

For release on delivery
10:00 a.m. EDT
April 21, 2009

Statement of
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President
Federal Reserve Bank of Kansas City
before the
Joint Economic Committee
United States Congress

April 21, 2009

Madam Chair Maloney, Vice Chair Schumer, ranking members Brady and Brownback, and members of the committee, I appreciate the opportunity to talk with you about the issues surrounding the exceptionally large financial institutions whose failure may pose systemic threats to the financial system.

The United States currently faces economic turmoil related directly to a loss of confidence in these large institutions. Although the response to the events of the past year has taken on various forms, so far, we have not seen the return of confidence and transparency to financial markets, leaving lenders and investors wary of making new commitments. Until that faith is restored, it is impossible for us to achieve full economic recovery.

When the crisis began to unfold last year, and its full depth was not yet clear, we were quick to pump substantial liquidity into the system. In the world we find today, with the crisis continuing and hundreds of thousands of Americans losing their jobs every month, it remains tempting to pour additional funds into these institutions in hopes of a turnaround. We have taken these steps instead of defining a consistent plan or addressing the core issue of how to deal with these institutions that now block our path to recovery. Our actions so far risk prolonging the crisis while increasing the cost and raising serious questions about how we eventually unwind these programs without creating another financial crisis as bad or worse than the one we currently face.

These large and systemically important institutions are regularly referred to as “too big to fail,” but yet we all know that a free market system requires that insolvent firms, regardless of their size, market position or the complexity of their operations, must fail. We have been unwilling to allow this to happen to these firms, ignoring that we have an existing mechanism

that can be used for firms of all sizes and allows for their dissolution while controlling damage to the broader financial system.

There seems to be a prevalent line of thinking that the problems we now face with these institutions are simply too complex for us to resolve without widespread damage to the financial system. I don't think those who managed the Reconstruction Finance Corporation, the Resolution Trust Corporation or the Swedish financial crisis were provided with a blueprint that guaranteed their success. And though I would be the first to acknowledge that the path I propose is not easy, I do not accept the idea that we have lost our ability to solve the challenges we now face.

This system has a proven track record in the United States as well as abroad and it would serve us well in the current crisis. I have included in this written testimony the text of a speech I delivered recently in Tulsa, Okla., that spells out the details of how this program would work. Additionally, I have included supplementary information including further details related to the resolution framework for large institutions; the process used to handle the 1984 failure; of Continental Illinois, which was one of our nation's largest financial institutions at the time of its failure, and the approach Sweden took in response to that nation's banking crisis in the 1990s, which is very similar in many ways to what we face in the United States today.

In addition to the current turmoil, from a regulatory perspective we must also make the changes necessary to protect the financial system from a similar crisis in the future. For some time, there has been an ongoing debate in the regulatory community pitting proponents of a broad principles-based approach against those favoring a more rigid rules-based system that can be widely understood and more readily, and evenly, enforced. The current crisis has made the case that the rules system is our only alternative, as the principles-based approach leaves far too

much open for the discretion of the firms in question and not enough authority for the various regulatory agencies.

Along these same lines, this crisis has been the first real test of the Basel II capital framework, and it has failed miserably. Basel II relies on firms making their own detailed assessments of the risks they have assumed so a capital requirement can be assigned. I would doubt any of us today would believe such a system to be desirable or even workable.

Enforcement under Basel II relies on examiners understanding and evaluating extremely complex mathematical models. When it becomes clear that these models understate capital needs, examiners often have difficulty arguing the technical merits of their views and convincing bank management to add capital. In many ways, Basel II provides banks with a rationale, a defense and an opportunity for taking excessive leverage. Banks have strong competitive and financial incentives to increase leverage. During good times, leverage increases profitability, but it also increases risk. We have seen the broad systemic effects of excessive leverage. To limit such problems in the future, we must maintain limits on financial leverage through strict rules setting minimum capital-to-asset ratios. It would be the easiest, most equitable and clear-cut way to set capital requirements for all sizes of banks and for a broader range of firms throughout financial markets.

One of the more troubling aspects of this crisis has been that in many ways these events have not been unpredictable. A decade ago, I and others anticipated that the financial megamergers we were seeing at that time would lead to a situation like the one we face today.

Although we did not have any way of knowing the events that would provide the stimulus for this crisis, there were already concerns in 1999 that, “In a world dominated by mega financial institutions, governments could be reluctant to close those that become troubled for fear

of systemic effects on the financial system. To the extent these institutions become ‘too big to fail,’ and where uninsured depositors and other creditors are protected by implicit government guarantees, the consequences can be quite serious. Indeed, the result may be a less stable and a less efficient financial system.”¹

This is clearly the result we now face, and it is even more pressing that we deal with the problem at hand in a manner that brings stability and transparency back into our system for the current environment or it is a certainty that this is an environment in which we will find ourselves yet again.

¹ “Financial Industry Megamergers and Policy Challenges,” speech by Thomas M. Hoenig, delivered March 25, 1999. Accessible at www.KansasCityFed.org/home/subwebnav.cfm?level=3&theID=9983&SubWeb=6.

SUCCESS DEPENDS ON FAILURE

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April 9, 2009

As you all know, we are in the middle of a very serious financial crisis, and our economy is under significant stress. There has been much debate about how we should address these challenges, but regardless of the method one supports, all agree that the economy will not recover until the financial system is stabilized and credit flows improve.

