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Resolving Troubled Systemically Important Cross-Border Financial Institutions: Is a New Corporate Organizational Form Required?

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Abstract

This paper explores the advantages of a new financial charter for large, complex, internationally active financial institutions that would address the corporate governance challenges of such organizations, including incentive problems in risk decisions and the complicated corporate and regulatory structures that impede cross-border resolutions. The charter envisions a single entity with broad powers in which the extent and timing of compensation are tied to financial results, senior managers and risk takers form a new risk-bearing stakeholder class, and a home-country-based resolution regime operates for the benefit of all creditors. The proposal is offered 1) to highlight the point that even in the face of a more efficient and effective resolution process, incentives for excessive risk taking will continue unless the costs of risk decisions are internalized by institutions, 2) to suggest another avenue for moving toward a streamlined organizational structure and single global resolution process, and 3) to complement other proposals aimed at preserving a large role for market discipline and firm incentives in a post-reform financial system.

Key words: financial regulatory reform, corporate governance, bank charter, bank insolvency

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Introduction:

Virtually all the principals in the U.S. involved in developing policies to deal with troubled financial institutions during the current final crisis have argued that they were handicapped in the options available to deal with large systemically important non-bank institutions like Bear Stearns, Lehman Brothers and AIG. They indicate that they were faced with relying upon 1) hastily arranged mergers, 2) traditional bankruptcy laws to resolve institutions, or 3) government injections of funds to enable troubled institutions simply to continue operating. In most cases, willing and financially strong acquisition partners were not available. Bankruptcy risked unknown delays and potentially huge negative externalities that might have been associated with the consequences of credit losses imposed on other financial institutions (e.g., money market mutual funds), the unwinding of derivative and other trading transactions, and the liquidation of distressed assets.

These resolution problems in the case of non-bank financial institutions contrast with the options that were available to deal with troubled depository institutions such as Countrywide and IndyMac. The law provides that regulators of banks and thrifts can step in, legally close and resolve troubled institutions virtually over a weekend, thereby avoiding disruptions to the payments system and to borrower and other customer relationships. Policy makers have argued that they need similar authorities to deal with large bank holding companies and other systemically important financial institutions.[1]

[1] See, for example, Paulson (2008), U.S. Treasury (2009) and Bernanke (2009b).

However, while there may be need for a more streamlined resolution process, many barriers exist to remedying the problem given the legal and organizational structures and global reach of the most critical institutions. Moreover, a closer look at the incentives for risk-taking and risk containment within these complex and far-flung structures suggest that change may be required to internalize more effectively the costs and consequences to the institution of risk decisions.

Broadly speaking, for a market-based financial system to return to effective functioning and avoid the pitfalls of the past, there is a clear need for a more effective organizational and governance structure that is more sensitive to market signals. At the same time, the supervisory, regulatory and resolution framework needs to be changed on both the domestic U.S. level and on a coordinated international level. The objective would be to establish a workable market environment, but one that sets and monitors the rules of the game and does so without micromanagement that largely substitutes regulatory judgment for the judgment of management.

For a variety of reasons related to tax as well as doing business restrictions, most large financial institutions are organized as holding companies with many subsidiaries and affiliates engaged in widely disparate lines of businesses around the world. Often these subsidiaries and affiliates are separately chartered in the host countries in which they operate. Not only do these legal structures complicate the regulatory, supervisory and resolution processes, they make these companies unduly complex, difficult to manage and virtually impossible to monitor by investors or regulators.

Unwinding this complexity by simply imposing more regulations or extending bank-like resolution authority to more entities won't deal with the practical problems that

resolving a troubled institution in a timely fashion may require. For example, the U.S. only has legal authority to close an affiliate, subsidiary, branch or bank owned by a bank holding company if it is licensed or chartered in the U.S., and not by another sovereign country. Lest one doubt the importance of this problem, one prominent example, AIG, had more than 71 insurance companies based in the US and over 175 other separately chartered financial services companies operating in about 140 countries. Its AIG Financial Products group was legally headquartered in Connecticut but operated mainly out of London where it was subject to the jurisdiction of UK regulators. Even a year after the government's intervention of AIG, much confusion still exists about what the problems at AIG were, what the source of its problems were or which of its many subsidiaries were or were not viable.[2] Thus, in addition to granting U.S. authorities legal authority to resolve a large financial company, more transparency is needed to explain the resolution action and its consequences and to reduce the negative externalities that such financial distress and consequent intervention create.

We have concluded that as a first step, a more responsive and effective financial market place - one that relies upon competition and market discipline and one that moves toward freeing governments from bailouts and "too-big-to-fail policies"-- requires a new, simpler organizational form for large systemically important institutions, and we have proposed such an entity in what follows. The proposed structure simplifies the organization and holds the potential to make large institutions more transparent in terms of their operations and risk exposures. This should enhance the efficiency of market discipline, of the identification and management of risk, and of the supervisory process. We put forward our proposal to provoke discussion and more attention to governance and

[2] See, for example, hearings in the U.S. House of Representatives on AIG, 1/27/2010.

practical resolution issues, especially in an international context. In the rest of this paper, we first discuss the nature of the breakdown in corporate governance and the organizational and resolution problems for large complex institutions, especially those with significant cross-border activities. Then we propose a solution and discuss how the possible objections to the new corporate form might be addressed. We end with a summary and conclusion.

The Problem in Detail

A key to understanding the current crisis is recognition of the overarching role played by incentive problems. Defects in incentives explain the breakdown in corporate governance and risk control as well as explain why and how the financial and organizational structure of institutions and the instruments they employed became so complex. They also help understand the behavior of the regulatory agencies in supervising institutions and resolving their failures.[3] We discuss each of these issues in turn.

Governance

Financial institutions took on increasingly more risk during the 1990's and 2000s. Leverage expanded with some banks and investment banks achieving leverage ratios that in the extreme ranged between 30 and 50 times. Why this was not controlled by either the regulatory process or, equally important, the internal governance structure is a critical question. Interestingly, neither of the predominant business organizational forms, partnerships and limited liability corporations, nor the compensation structures firms of

[3] The problem is evident in the numerous problems that have surfaced with institutions overseen by the Office of Thrift Supervision. Similarly, incentive problems were critical in the U.K.'s Financial Services Authority's handling of the Northern Rock situation (see Eisenbeis and Kaufman(2010)).

these types typically employed, in the end provided a fully satisfactory framework for controlling financial risk-taking in the huge financial firms that exist today.[4]

Conceptually, the strength of the partnership form was that it provided incentives with respect to limiting undue risk-taking because of the stake that the partners had to preserve their interest in maintaining the firm's capital and thus to limit the potential for downside risk. Indeed, it is no accident that investment banks, accounting firms and rating agencies were originally organized as partnerships. All three types of organizations rely upon the credibility that they will honor their commitments and maintenance of their reputations as the major source of their value creation. In particular, the unlimited personal liability of the partners created a culture of fiscal responsibility and strong incentives to avoid large downside risks. The partners all had illiquid stakes in their organizations as owner-managers and were in it for the long term. This tended to discourage short term risk taking at the expense of long run profits, and induced the partners to monitor what was going on within the organization.[5] Indeed, until 1970 the New York Stock Exchange prohibited the listing of investment banks on the exchange.

However, as these firms grew and prospered, the weakness of the partnership structure became exposed along several dimensions. For example, retiring partners, were no longer able to monitor the risk-taking of the firm and therefore were incented to withdraw their accumulated capital. Internally generated growth in capital and the resources of the partners also could not provide sufficient capital to meet the scale of today's large-scale financings of mergers, acquisitions, turnkey investments and

[4] Of course individuals can engage in such speculation on their own account.
[5] Interestingly, Paulson(2010, pg. 35) addresses this incentive issue and clearly states that when Goldman Sachs adopted the corporate organizational form in 1999 he attempted to maintain the "...culture and ethos..." of the partnership form and attempted to structure executive compensation in such as way as to capture the risk-controlling benefits of the partnership organizational form.

expansions by industrial corporations and sovereign authorities. It is for this latter reason in particular that most of the major investment banks abandoned the partnership form between 1970 and 2000 as financial markets grew and the scale of corporate financing needs grew requiring more and more capital.[6]

The limited liability corporation removes the obstacles of capital capacity by limiting the shareholders' and managers' liability. For certain types of financial activities; however, the opportunity for high returns, the apparently high tradability of market instruments, implying ease in reducing positions, and the difficulties in measuring uncertainty around risk and return create a form of perverse incentive, in which excessive risk-taking during an extended market boom can provide substantial short-term gains with little downside financial risk to the risk-taker. This incentive may increase with complexity as some institutions become too-big-to-fail and seek to capture subsidies embedded in the federal safety net.

Further complicating the control of risk-taking was the expansion of that portion of the shadow banking system outside the regulated banks and securities firms, such as hedge funds and private equity funds.[7] But many other institutional investors with a risk appetite also provided an escape hatch for risk-takers seeking such short-term gains.

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[6] Merrill-Lynch went public in 1971, Bear Stearns and Morgan Stanley in 1986, Lehman Brothers in 1994, and Goldman Sachs was the last U.S. investment bank to go public in 1999.

[7] The term "shadow banking system" was originated, or at least first publicized, by Paul McCulley of PIMCO at the 2007 Jackson Hole meetings, but he did not include private equity. In a subsequent news-letter McCulley defined it as

:"And in the current circumstance, it's called a run on what I've dubbed the "shadow banking system" – the whole alphabet soup of levered up non-bank investment conduits, vehicles, and structures.

....

