occ-hb-internal_external_audits-intro.pdf >.

⁷⁰ Eisenbeis, Robert A., and Larry D. Wall's (2002) see ref. 24 above.

⁷¹ Japan: Financial Sector Stability Assessment and supplementary information. International Monetary Fund September 2003 (< <http://www.imf.org/external/pubs/ft/scr/2003/cr03287.pdf> >).

⁷² Directive 2003/51/CE of the European Parliament and of the Council of 18 June, 2003 (Official Journal of the European Communities L 178/16).

⁷³ One exception which has been identified by the IMF Financial System Stability Assessment is Germany. See <http://www.imf.org/external/pubs/ft/scr/2003/cr03343.pdf>.

⁷⁴ Douglas D. Evanoff and Larry D. Wall, (2002) *Subordinated Debt and Prompt Corrective Regulatory Action* Prompt Corrective Action in Banking: 10 Years Later edited by George Kaufman, pp. 53-119. This book is volume 14 of Research in Financial Services: Private and Public Policy published by JAI.

⁷⁵ Douglas D. Evanoff and Larry D. Wall, *Sub-Debt Yield Spreads as Bank Risk Measures*. Journal of Banking and Finance, (May 2002) pp. 989-1009.

⁷⁶ However, Evanoff and Wall (2002, see ref. 74 above) they also note that the quality of the signal obtained from subordinated debt may be improved if large banks were required to issue subordinated debt on an annual or semi-annual basis.

⁷⁷ Benink, H. and George J. Benston (2005) see ref. 6 above.

⁷⁸ Bank for International Settlements, (2003), *Markets for Subordinated Debt and Equity in Basle Committee Member Countries*, Basle Committee on Banking Supervision. Working Paper No. 12. Benink, H. and George J. Benston (2005) see ref. 6 above.

⁷⁹ Sironi, A. (2001) *Testing for Market Discipline in the European Banking Industry: Evidence from Subordinated Debt*. The Financial Safety Net: Costs, Benefits, and Implications for Regulation. The 37th Annual Conference on Bank Structure and Competition. Federal Reserve Bank of Chicago, pp. 366 - 384.