Unlike regulated real banks, who fund themselves with insured deposits, backstopped by access to the Fed's discount window, unregulated shadow banks fund themselves with un-insured commercial paper, which may or may not be backstopped by liquidity lines from real banks. "

http://www.pimco.com/LeftNav/Featured+Market+Commentary/FF/2007/GCBF+August-+September+2007.htm. We are indebted to Larry Wall for pointing this out.

Thus, firms may find enforcing strict risk control difficult. The potential for a significant leakage of currently regulated activities into the less-regulated shadow banking system is increased as either regulatory or firm controls are tightened. This so-called boundary problem probably gets insufficient attention in considering how to correct incentive problems in the financial sector since escape is so easy.

Ideally, a business organizational form for financial institutions, at least those taking substantial risk with the aim of earning high returns, would address these incentive issues. Academics, regulators and managements of financial firms have been seeking the means to redress these incentive problems, primarily through the design of compensation contracts. In particular, remedies generally defer income, pay in stock, often restricted stock, or otherwise extend the payment horizon. But these schemes generally do not exert sufficient penalty on the individual senior manager or risk-taker, such as reductions in future income, in order to provide real risk that poor decisions will be penalized. However, no incentive system however well designed can fully prevent mistakes in risk assessment or risk management nor can they prevent the realization of risks some times. It should be noted that AIG had an incentive payment arrangement that vested a significant share of income only at age 65, undoubtedly setting one of the longest compensation horizons in the industry.

The Role of Complexity

A key problem faced by financial institution supervisors when a large financial institution experiences financial difficulty is identifying and attempting to mitigate the potential negative spillover effects that the institution's failure or near-failure may have on financial markets generally or other financial institutions. At the heart of this problem

is the issue of complexity. Complexity has many dimensions but certainly includes the complexity of organizational structure, the complexity of financial instrument design and the complexity of dealing with overlapping jurisdictional and legal structures that may make collection of assets and assigning costs to creditors in an orderly fashion difficult. Any one of these three dimensions poses substantial challenges. But these complexity problems typically occur together in today's financial landscape where financial institutions are large in size, operate world-wide in markets that operate at least 24/5 and deal in a wide array of financial instruments and guarantees that may be direct, contingent or implicit liabilities of the issuers under the jurisdiction of multiple regulatory bodies. In this section we attempt briefly to outline the nature of these problems before turning to proposals that might eliminate or mitigate many or most of them.

Complexity of Structure

Herring and Carmassi (2010) provide an exhaustive discussion and analysis of the financial structure of large complex financial institutions, the different possible motives for that complexity and the implications that their complexity may have for systemic risk and safety and soundness. They present interesting tables on the operations of the 16 Large Complex Financial Institutions as of year-end 2007 that were identified by the Bank of England (2007) and other international regulators. Citigroup, for example, was shown to have over 2400 majority owned affiliates and subsidiaries including 101 bank subs, 35 insurance companies, 706 mutual and pension fund and other similar entities, 584 other subs including private equity and 1009 non-financial subsidiaries. Table 1 summarizes some key average indicators of organizational complexity for these 16 LCFIs

(note that AIG was not among those on the list). These entities operated in an average of 44 countries, with the average number of subsidiaries for these institutions being 1005 entities including: an average of 47 banks, 20 insurance subs, 227 special purpose entities including mutual funds, 270 other financial subs and 440 non-financial subsidiaries. Interestingly, Lehman Brothers was relatively uncomplicated by comparison with less than half the average total number of subs of other LCFIs and operations in 20 countries compared with the average of 44 for LCFIs in general.

In terms of possible motives for organizational complexity Herring and Carmassi (2010) consider several different but important dimensions including: the need to mitigate asymmetric information between shareholders and creditors and between shareholders and managers; the desire to avoid customer concerns about potential conflicts of interest; the ability to segment internal agency problems; reducing transactions costs; the consequence of legacy mergers and acquisitions; the desire to reduce the costs of financial distress; the ability to efficiently manage tax liabilities; and the desire to avoid regulation. To this list one might also add the ability to segment customer accounts from regulatory scrutiny based upon differential secrecy laws governing the disclosure of customer and account information and the desire to take advantage of more accommodating incorporation and financial reporting requirements. There is empirical evidence supporting the validity of virtually each of these motives, but it is likely that mergers, taxation, regulatory considerations and the desire to avoid the costs of financial distress are the dominant factors driving organizational complexity.

For example, geographically dispersed organizations can exploit the differential tax treatment of separately chartered and incorporated affiliates and subsidiaries by

engaging in inter-company transfers and shifting costs and revenues to and from high-tax to lower tax areas. Similarly, it has been common in the US for banking organizations to form separately chartered mortgage banking affiliates to avoid doing-business taxes across state lines. Of course, regulatory arbitrage was critical in the US in the formation of bank holding companies as a way of avoiding restrictions on activities and geographical restrictions on interstate banking. US rules also provide differential tax treatment of income and revenues earned abroad when repatriated rather than retained abroad in affiliates and subsidiaries. In the case of cross-border institutions, some countries require that foreign entrants do so through separately chartered affiliates or subsidiaries in order to operate within that jurisdiction. In addition, many countries require that certain activities like securities, real estate or insurance be conducted in separate organizational entities.[8]

Again, Herring and Carmassi (2010) provide numerous examples and institutional detail to support each of the motives for organizational complexity and these need not be reproduced here. Organizational complexity can affect the ability to identify, understand and monitor the risks and potential negative externalities that the failure of a large institution may entail; the best way to discuss the issues that is to do so in the context of some concrete examples.

Lehman Brothers

[8] Barth, Caprio, and Levine (2007) indicated that 59 of 127 countries that permit banking organizations to conduct some form of securities activities require them to be in a separate entity. Similarly, 45 of 62 countries permitting banking organizations to conduct real estate activities restrict the organizational structure.

A brief description of both the complexity and extent of Lehman Brothers' cross-border activities is detailed in a recent consultative document by the Basel Committee on Banking Supervision(2009).[9] Lehman operated a combination of 2,985 U.S. and foreign chartered separate entities, both regulated and unregulated. The Committee provides a general description of Lehman's organization and operations that makes two key observations before discussing the insights that might be gleaned from dealing with its failure. First, the organization's legal structure design, consistent with the observations of Herring and Carmassi (2010), was driven mainly by tax, regulatory and legal compliance considerations.[10] Second, the complex legal structure was essentially unrelated to either its operational structure or the lines of business in which the organization engaged. This meant, for example, that funds or securities originated in one legal entity in one part of the world might be recorded in another entity in another part of the world. A further complication was introduced by the fact that some of its activities, such as funds and liquidity management, were centralized at the parent level while other business decisions were left to the business line managers. The disconnect between Lehman's legal and operational structure meant that host countries that may have had the legal right to do so could not simply carve out those portions of Lehman under their jurisdiction and enable them to continue business separately as a going concern or to

[9] Note that the numbers cited here differ from those of Herring and Carmassi (2010) Table 1 because the latter listed only majority owned subsidiaries and affiliates. This description draws heavily upon the Basel Committee on Supervision's description.

[10] It should also be noted that Lehman Brothers was subject to significantly more regulatory oversight than the press reports might have suggested. In part a consequence of EU's Financial Conglomerates Directive requirements for doing business within the EU, Lehman was subject to consolidated supervision by the SEC of its parent company under what was known as the Consolidated Supervised Entities program. The Committee notes that this included an agreement that Lehman meet the Basel II Framework for capital adequacy and liquidity risk. There has been little detail provided within the U.S. on whether Lehman did or did not meet those requirements or what role the SEC may have played in ensuring that it did.

force them into bankruptcy; the local operations relied on other parts of Lehman to operate.

One impediment that prevented Lehman Brothers from engineering an orderly private sector wind-down, the Basel Committee noted, was its need for access to liquidity, even in bankruptcy, because of the short term nature of its funding. The organization's main source of liquidity was centralized in its parent company, which in bankruptcy had suddenly become unavailable. When Lehman's parent filed for bankruptcy, the U.S. broker-dealer did not; therefore, the Federal Reserve was able to provide the broker dealer with liquidity while other parts of the organization placed in bankruptcy or in administration received none. For example, Lehman Brother's U.S. broker-dealer - part of which was eventually purchased by Barclays - was supported by the Federal Reserve under its emergency lending powers under Section 13(3) of the Federal Reserve Act whereas Lehman's London subsidiary, having been denied access to liquidity because of its parent's inability to provide funds, declared bankruptcy. Other parts of the organization are separately being resolved by the respective responsible authorities in most of the countries with significant financial centers, both within and outside the European Union. However, because of how Lehman Brothers operated, it was not immediately clear what funds belonged to what legal entity or necessarily who had priority claim on assets in the bankruptcy.

As one particularly messy example, just a few hours before Lehman Brothers declared bankruptcy, executives transferred approximately $8 billion in funds from its London brokerage affiliate to N.Y. The transfer left Lehman's London affiliate with essentially no funds; there weren't even sufficient resources to pay employees. The

transfer not only left foreign clients of the London affiliate with no funds, many U.S. hedge funds and other institutions were also without the ability to access their funds or assets. As a result of such transfers, it is no wonder that in such cross-border cases, local officials are incented to protect their own citizens first. Hence, the first instinct is to ring fence assets in local offices immediately. This issue has arisen in nearly every significant failure of a large financial institution; as a result, many countries require sufficient assets to be held where they can be ring fenced in the event of a bankruptcy.[11] A root problem in dealing with cross-border organizations is that some countries or areas like the EU treat claimants of a cross-border entity under what is known as "universality," which means that claimants are treated equally regardless of nationality, at least within the EU. In contrast, other countries, like the U.S. apply the principle of "territoriality," to foreign branches, which gives the creditors of the local branch preference over other creditors—the residual assets are turned over to the primary bankruptcy jurisdiction only once all claims on the local office are satisfied. As several examples in the Basel Committee paper illustrate, however, "territoriality" or potential ring-fencing creates uncertainties that catalyze a scramble for collateral and can actually accelerate liquidity problems.

Because of past experience with the failures of large complex financial institutions, the unequal treatment of claimants because of different bankruptcy rules, different jurisdictions, and the disparate actions of bankruptcy judges in resolving claims naturally sets into motion a competitive scramble for resources. Moreover, disparate methods of resolution, speed of action and outcomes across jurisdictions create uncertainty and dislocation, so much so that creditors who are similarly situated end up with very different outcomes. In the U.S., for example, the bankruptcy court moved

[11] See Eisenbeis (2006), and Eisenbeis and Kaufman(2005) for a discussion of this problem.

fairly expeditiously to sell the U.S. broker-dealer of Lehman Brothers (which had not gone into bankruptcy), and other units followed in short order. In the U.K., by contrast, the administrative proceeding has moved very slowly. The problems of differential outcomes hold the potential even to accelerate the problems of access to liquidity during an unwinding process and may also accelerate runs by large creditors and even customers in response to the uncertainties that the unwinding processes create.

The differential impacts of various insolvency regimes have concerned financial authorities and market participants for some time, and some movement in conforming insolvency regimes has occurred, most notably the repeal of the "zero hour" rules unwinding payments activities in Europe and efforts sponsored by UNIDROIT, UNCITRAL and The Hague Securities Convention to harmonize or bridge differences in insolvency arrangements. Contact Group (2002), a study by an ad hoc task force of lawyers and economists sponsored by the Group of 10 Governors, described some of the challenges of cross-border insolvencies of financial institutions.

The report notes that the goals of insolvency regimes generally:

> are (1) reduction of legal and financial uncertainty, (2) promotion of efficiency and (3) provision of fair and equitable treatment. Increased legal certainty helps market participants form a probability distribution around the outcomes of financial transactions, and to make choices based on their willingness to bear risk. The promotion of efficiency involves the alignment of the incentives of managers, creditors, shareholders and other actors in the bankruptcy process. It also involves devising effective means to reduce the risk of moral hazard. Equitable treatment reflects consensus about the relative burdens between debtors and creditors and among creditors in insolvency, expressed in the rules and payment priorities in the insolvency process.[12]

The report further notes that the differences in insolvency regimes

> increase legal uncertainty, because the jurisdiction and prevailing law and approach can vary as the location and nature of the insolvent firm's assets and activities and as the firm's counterparties vary. Efficiency can be reduced, especially where multiple jurisdictions and conflicting laws make predicting outcomes more difficult and create

[12] From the Executive Summary of Contact Group (2002), p. i.

> complex coordination problems. Equity may be impaired, since the debtor or creditor may not receive the treatment and priority that was expected in entering into a financial transaction. Furthermore, the outcome of jurisdictional differences on the single/separate entity approach may not seem equitable to all creditors.[13]

In particular, for financial companies, time is of the essence in an insolvency. The report noted that considerable innovation was underway in the bankruptcy process to preserve value in the estate by shortening the time needed for resolution—for example, the bankruptcy judge in the Enron case had arranged an auction of Enron's trading operations within days of its filing. During the crisis, further innovation occurred in financial institution workout or resolution in the United States, borrowing techniques from more standard corporate bankruptcy practice. Several large financial institutions fortified their capital position by converting debt into equity and the financial firm CIT arranged a pre-pack bankruptcy in late 2009. The instances of conversion of debt into equity were preceded by FDIC-led resolutions that for the first time imposed a significant haircut on debt holders, upending a longstanding presumption—never explicit--that debt holders would be protected in a resolution.

The report also talked optimistically about the need for and extent of comity, the deference of other insolvency jurisdictions to the insolvency regime of the head office of the financial company. The Lehman bankruptcy demonstrated, however, that such comity has distinct limits, especially given a sudden and massive bankruptcy.

Complexity of Financial Instrument Design

[13] Contact Group (2002),, p. iii.

Derivatives and other financial engineered securities were first hailed as a new way to take traditional securities like mortgages and transform the cash flows into tailored securities that met the need of investors. Financial economists argued that these securities helped to complete financial markets and hence they improved market efficiency. Because these instruments simply transformed traditional default and interest rate risks, they therefore didn't create new risks, but they did provide a way to distribute those risks to more investors.

However, the securitization process also had a dark side. Kane (2009) has argued that one aspect of the innovation was the creation of incentive conflicts that also morphed traditional risks into "... hard-to-understand and hard-to-monitor counterparty and funding risks....". This complexity means that when a troubled institution approaches failure, the full capital and funding needs of the troubled institution and the full ramifications of its failure are difficult to assess with confidence.

There are many reasons why the complexity of financial instruments evolved. While the sub prime mortgage market and the securities that it spawned are often blamed for triggering the current crisis, government policies to stimulate housing and restrictions on the kinds of mortgages that Freddie and Fannie could either securitize or invest in were certainly critical.[14] The incentives to engage in this opaque transformation are many, including the desire to earn rents on information asymmetries and leverage, to trade on government guarantees inherent in deposit insurance and too-big-to-fail implicit government guarantees, and to better manage credit, liquidity and interest rate risk. In

[14] In the late 90s and early 2000s, Congress supported efforts to increase the flow of funds to low and moderate income families and especially urged Freddie and Fannie to expand their portfolios of such loans. It was determined that Freddie and Fannie could buy highly rated tranches of mortgage backed securities of sub prime loans. They ended up with more than 50% of such securities.

addition, private sector entities realized that they could emulate the securitization process that Freddie and Fannie engaged in by substituting their government guarantees with insurance contracts, quality ratings by rating agencies, models to assess the adequacy of the structure of the securities, and credit enhancements and insurance provided by insurance companies for the oversight and guarantees provided by Freddie and Fannie to create high quality (at least according to the rating agencies) securities for investors such as pension funds, banks, hedge funds and mutual funds.

The supply and wide range of these derivative securities included Residential Mortgage-Backed Securities (RMBS), Collateralized Debt Obligations (CDOs), and Asset-Backed Commercial Paper, just to name a few. They proliferated in response to a deficiency in the supply of primary investment instruments relative to what proved to be excess demand. For example, by about 2006, the number of companies worldwide rated triple-A was only 62 with less than 6 being U.S. companies. By comparison, there were over 64000 issues of triple-A rated structured securities, the demand for which was driven in a time of rising incomes by the portfolio requirements of insurers, pension funds and even mutual funds who had mandated minimum credit ratings for assets into which they could place a growing supply of funds. In addition, banking regulators, both in the United States and abroad contributed to this excess demand by placing reduced capital requirements on highly rated securities - especially mortgage-related securities.[15] Indeed, AIG provided credit default swaps as one form of credit enhancement that enabled foreign institutions to lower their capital requirements under the Basel capital standards. In AIG's 2007 annual report, for example, it indicated that nearly 72% of the notional amount of its super senior default swap portfolio, written mainly on corporate

[15] See Herring(2009)

loans and prime residential mortgages, were "...written to facilitate regulatory capital relief."[16] Avoidance of capital constraints was equally important to U.S. banks. For example, if a bank held a sub prime mortgage on its books, it would be subject to a 100% risk weight compared to only a 50% risk weight on a prime mortgage loan. This meant that the bank would have to hold 8% capital against a sub prime loan; however, if that same loan were packaged into a mortgage-backed security in an off balance sheet special purpose vehicle, there would be a 0% risk charge.

As the above example suggests, the regulatory and legal arbitrage incentives were a major objective in creating complex instruments. Not only did securitization structures create high quality securities that bore lower capital requirements, especially if they were mortgage related securities, but also they provided a way for institutions to economize on capital by increasing the flow of assets through their balance sheets, thereby generating fees for originating and distributing securities. To accomplish this, institutions often created supposedly bankruptcy remote Special Purpose Vehicles, which then issued short term debt - mainly commercial paper- to finance the purchase of real estate, credit card receivables and other loans that were then repackaged and sold into the market place. In essence these firms were highly leveraged short-funded institutions that were vulnerable to interest rate risk that was exposed when concerns about the underlying quality of their assets resulted in increases in credit spreads. As a result, when some of the SIVs and SPVs had problems funding their portfolios in the asset-backed commercial paper market in 2007 and into 2008, the sponsoring banks and investment banks were forced out of concern for maintaining their reputations to bring the SIV's assets back onto their books, thereby unwinding what looked to be a riskless sale of assets without recourse. For

[16] See AIG(2007), pg. 122.

example, in November of 2007 HSBC rescued 2 of its SIVs at a cost of about $45 billion and in December of that year Citigroup bailed out 6 of its SIVs at a cost of about $49 billion.[17]

Over time the complexity of the securitized assets exploded. By 2006 we had pyramiding of securitized assets in which primary instruments like loans were packed into asset backed securities with principal and interest cash flows separated into tranches. These cash flow tranches were then re-packaged into other multiple tranche securities creating high quality upper tranche securities. In effect the process often took low quality securities and by dividing up the cash flows created high quality primary securities with low quality residual tranches.[18] Scott and Taylor (2009) describe in some detail just how complex securitizations had become using an example of Collateralized Debt Obligations (CDOs):

> To better understand the magnitude of the problem and to find solutions, we examined the details of several CDOs using data obtained from SecondMarket, a firm specializing in illiquid assets. One example is a $1 billion CDO2 created by a large bank in 2005. It had 173 investments in tranches issued by other pools: 130 CDOs, and also 43 CLOs each composed of hundreds of corporate loans. It issued $975 million of four AAA tranches, and three subordinate tranches of $55 million. The AAA tranches were bought by banks and the subordinate tranches mostly by hedge funds.
>
> Two of the 173 investments held by this CDO2 were in tranches from another billion-dollar CDO -- created by another bank earlier in 2005 -- which was composed mainly of 155 MBS tranches and 40 CDOs. Two of these 155 MBS tranches were from a $1 billion RMBS pool created in 2004 by a large investment bank, composed of almost 7,000 mortgage loans (90% subprime). That RMBS issued $865 million of AAA notes, about half of which were purchased by Fannie Mae and Freddie Mac and the rest by a variety of banks, insurance companies, pension funds and money managers. About 1,800 of the 7,000 mortgages still remain in the pool, with a current delinquency rate of about 20%.

[17] Recognition that the structures were dependent on the SIV's sponsor had led FASB to require most of these structures to be reflected on the sponsor's balance sheet effective 1/1/2010.
[18] See IMF(2007) for a detailed description of the process.

The disclosure documents for such instruments can run literally thousands of pages, and can be even more complex than the example cited above. This complexity has clearly complicated the liquidation and handling of securitized assets, should a regulator or the FDIC have to resolve the failure of the issuer.[19]

Tax and Regulatory Arbitrage

Tax and regulatory incentives historically have played major roles adding to the complexity of a financial firm's structure. In the U.S. for example, restrictions on the commingling of banking and commerce and restrictions on interstate banking were major factors giving rise to the multibank holding company.[20] Perhaps the most notable example was the Transamerica Corporation that in 1930 owned not only Bank of America, but also held a mortgage company, an insurance company, a securities firm, a utility company and a service company. In 1956 the Bank Holding Company Act was passed that regulated companies that owned more than one bank and prohibited them from engaging in commerce. The Federal Reserve was empowered to regulate these organizations. Institutions that were prohibited from branching adopted the multi-bank holding company as a way of chaining together formerly independent banks into quasi-branch networks, thereby avoiding state restrictions on branching. In many states, such as Florida, Texas and Georgia, all branching was prohibited, so the bank holding company was the major device for organizations to engage in multi-office banking.

[19] The FDIC recently went out for public comment on how to handle securitized transactions. The ECB is also clearly struggling with how to handle securitizations when it comes to evaluating collateral for monetary policy purposes.

[20] For a detailed history and discussion see Fischer(1986).

Tax considerations also played a major role in the formation of a bank holding company. In particular, dividends up-streamed to a parent holding company were tax deductible, which meant that debt at the parent holding company could be used to acquire banks and debt could be paid with pretax dividends up-streamed from subsidiary banks. This made the holding company form especially desirable for expansion-minded institutions.

Numerous other loopholes existed in the law; the most significant was that it applied only to institutions that owned two or more banks. In 1968, First National City Bank (the forerunner of Citigroup) followed the example of Wachovia and formed a one bank holding company and began to accumulate finance and other subsidiaries across state lines. Savage (1978) indicates that within two years, more than 650 one bank holding companies were formed. Within a short time, Congress passed the 1970 amendments to the Bank Holding Company Act which regulated one bank holding companies and effectively separated banking and commerce. The Federal Reserve was empowered to limit the activities of bank holding companies to those deemed "... so closely related to banking as to be a proper incident thereto."

Tax avoidance of both state and local taxes as well as federal tax laws have always played a major role in affecting banking structure. For example, if a bank conducted certain activities across state lines, then it might be subject to a wide range of doing-business taxes in that state. Conducting that same activity through a separately chartered subsidiary would subject only the revenues of that subsidiary generated in that state to local taxes. Similarly, when a holding company subsidiary that is chartered in another country earns income, that income is not taxed by the United States until it is

repatriated, whereas had that income been earned through a branch operating in another country, it would be taxable in the U.S.

Finally, numerous activities have been undertaken to avoid capital adequacy and other prudential constraints. The most notable recently was the incentive to shift mortgage lending, especially sub prime mortgage assets, off an institution's balance sheet to avoid capital adequacy requirements. For example, on balance sheet mortgages were subject to only a 50% risk weight when it came to allocating capital to such loans where as on balance sheet sub prime loans would be subject to a 100% risk weight. However, by selling those assets to a bankruptcy remote Special Purpose Vehicle supported only by a line of credit from the selling bank, the assets would be exempt from capital requirements as long as the line of credit had a maturity of less than one year. The Special Investment Vehicle would finance the purchase of those assets with commercial paper and, in some cases, then securitize and sell the underlying assets to investors. Fees would flow to the bank from this sponsored entity which would be outside of regulatory capital requirements or supervision.

Jones (2000) provides a general discussion of the methods that have been used to avoid capital adequacy constraints by banking organizations. He describes three techniques designed 1) to concentrate risk into derivative instruments that have lower measured risks and hence lower capital charges than the original assets, 2) to structure transactions that are treated by the capital standards as direct credit risks subject to an 8% capital requirement as assets sold with recourse that may have a lower dollar-for-dollar capital requirement, and 3) to convert direct credit risk exposures into contractual arrangements such as standby letters of credit or other credit enhancement that may have

no capital requirement at all. This latter technique gave rise to the SPVs mentioned previously that would purchase loans or other assets, taking them off the bank's balance sheet, but obtain credit enhancements such as letters of credit or credit default swaps. Such techniques clearly enhance the ability of institutions to increase their effective leverage immensely.

Another form of regulatory arbitrage is the formation of subsidiaries to conduct certain activities such that the capital and other regulatory requirements are reduced; in particular, investment banks and companies like AIG formed subsidiaries to house their derivatives dealing. The use of those subsidiaries is often prompted in the first instance by punitive regulatory treatment of an activity not originally contemplated for the primary regulated entity, such as unusually high capital requirements in the broker-dealer. In the case of AIG, where credit default swaps played a large role in its financial difficulties, Armistead (2009) maintains that had the swaps been written in the insurance subsidiaries, they would have been regulated as insurance or as gambling.[21] Such subsidiaries consequently receive relatively light regulatory scrutiny within the CSE in the case of a securities firm or Office of Thrift Supervision for some other financial companies, such as AIG.

The range of tax incentives and regulatory avoidance incentives are too numerous to go into detail.[22] But the key point is that they contributed significantly to the complexity of both the instruments and organizational structures that institutions adopted to maximize returns while minimizing tax liabilities and regulatory constraints and costs.

[21] See Armistead(2009)
[22] Perhaps the foremost student of regulatory arbitrage is Professor Edward J. Kane. See for example, Carbo-Valverde, Kane and Rodriguez-Fernandez (2009).

Regulators sometimes accommodated these innovations but when they didn't, they often fell behind the curve in attempting to constrain them.[23]

Complexity of Legal and Regulatory Jurisdiction and Burden Sharing

An unresolved issue dating from the 1970s and the initial postwar expansion of international banking is the division of supervisory responsibility between the home and host country. During the 1990s, a series of reports by the Joint Forum sought to tackle the issues created by the mismatch of legal and business organization discussed earlier, as laid out in Joint Forum on Financial Conglomerates (1998).[24] The issues included capital, liquidity, intercompany transactions, concentrations and supervisory information-sharing, among others. The respective roles of home and host were sufficiently unclear that the first major supervisory agreement written by the Basel Committee called for consolidated supervision of banking companies. Host country supervisors have a direct and substantial interest in the health of the affiliates of large, global financial institutions domiciled in an advanced economy. Often, such foreign-owned institutions are major market participants whose failure would have a macroeconomic impact if they retrench in the face of stress and reduced flows of credit and liquidity to the local economy. Not only US banks, but investment banks, some large finance and insurance companies have this potential impact.

[23] The attached URL http://www.regulatory-arbitrage.com/ links to a course entitled "Regulatory Arbitrage Opportunities after Basel II and the 8th Company Law Directive of the European Union(Statutory Audit Directive, the European Sarbanes-Oxley). The course description says that it is designed to provide an understanding and ability to take advantage of the unique regulatory arbitrage opportunities created.

[24] The first discussion of the division of supervisory responsibilities was Basel Committee on Banking Supervision (1975), the so-called Basel Concordat, It has been amended a few times; subsequent elaborations and amendments can be found on the www.bis.org website.

In general, the home country supervisor is best placed to evaluate and take action on the institution's capital, liquidity, business strategy and risk management systems; in that sense the responsibilities of the home country supervisor are perhaps easiest to clarify. Nonetheless, a good, definitive statement of the home country's obligations hasn't been developed. The home country, which has chartered the financial institution, should be responsible for ensuring the firm is adequately capitalized and has sufficient liquidity. In the recent severe financial crisis, home countries had no choice but to stand behind their financial institutions, and several countries took extraordinary measures to support them rather than have a disorderly failure in an environment in which the externalities of contagion were evident.

What remains less clear are the specifics of the role of host country supervisors. Basel Committee on Banking Supervision (1975), the Basel Concordat, places the emphasis on liquidity and the functioning of local financial markets in motivating the role of the host supervisor. In practice, however, the focus of host country supervision seems to have evolved since 1975, without a clear updated statement of the chief host supervisory concerns. Home countries, rather than host countries, seem expected to provide and have in fact provided liquidity support—and more—for their institutions. For example, in the recent crisis, the majority of dollar liquidity so vitally important to most large foreign financial institutions was provided by their home country central banks, who obtained the dollars through foreign currency swaps with the Federal Reserve. In contrast, foreign institutions, especially U.S. institutions, are still major players in host country financial markets as underwriters and traders.

Over this same period, the safety and soundness of foreign-owned domestic banks and financial subsidiaries has become more important for host supervisors in many countries, especially in the emerging markets. Following an extended period of substantial foreign direct investment, some foreign financial institutions have become major presences in the financing the host country economy. Committee on the Global Financial System (2004) presents a number of issues host supervisors confront when the largest institutions in the country are foreign-owned.

Potentially, then, there are more than one class of host country supervisory stakeholders. One class might be supervisors of very substantial operations of the firm; these supervisors often are members of supervisory college arrangements. Another class might be supervisors of operations of the firm that are large relative to the country, but small relative to the firm. Currently, no commonly used structure of supervisory consultation reaches these supervisors.

Uncertainty about supervisory roles and about the obligations of the firm to its many varied stakeholders complicates the day-to-day supervision of institutions, but becomes an acute problem when the firm is troubled. How aggressively should the home country supervisor respond to problems? How much should it enlist other supervisors through consultation or coordinated action? Who precipitates a workout? A resolution?

And once resolution begins, how should the financial burdens of resolution be handled? The example of the Icelandic banks from the recent crisis represents a test case for cross-border resolution of financial institutions. The United Kingdom and the Netherlands are seeking funds from the nation of Iceland to compensate their depositors.

The size of the liabilities of the bank in question are very large relative even to Icelandic GDP; paying off those liabilities will require an act of the Icelandic parliament signed by the Icelandic President, and voters on March 6, 2010 turned down a proposal to repay funds advanced by Great Britain and the Netherlands. As of now, the issue remains unresolved.

Elements of the New Charter

A clear lesson from the current financial crisis and its aftermath is that the complexity of 1) large financial institutions' organizational structure, 2) the financial instruments the instruments they deal in, and 3) the overlapping and confusing regulatory and tax regimes with which these institutions must deal have contributed to their opaqueness and have confounded regulators' ability to deal with them in crises situations. Moreover, a misalignment of incentives between management and firms because of the limited liability corporate form and the short-horizon, high-return nature of much financial activity make financial institutions vulnerable to crisis and difficulty to steady in crisis situations.

The misalignment of incentives and the multidimensional complexity of financial firms also have confounded markets' ability to correctly understand and price either the assets in which they transact normal business as well as to value the institutions themselves. Measuring, monitoring and pricing risk has proved difficult for both those inside and outside these large institutions. We conclude that perhaps it is time to simplify the structure of these institutions and change their corporate form in a way that reduces complexity, better distributes risk to management, and enhances regulators' and the

markets' ability to understand the risks that these institutions are taking. Moreover, these changes may enhance an understanding of the interconnectedness among institutions should they experience financial difficulties and may simplify and facilitate their speedy merger, recapitalization or resolution should they no longer be going concerns. To that end we propose a new charter for large financial institutions that attempts to reduce complexity, better aligns management and risk-taker incentives, and in the process also highlights the areas where international reform and cooperation is in order and that therefore may better focus the financial reform efforts.[25]

We suggest that large institutions with resources in excess of a threshold set at $100 billion or more and/or meet other criteria for interconnectedness and externalities in the event of failure be required to adopt a single bank charter that has no parent holding company nor affiliates or subsidiaries (See Table 2 with a list of suggested charter features).[26] This idea is not new nor unique to us.[27] What is different, however, is that we attempt to detail the types of activities, governance, financing, taxation, regulatory oversight and other dimensions that this new entity should have in order to facilite resolution and deal with the complexity and incentive issues we have already been highlighted.

The newly chartered institution we envision would have a federal charter, similar to that of National Banks.[28] The charter would also be available on a voluntary basis to

[25] This newly chartered institution is structured such that it could essentially meet the nine criteria outlined by Cohen(2010).
[26] We note that the Supervisory Capital Assessment Program in the spring of 2009 chose a threshold of $100 billion. The one exception, and perhaps there may be others, that we see at this point might be insurance activities that have such a significant fiduciary responsibility to its policy holders that its business should not be co-mingled with the banking business of the organization.
[27] See for example the discussion in Hüpkes(2010). She describes the single entity firm operating globally as one of two stylized polar opposites.
[28] This is not unlike the single charter of Societas Europaea (SE) available in the EU. See Lenoir(2008).

U.S. domiciled institutions not otherwise meeting the criteria for inclusion. Under this charter, the institution would be permitted to engage in whatever financial activities that its chartering agency may deem desirable, including universal banking activities. This would clearly include deposit taking and making loans, but might arguably include all those activities currently permitted by the chartering authority to banks and bank holding companies and governed by the Bank Holding Company Act's Section 4(c)(8) criterion.[29][30]

Of course, this is a drastic change from where we are today. But Basel Committee on Banking Supervision (2009) has proposed that firms greatly reduce the number of legal entities within their organization. Thus, our proposal of a single entity could serve as a baseline against which to assess the implications of permitting just a small number of legal entities. More than one legal entity may be necessary to segregate classes of activities because those classes reflect genuine differences in business and regulatory purpose—e.g., depositor protection versus investor protection. That possibility notwithstanding, our baseline intends a radical reduction in the number of entities from four digits to one digit.

As a condition to obtaining Federal Deposit Insurance, the new entity would be subject to supervision and regulation by a designated federal bank regulatory agency, with powers similar to the Federal Reserve's current role as primary regulator for bank holding companies.[31] Because the institution would be legally considered to be a bank

[29] The Bank Holding Company Act (12 U.S.C [sections] 1843(c)(8) provide that the Board may authorize activities that are "so closely related banking as to be a proper incident thereto..."
[30] Should this charter proposal be adopted in the EU, for example, then the bank would be permitted to engage in universal banking activities.
[31] In this regard, should that regulator be designated at the Federal Reserve there would be no effective change in supervisory responsibility for the nation's largest institutions from what is presently the case.

with Federal Deposit Insurance, it would also be subject to the prompt corrective action and early intervention provisions of FDICIA 1991. In our proposal, instead of basing the closure rule on book value capital, the rules should be based upon the market value of capital. The capital guides dictating regulatory intervention should be mandatory rather than discretionary, and the chartering agency should be required to close the institution before one of either two events occur - the market value of its equity falls below a pre-specified value or the ratio of the mark-to-market value of its assets relative to its liabilities falls below a pre-specified but positive value.[32] The guiding principles for both the regulator and the resolution authority should be to minimize the loss/cost of a closure to the FDIC and/or the taxpayer while fairly treating creditors and honoring ex ante priorities that would be applicable to claims in ordinary bankruptcy. In the event that the institution's condition were to trigger intervention by the resolution authority, the principle of universality should apply and all creditors, be they foreign or domestic would be treated equally in terms of the priority of their claims. The aim here is to both to constrain regulatory discretion in keeping economically insolvent institutions afloat and to remove the uncertainty as to creditor priorities in bankruptcy.[33]

Jackson and Skeel(2010), Bliss and Kaufman(2010), Wallison(2010), Cohen and Goldstein (2009), and the Shadow Financial Regulatory Committee(2010) present compelling arguments for bankruptcy courts taking the principal role in the resolution of very large depository institutions and nonbank financial institutions, in particular because

[32] Such clearer and "harder" intervention triggers would reduce the pressure on risk-based capital standards and allow them to focus more on pillar II type evaluations of the adequacy of economic capital. In concept, there could be no requirement to impose or develop risk-based capital standards. Because the market value of equity for too-big-to-fail firms has the value of the safety net subsidy embedded in it, this argues for a higher rather than lower trigger point.

[33] The evidence is that under current FDICIA PCA requirements, the failure to close institutions promptly has resulted in large losses to the FDIC. See Kaufman(2004).

of the bankruptcy proceedings' transparency, insulation from political economy considerations, and the potential for appeal and higher-level judicial review. We have proposed relying on the FDIC in large part because the FDIC already possesses a special toolkit, including the ability to close a still technically solvent institution and to transfer assets and liabilities to a transitional bridge bank, to facilitate resolution; moreover, FDICIA sets out limitations and review mechanisms intended to limit delay in closing banks. We note, however, that the objectives are more important than the means. Jackson and Skeel(2010) provide intriguing examples of how the bankruptcy code, with relatively small modifications, can address many financial institution- and financial instrument-specific issues that currently are viewed as requiring "special" procedures or provisions. We later argue that the FDIC should actively incorporate more cutting edge approaches developed in corporate bankruptcy practice. Should the bankruptcy route be taken, then revisions in the statute may be needed, that incorporate the best features of bank resolution procedures and bankruptcy process, in part to prevent some of the egregious actions that accompanied the recently Chrysler bankruptcy. See Roe and Skeel(2009).

As an example of the FDICIA framework's value, we propose that the existing prohibitions on central bank lending to insolvent banks should be extended to this new entity as well. Instead, every effort should be to ensure that any financial institution failure is an isolated and independent event. When failures are isolated events, with no contagion, the negative externalities are largely minimized. This implies a substantial burden on the regulatory community to identify early emerging systemic stresses and to act promptly to stem them. It also implies that information for each financial firm about

its counterparties and creditors and the size and nature of their exposure to the firm is critical and must be collected on an ongoing basis by the regulator in order to gauge the consequences of a closure of the institution on those counter parties.

We also envision that such institutions would be subject to a modified resolution regime. In a resolution, all contracts with a maturity of less than a given number of days would be settled and closed prior to the settlement of other claims to ensure that short term markets would be able to continue to settle and clear. This provision places a substantial burden on regulators to ensure that the institution has adequate liquidity management and avoids a concentration of very short-term liabilities, since troubled firms often experience a move of depositors and counterparties from longer to shorter maturities. In terms of accounting conventions, every effort should be made by both the institution and regulator(s) to ensure that all contracts and liabilities are carried on balance sheet and contingent contracts should also be carried with some on-balance sheet representation, as over-the-counter derivatives now are.

In line with current work described in Financial Stability Forum (2010), for each institution, the supervisor should have in hand a plan from the institution to reduce its risk in the event of difficulties and the supervisors should have a current plan to resolve each institution in no less than a weekend.

To encourage more transparency, the supervisor should charge the federally insured financial institution for its supervision and monitoring activities in line with the amount of supervisory attention the firm requires. These excess fees designed to address a lack of transparency should be transferred to the Federal Deposit Insurance Corporation and not be relied upon to fund the agency's supervisory efforts. The intent here is to

incent the institution to be transparent with the regulator as to the nature of its activities, risk taking and interconnections with other financial institutions by imposing a supervisory fee that increases with complexity and the costs of making that complexity transparent.

In the event that a firm hits the triggers for insolvency, the designated supervisor would be required to put it into receivership and assign it to the FDIC who would utilize standard procedures to sell, merge, create a new bridge institution with all the existing authorities it presently has over federally insured banks. Should the FDIC incur a loss, that loss would be deemed the responsibility of the primary regulator since it didn't close the institution before it became economically insolvent, and it would be subject to a public review of its supervisory record, as is currently the case under FDICIA.

The new charter could also impose higher obligations in terms of disclosure and set new standards for clear, accessible descriptions of risk-taking activities, risks to the firm, and mitigation strategies. Fuller web-based disclosures, with more drilldown menus to understand activities in individual countries and business lines, would both facilitate investor understanding of the risks of the firm, but also provide more basic information to foreign supervisors that may host offices of the institution in an accessible and comparable format.

To make adoption of this new charter less onerous, we would argue that an important way of compensating for the extra burdens of regulation and guarantee fees would be to eliminate the differential tax treatment of interest payments on debt and dividends. One of the clearest tenets of contemporary finance theory is that this differential tax treatment incents institutions to use debt financing and to engage in

leverage, which is counter to the objective of ensuring that an institution has sufficient capital to operate in a safe and sound manner. With some uncertainty about the reach of implicit government guarantees to debt instruments in combination with the proposed FDIC insurance levy on all non equity liabilities, the revised tax treatment of equity financing should make it even more attractive to institutions than debt financing and to make leverage relatively more costly.[34]

Finally, we suggest two ways to address the breakdown in corporate governance that occurred prior to and during the financial crisis. First, we suggest that bonus and incentive pay - as distinct from regular salary compensation to key senior executives - only be permitted when pre-dividend distribution of profits are positive. Such payments essentially gives key management a stake in the overall performance of the firm and in this respect, the incentives would tend to mimic those of a partnership. It would also encourage more scrutiny within the firm of situations in which one business unit cross-subsidizes other business units that may be making losses, and encourage the collective management to turn around unprofitable businesses, but more especially, to evaluate the risk in the firm's businesses, especially unusually high-return businesses, for their impact on future profitability. Finally, requiring management to split the bonus/incentive pool with shareholders, essentially gives shareholders a clear stake in gains paid to management as opposed to returns to shareholders.

Second, we envision that the new charter form would have attributes designed to to mimic some of the beneficial aspects of the partnership while retaining the benefits of

[34] In the event that the subsidy involved here seemed too high, the charter could provide more tailored relief. For example, firms could receive a more limited tax break on debt tied to the amount of additional equity above regulatory minimums they hold (assuming required capital is largely common equity), up to some high limit.

limited liability. Specifically, the charter would have an additional stakeholder class beyond equity and debt holders, a stakeholder class of senior management and significant risk-takers in the firm. In addition to holding equity in the firm and having bonus and incentives paid out of pre-dividend distributed profits, the new stakeholder class would hold an obligation that would subject them to future reductions in income or wealth in the event the value of the firm falls.

One avenue to do so could be the current debate in the academic and regulatory communities about whether to require large, systemically important firms to issue some form of contingent capital, tradable subordinated debt, or mandatory convertible securities.[35] Tradable subordinated debt and tradable contingent capital is intended to provide continual market price signals that would be relevant to investors, creditors and regulators. In the case of the contingent capital securities, two possible design options for the trigger would have different implications for troubled banks. One option would be to require a market based conversion feature at a sufficient positive level of the institution's existing capital to enable it to recover from financial difficulties and continue as a going concern. In this case, the market price signals would provide evidence on the riskiness of the institution and the likelihood that it would continue to be a net positive present value investment.[36] The second option for setting the conversion trigger for the contingent capital would be geared to the closure capital trigger envisioned in FDICIA that specifies the threshold at which the institution would be legally closed and turned over to the FDIC

[35] Numerous proposals to use subordinated debt have been put forward. See Evanoff and Wall(2000). In the current crisis, the Government has stepped in and guaranteed the subordinated debt of Freddie and Fannie, but explicitly excluded subordinated debt from the FDIC Temporary Liquidity Guarantee Program.

[36] Flannery(2005, 2009a and 2009b) has discussed both some of the practical design issues but also the importance of having a market-based rather than regulatory trigger.

for resolution. The effect of this structure would be to provide just an additional buffer that would give the FDIC time to either find a merger partner, to sell off parts of the organization or otherwise resolve its failure. The buffer would essentially put the contingent capital debt holders into a first loss position with equity holders and help to absorb losses that might otherwise accrue to the FDIC. Ideally, these claimants might realize some residual value upon disposition of the firm, but would not stand ahead of equity holders in receiving value. If structured this way, the pricing of the contingent capital would provide a market signal largely about the impending bankruptcy as the value collapsed towards zero. Those prices would serve as an additional indication that the regulators could not continue supporting the institution or to engage in regulatory forbearance. A second proposal offered by Professor Edward Kane is to create a special class of extended liability stock, not unlike the double liability that used to apply to holders of national bank stock before 1933.[37] Under Kane's proposal, bonus compensation would be given in the form of special common stock with extended liability.[38]

Thus, management and senior risk-takers could be required to hold the contingent capital, extended liability stock, or similar securities with restrictions on their divestiture even in the event that an individual leaves the firm. The long holding period is intended to ensure that market information and evaluation of the firm inform management's decisions in the short run and create an enduring stake in the outcome of risk decisions in the long run. Alternatively, management would be required to place in escrow a

[37] Some states even had triple or unlimited liability on bank stock.

[38] The shares might even be traded, but the extended liability would convey to the new share holders, thereby providing a market price that would be especially sensitive to downside risk.

financially significant pool of assets earned as bonuses or incentive pay that would revert to the firm in the event of losses. The individual would be required to maintain that pool, for a long period, such as ten years, even when the manager or risk-taker leaves the firm.[39]

Third, we propose that the FDIC, as the designated resolution authority, be granted the additional powers necessary to take a more aggressive, cutting edge approach to resolution of financial companies. Currently, innovation is occurring at a respectable pace in the nonfinancial corporate bankruptcy arena, as described in Jackson and Skeel(2010). In the crisis, both time-honored techniques (debt conversion to equity) and other innovations (auctions, pre-packaged bankruptcies or "prepacks") were put to use. We propose that the FDIC be funded such that it can invest in intellectual and practice innovations in resolution. This might include drawing on innovative thinking about how to reduce counterparty exposures arising from derivatives in advance of a resolution, as was attempted prior to the Lehman failure, to arrive at innovative solutions to difficult problems in the resolution process. One outcome of a process of innovation might be a well-specified set of rules regarding the treatment of claims beyond deposits, to achieve some of the legal uncertainty the proponents of bankruptcy proceedings for financial companies attribute to the rules of bankruptcy courts.

Fourth, perhaps our most radical recommendation is to adopt this charter at the international level. The effort to harmonize insolvency law relative to financial

[39] Recently, some have proposed that financial firms revert to a mutual form. We see the mutual form as having the same serious limitations as the partnership form—difficult to raise sufficient capital. Firms far smaller than the firms contemplated for the new regime have been demutualizing over the decade or two in an effort to reach a size in order to be efficient and meet market demand. A stakeholder class holding a kind of mutual ownership claim on the firm that could be transferred for a very long period of time, however, might be another innovation to restore real downside risk for senior managers and risk-takers.

institutions across an expanding range of relevant countries is rightly viewed as a daunting challenge. In some cases, as in the treatment of payment system-related claims in the insolvency of a financial institution, the international community has painstakingly, but successfully sought revisions to the underlying bankruptcy or insolvency law country by country. In others, a strategy of identifying particular cross-border circumstances and creating new provisions to sit atop the existing body of law has been used, as was the case in The Hague negotiations on the treatment of securities holdings in depositories. Our proposal adopts this second strategy.

For the home country, such an approach provides the potential of increasing the global post-failure estate both by mobilizing the global assets and liabilities of the firm and through potentially substantial economies in the resolution process. (Further research to substantiate these gains would be helpful.) For each country, it means, of course, placing substantial responsibility for resolving a major foreign institution in the hands of its home resolution authority and requires substantial trust that the process will be fair. This would represent a very major change in the U.S., which relies on local insolvency proceedings for branches of foreign banks.

For that reason, we think it important that the major jurisdictions adopt a common approach to resolution for this class of financial institutions. At the international level, the resolution of such systemically important firms should also adopt cutting edge techniques such as the bridge bank, restructuring of the firm's capital and liability structure, auctions and pre-packs to dispose of the firm and its assets rapidly. The resolution would be led by the home country jurisdiction, but could draw on the resolution authorities of the members of the supervisory college or other consultative

body. In addition, the supervisors and/or resolution authorities in the countries where the financial firm is a top market participant need to be promptly brought into the resolution process.[40]

From the international perspective, the crucial difference from current practice is that the home country jurisdiction would seek to maximize the value of the global estate for the equal benefit of all stakeholders of a given class, regardless of location. This works naturally if the firm is a single legal entity, but since large firms will likely have at least a small number of legal entities and a presence in multiple countries, developing a new protocol for resolution of multi-entity firms represents another important area for innovation.

As noted above, the home country should develop a credible plan for resolving a major financial institution chartered or licensed in its jurisdiction, including how the firm could credibly be recapitalized, if necessary, and how its liquidity needs could be met in distress circumstances by the home country. We believe that the need for such a plan would represent an important discipline on smaller countries with very large financial institutions. As the recent crisis made clear, countries need to be able to stand behind their major financial institutions sufficiently to provide an orderly resolution and to do so at an acceptable, even if very high, macroeconomic cost. It should be noted that several smaller countries (Switzerland, the Netherlands, and Belgium) were able to support large troubled firms during the crisis.

In addition to the features described above, an annex to the charter would clearly identify the principal supervisors around the world, describe any college of supervisors

[40] Basel Committee on Banking Supervision(2009) recommends several areas for convergence of national bank insolvency laws.

arrangements and an expanded roster of key host supervisors, detail the roles, responsibilities and rights of each, and lay out a communication protocol. In particular, we believe that host supervisors, where the role in the host country is large but the activity relative to the firm is small, need more leverage to ensure that they are informed and that the necessary efforts to coordinate the disposition of the local affiliate with the broader resolution are made. That additional leverage could be provided by the ability to call for a meeting of the supervisory college, for example, or to take independent action if the home supervisor is unresponsive.

Final Thoughts

Our proposal is meant to represent a radical change in regime and a call to pull out a blank piece of paper to write new business rules of the road for large financial institutions in light of the enormous burden imposed on the public and on the economy when risk-taking spins out of control. In focusing on aligning incentives, we believe our proposal can spur additional thinking about how to create more of the downside risk to individual managers and risk-takers in financial firms that underpinned the partnership model, while still avoiding the unlimited nature of downside risk that limited liability is meant to prevent. We also believe that moving bank resolution closer to the most innovative bankruptcy practice would improve market discipline, by making bondholders and others holding higher claims less assured that they will be made whole in a resolution.

In addressing complexity, we believe our proposal sweeps aside many of the obstacles that impede dealing with financial institutions promptly and aggressively when

they have problems and those that frustrate a swift, equitable resolution process. In essence, we are asking countries to substitute a faster, cleaner single resolution process for the balkanized, suboptimal process of country by country (sometimes entity by entity) resolution, and its destructive nature if preceded by national ringfencing of assets. Such a leap requires a high degree of faith among countries, and we see the opportunity to enhance understanding and the clarity of roles through protocols among the firm's supervisors and among the resolution authorities.

What this proposal cannot do by itself, of course, is legislate more transparency in markets, reduction of unnecessary risks in market practices (as the Task Force studying triparty repo in the U.S. is currently undertaking), less complexity in financial instruments, and a host of other elements contributing to the crisis. Where such market practices have played a role, we see an important role of the industry to address them and to do so expeditiously.

What this proposal also cannot do is change human nature. On the firm side, it cannot eliminate greed or improve good faith in sales practices, nor can it solve the many agency problems in financial transactions. What is seeks to do is to increase the pain to the firm's management when corporate governance does not rein such behavior in. On the regulatory side, it cannot make supervisors cooperate internationally or make them vigilant at home, although it can prod earlier and better dialogue among them.

Any proposal of this nature risks creating a boundary problem—firms that are subject to the new charter and its regime and those that are not. Such boundaries create the opportunity for regulatory arbitrage. One potential mitigant may result from innovation in the stakeholder structure that we propose. We believe that the problem of misaligned

incentives is endemic in the financial industry and needs attention. Both the industry and the supervisory community can work actively to find better mechanisms to make explicit to micro decision makers the negative externalities to the firm and to the financial system in excessive risk-taking.

We put forward this proposal in the expectation that it will be bettered by additional study and interesting counterproposals. We welcome the debate.

References:

AIG (2007), Annual Report.

Armistead, Tom (2009) , "The Problem with Regulatory Arbitrage, " http://seekingalpha.com/article/131763-the-problem-with-regulatory-arbitrage, April

Bank of England (2007), "Structure of the Financial System," *Financial Stability Report*, 22, October.

Bair, Sheila C.(2009), "Statement of Sheila C. Bair Chairman, Federal Deposit Insurance Corporation on Regulating and Resolving Institutions Considered "Too Big To Fail"; before the Committee on Banking, Housing and Urban Affairs, U.S. Senate; Room 538, Dirksen Senate Office Building, May 6

Basel Committee on Banking Supervision (1975). "Report on the supervision of banks' foreign establishments". Basel, Switzerland: Bank for International Settlements, September.

Basel Committee on Banking Supervision, "Report and Recommendations of the Cross-border Bank Resolution Group," Consultative Document, Bank for International Settlements, September 2009.

Bernanke, Ben (2009a),"Financial Reform to Address Systemic Risk," At the Council on Foreign Relations, Washington, DC, March 10.

Bernanke, Ben (2009b). Testimony on Financial Regulatory Reform before the Committee on Financial Services, U.S. House of Representatives. October 1, 2009.

Bliss, Robert R. and George G. Kaufman (2007) , "U.S. Corporate and Bank Insolvency Regimes: A Comparison and Evaluation," *Virginia Law and Business Review*, Vol. 2, No. 1, Spring 2007, pp. 143-177.

Bliss, Robert R. and George G. Kaufman (2010), "Resolving Large Complex Financial Institutions Within and Across Jurisdictions," presented at the Wharton Financial Institutions Center workshop on "Cross-Border Issues in Resolving Systemically Important Financial Institutions," February 10-11.

Caprio, Gerad, Jr., Demirgüç-Kunt, A., and Kane, Edward J.(2008), "The 2007 Meltdown in Structured Securitization: Searching for Lessons not Scapegoats," November 23, forthcoming in *The World Bank Observer*.

Carbo-Valverde, Santiago, Kane, Edward J. and Rodriguez-Fernandez, Francisco (2009), "Evidence of Regulatory Arbitrage in Cross-border Mergers of Banks in the EU," NBER

Working Paper No. 15447, National Bureau of Economic Research, Harvard University, October.

Cohen, Rodgin and Morris Goldstein (2009), "The Case for an Orderly Resolution Regime for Systemically-Important Financial Institutions, " Briefing Paper # 13, The Pew Charitable Trusts, Financial Reform Project.

Cohen, Rodgin (2010).

Committee on the Global Financial System. "Foreign direct investment in the financial sector of emerging market countries." Basel, Switzerland: Bank for International Settlements, March 2004.

Contact Group on the Legal and Institutional Underpinnings of the International Financial System (2002). "Insolvency Arrangements and Contract Enforceability." Basel, Switzerland: Bank for International Settlements, September, The report can be found at http://www.bis.org/publ/gten06.htm.

ECB (2009), Public Consultation on the Provision of ABS Loan-Level Information in the Eurosystem Collateral Framework," European Central Bank.

Eisenbeis, Robert A. and George G. Kaufman (2010), "Lessons from the Demise of UK's Northern Rock and Large U.S. Financial Institutions," in Robert W. Kolb (ed.), *Lessons from the Financial Crisis: Causes, Consequences, and Our Economic Future*, Hoboken, NJ: John Wiley & Sons, Inc.

Eisenbeis, Robert A. (2006) "Banking Crisis Resolution and Foreign-Owned Banks," prepared for a conference on *Banking Crisis Resolution: Theory and Practice*, June 16-17, 2005, at the Norges Bank, Oslo, Norway, Federal Reserve Bank of Atlanta, *Economic Review*, Fourth Quarter 2005/Volume 90, Number 4, published in Pratt's *Journal of Bankruptcy Law*, March 2006.

Eisenbeis, Robert A. and George G. Kaufman (2005), "Cross Border Banking: Challenges for Deposit Insurance and Financial Stability in the European Union," with George G. Kaufman, Prepared for the Conference on *Systemic Financial Crises: Resolving large Bank Insolvencies*, Federal Reserve Bank of Chicago, October 6 & 7

Eisenbeis, Robert A. (2004), "Agency Problems in Banking Supervision: The Case of the EMU," presented at the conference *The Structure of Regulation*, Bank of Finland, September 2-3.

Eisenbeis, Robert A. (2006), **"**Home Country versus Cross-Border Negative Externalities in Large Banking Organization Failures and How to Avoid Them**,"** Presented at a Conference on: International Financial Instability: Cross-Border Banking

and National Regulation Sponsored by the Federal Reserve Bank of Chicago and International Association of Deposit Insurers, Oct. 5-6, 2006.

Evanoff, Douglas D. and Larry D. Wall (2000), "Subordinated Debt as Bank Capital: A Proposal for Reform," Federal Reserve Bank of Chicago *Economic Perspectives*, Second Quarter.

FDIC (2009), "Advance notice of proposed Rulemaking Regarding Treatment by the Federal Deposit Insurance Corporation as Conservator or Receiver of Financial Assets Transferred by an Insured Depository Institution in Connection with a Securitization or Participation After March 31, 2010," Federal Deposit Insurance Corporation, 12 CFR Part 360.

Financial Stability Board (2010). "Press Release: FSB Third Plenary Meeting in Basel, Switzerland 9 January 2010".

Fischer, Gerald C.(1986), The Modern Banking Hoolding Company - Development, Regulation and Performance, Temple University School of Business and Management, Temple University, Philadelphia.

Flannery, Mark J. (2005), "No Pain, No Gain? Effecting Market Discipline via 'Reverse Convertible Debentures'", in Hal S. Scott (ed.), Risk Based Capital Adequacy, Oxford University Press.

Flannery, Mark J.(2009a), "Stabilizing Large Financial Institutions with Contingent Capital Certificates," Working paper, University of Florida, October 6.

Flannery, Mark J.(2009b), "Market-Valued Triggers Will Work for Contingent Capital Instruments," Solicited Submission to U.S. Treasury Working Group on Bank Capital, University of Florida, November 6

Geithner, Tim (2009), "Treasury Secretary Tim Geithner Written Testimony House Financial Services Committee Hearing," U.S. Treasury, March 24.

Herring, Richard and Jacopo Carmassi, "The Corporate Structure of International Financial conglomerates: Complexity and Its Implications for Safety and Soundness," in *The Oxford handbook of Banking*, ed. by Allen Berger, forthcoming 2010.

Herring, Richard (2009), "The Darker Side of Securitization: How Subprime Lending Led to a Systemic Crisis & Why It Has Persisted," presentation, Wharton Financial Institutions Center.

Hüpkes, Eva (2010), "Rivalry in Resolution: How to Reconcile Local Responsibilities and Global Interests," presented at the Wharton Financial Institutions Center workshop on "Cross-Border Issues in Resolving Systemically Important Financial Institutions," February 10-11.

Jackson, Thomas H. and David A. Skeel, Jr.(2010) "Bankruptcy, Banks, and Non-Bank Financial Institutions," prepared for the Wharton Financial Institutions Center Workshop on "Cross-Border Issues in Resolving Systemically Important Financial Institutions," February 10-11.

Joint Forum on Financial Conglomerates (1998). "Supervision of Financial Conglomerates." Basel, Switzerland: Bank for International Settlements, February 1998.

Jones, David S. (2000), " Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage and Related Issues," *Journal of Banking and Finance,* 24, pp. 35-58.

Kane, Edward J. (2009), "Incentive Roots of the Securitization Crisis and Its Early Mismanagement," *Yale Journal on Regulation*, 26 (summer), 405-416.

Kaufman, George G.(2004), "FDIC Losses in Bank Failures: Has FDICIA Made a Difference, " Federal Reserve Bank of Chicago *Economic Perspectives,* Q III, pp 13-25.

Lenoir, Noëlle (2008), "The Societas Europaea (SE) in Europe: A Promising Start and an Option with Good Prospects," *Utrecht Law Review*, Volume 4, Issue 1 (March).
Paulson, Henry M. Jr. (2008). "Remarks by U.S. Treasury Secretary Henry M. Paulson, Jr., on the U.S., the World Economy and Markets before the Chatham House." July 2, 2008.

Paulson, Henry M., Jr.(2010) *On the Brink,*, Business Plus, NY,NY.

Roe, Mark J. and Skeel, David A (2009) , "Assessing the Chrysler Bankruptcy," Harvard Law and Economics Discussion Paper No. 645; U of Penn, Inst for Law & Econ Research Paper No. 09-22; U of Penn Law School, Public Law Research Paper No. 09-17; Harvard Public Law Working Paper No. 09-42. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1426530##.

Rosengren, Eric S.(2009), "Challenges in Resolving Systemically Important Financial Institutions, " Federal Reserve Bank of Boston, presented before the Institute of Regulation and Risk North Asia, Hong Kong, May 5.

Savage, Donald T.(1978), "A History of the Bank Holding Company Movement-1900-1978," The Bank Holding Company Movement to 1978- A Compendium, Board of Governors of the Federal Reserve System.

Scott, Kenneth and John Taylor, "Why Toxic Assets Are So Hard to Clean Up," Opinion, *Wall Street Journal*, July 20.

Shadow Financial Regulatory Committee (2020), "Resolution Regimes for Troubled Financial Institutions," Statement No. 286, http://www.aei.org/raProjectHome?rapId=15

Wall, Larry D. (2000), "Supervisory Goals and Subordinated Debt," *The New Financial Architecture: Banking Regulation in the 21st Century,* edited by Benton Gup, pp. 145-62.

Wallison, Peter J.(2010), "The Principles That Should Guide Transnational Resolutions," presented at the Wharton Financial Institutions Center workshop on "Cross-Border Issues in Resolving Systemically Important Financial Institutions," February 10-11.

U. S. Treasury(2009), "Financial Regulatory Reform: A New Foundation," US Treasury Department, Washington DC, June 17

Table 1. Organizational Structure of 16 Large Complex Financial Institutions as of 2007

	Number of Bank Subs	Number of Insurance Subs	Number of Mutual Funds and Other SPVs	Number of Other Financial Subs	Number of Non-Financial Subs	Total No. of Subs	% Foreign	No of Countries	Number of Subs in Tax Havens	Number of % Subs in Tax Havens
Citi	101	35	706	584	1,009	2,435	50%	84	309	13%
Deutsche Bank AG	54	9	458	526	907	1,954	77%	56	391	20%
BankofAmerica	32	24	396	282	673	1,407	28%	29	118	8%
HSBC	85	37	246	381	485	1,234	61%	47	161	13%
BNP Paribas	88	74	102	433	473	1,170	61%	58	62	5%
RBS	31	29	168	450	483	1,161	11%	16	73	6%
Morgan Stanley	19	22	225	170	616	1,052	47%	46	203	19%
BarclaysPlc	49	21	309	239	385	1,003	43%	73	145	14%
Societe Generale	81	13	93	270	387	844	56%	60	64	8%
JPMorgan Chase.	38	17	229	145	375	804	51%	36	54	7%
ABN AMRO	50	7	129	204	280	670	63%	43	37	6%
UBS AG	29	2	121	66	199	417	96%	41	38	9%
Goldman Sachs	7	4	48	151	161	371	51%	21	29	8%
Credit Suisse	31	4	91	63	101	290	93%	31	53	18%
Merrill Lynch	16	9	85	89	68	267	64%	25	23	9%
Average	47	20	227	270	440	1005	57%	44	117	11%
Max	101	74	706	584	1009	2435	96%	84	391	20%
Min	7	2	48	63	68	267	11%	16	23	5%
Lehman Brothers	9	3	84	210	127	433	45%	20	41	9%

Source: Herring and Carmassi(2010) Tables 8.1 & 8.2

Table 2 Features of Proposed Financial Institution Charter	
Feature	Proposed Structure
Charter Type	Federal Charter - Single entity
Charter Availability	Required of all institutions greater than some size threshold (say $100 billion) and/or meeting criteria about interconnectedness or impact of failure Option available to all other U.S. domiciled institutions
Permissible Activities	Any financial activities authorized by the chartering agency - activities be subject to same standards as those permitted to bank holding companies
Subsidiaries and Affiliates	The entity would not be permitted to have subsidiaries or affiliates - the one exception might be insurance if that were to be authorized (or alternatively, a high bar for each of a few legal entities)
Taxation	Dividends would be subject to same tax treatment as interest payments on debt and deposits
Accounting conventions	All contracts and liabilities - both current and contingent - must appear on the balance sheet and not on an off-balance sheet basis.
Bonus and Incentive Compensation	Payments can only be made out of positive consolidated profits after allowances for loan losses have been made at the same time that dividend decisions and retained earnings decisions are made
New Stakeholder Class	Senior managers and significant risk-takers in the firm would be required to hold a claim on the firm, such as contingent capital or tradable subordinated debt or escrowed funds, that would absorb future losses for a protracted period.
Market Priced Debt	Institution would be required to issue tradable sub debt and/or tradable contingent capital certificates. Contingent capital certificates would have one of two possible triggers depending upon function – Recapitalization or – Cushion to absorb losses as bankruptcy is evoked
Federal Deposit Insurance	Required if the institution accepted deposits

Guarantees of Deposits and Debt and Central Bank Lending	Standard FDIC deposit coverage would apply. Federal Reserve would be prohibited from extending credit to market insolvent institutions, analogous to current FDICIA 1991 provisions for banks. .
Supervision and Regulation	Responsible Supervisor and Regulator - Federal-level designee
Prompt Corrective Action and Early Intervention	Subject to FDICIA 1991 - Intervention would be mandatory rather than discretionary if 1) market value of entity fell below a pre-specified value or 2) mark-to-market value of assets relative to liabilities falls below a per-specified by positive value/ Guiding principle should be to minimize loss to FDIC and/or taxpayer.
Failure Resolution Policies	FDIC would be named receiver and handle resolution Powers would be same as available to resolve bank failures Guiding principle would be universality regardless of nationality of holders of claims. Objective should be to make failures independent events
Settlement of Short Term Contracts	Maturity of less than a given number of days would be settled and closed prior to the settlement of other claims to ensure that short term markets would be able to continue to settle and clear.
Information Requirements	Federal regulator must collect information on ongoing basis on who all counterparties to various transactions and consequences of a closure might be on those counterparties
Advance Resolution	The Federal regulator and FDIC must have in hand a current plan to seize and resolve each institution in no less than a weekend.
Supervisory Fees	The supervisor must charge for its supervisory activities based upon complexity of the organization and the excess fees be remitted to the FDIC
Loss in Event of Failure	Should the FDIC incur a loss, that loss would be responsibility of the Federal regulator, with a public review comparable to the FDICIA 1991 provisions.