The restoration of normal financial market activity depends on how we deal with the problems of our largest financial institutions. It has been a little more than a year since the first major government rescue occurred with Bear Stearns being acquired by JPMorgan. Since then, numerous programs have been enacted and trillions of dollars of public funds have been committed, much of it directly to our largest institutions. Despite these well-intentioned efforts, the problems remain, and the public's dissatisfaction with how their money is being spent grows.

It is not surprising that the initial measures taken in this crisis were ad hoc. The depth and extent of the problems were not anticipated. However, more than a year has passed and the challenge that still remains is to define a plan that addresses the significant asset problems embedded in our largest institutions. We must provide financial firms, investors and consumers with a clear and fair plan for dealing with firms that many call "too big to fail."

Last month, I gave a speech that outlined a resolution framework and a plan for how we should deal with these large systemically important financial firms. I believe that failure is an option. Those who disagree with my resolution proposal say that it is unworkable. In my remarks today, I will offer more details about how the process would work and explain why I think it is the best solution for getting our financial system and economy on the road to recovery.

Principles for a Resolution Framework

For a free market system to be successful, firms must be allowed to fail based upon a predefined set of rules and principles that market participants can rely on when determining their strategies and making decisions. This is particularly important for problem financial institutions. These key principles should apply if we are talking about a small bank in Tulsa or a large international financial conglomerate in New York City.

The first principle is to properly understand our goals and correctly identify the problems we are attempting to solve. This may sound obvious. However, when we are in the middle of a crisis where more than a half million people are losing their jobs every month, it is tempting to pour money into the institutions thinking that it will correct the problem and get credit flowing once again. Also, rather than letting the market system objectively discipline the firms through failure and stockholder loss, we tend to micromanage the institutions and punish those within reach.

This lack of confidence in the market's remedy is most acute for our largest financial institutions, which have publically disclosed substantial losses. The question that the supervisory authorities must answer is whether the losses are large enough to threaten the solvency of any of these firms. This assessment is the first step in determining actions necessary to restoring public confidence in our financial system.

A second principle is that we must do what is best for the overall economy and not what is best for one group. We need to make sure that when one financial firm fails, the resolution process does not cause significant disruptions to financial markets and the economy or make the

current problems worse. Furthermore, we must do it for the lowest possible cost so that we don't create a long-term fiscal burden on taxpayers.

It is important to recognize that there are not just the direct costs but, more importantly, long-term costs to the economy and financial system. The direct cost of resolving a failed bank, such as the government bearing some of a failed bank's losses, is simple to determine. However, it is much more difficult to know the costs from some of the unintended consequences. For example, market discipline is reduced when a resolution process does not make management, shareholders and creditors bear the costs of their actions.

The third principle is equity of treatment. Regardless of an institution's size, complexity or location, the resolution process must provide consistent treatment of a failing institution's owners, managers, employees and customers. The process must be transparent and clearly stated so that everyone understands what to expect if they gamble with the firm's assets.

When talking about equity of treatment, it is important to recognize that a single process can lead to different outcomes. For example, if any bank is examined and found to be insolvent, it needs to go through the resolution process with the owners losing their investment. However, the eventual outcomes for the institution can be different. A smaller bank's assets and deposits will likely be sold to another bank. In the case of a larger bank, the firm might be temporarily operated as a bridge bank before either being sold or reprivatized. Regardless, it is important that the banks go through the same process or else an incentive will be created for banks to take on excessive risks in an effort to grow large enough to gain favorable treatment.

A final principle is that we must base the resolution process on facts about what works and what does not work. One way to do this is to look at past financial crises. This is not the first

financial crisis, and we can learn a lot about what will and will not be successful by looking back at our own history with financial crises, as well as at the experiences in other countries.

Identifying the Problem

With these principles in mind, how should we go about resolving the current problems at our largest institutions?

First, we must determine both the location and size of the losses. Admittedly, it will not be easy. These firms are very large – the four largest bank holding companies each have more than \$1 trillion of assets, which accounts for about half of the banking industry’s assets. They have offices around the world, and they are involved in many complex businesses. But in order to repair the financial system, we must get the best estimates of the condition and viability of these firms, and we must require them to reflect their losses in their financial statements.

Normally, we think of a business’ solvency in terms of the value of its equity capital. When the value of its assets is less than the value of its liabilities, it has negative equity and it has failed. A financial firm, however, can also fail if its liquidity is insufficient to meet its current payment obligations, either because it can’t sell its assets for enough to pay off maturing liabilities, or it loses market confidence and cannot borrow enough.

I would note that these are concrete definitions and not subjective conditions. I mention this because it points out that the term “too big to fail” is a misstatement. It does not matter what size the firm is. Although a bank might still be open and operating, if it is insolvent by these definitions, it has failed.

Once we determine a bank's status, we would classify these institutions into three categories, depending on whether they are solvent and what their prospects are for continuing as an ongoing concern.

The first category would be firms whose operations are strong and whose equity remains above minimum requirements. These firms would not require much government support, if any. Some might need to raise additional capital to provide a greater cushion against the losses they may suffer during the current crisis. But these institutions are basically sound and should be able to raise private capital.

The second category would be those institutions whose equity temporarily falls below minimum requirements but are expected to recover in a reasonable period of time as economic conditions improve. These firms have generally sound management, who may have made some mistakes and suffered greater losses than normal due to the economic downturn. It is reasonable to expect these banks to raise additional private capital. However, the government may need to provide some capital in the form of preferred shares and possibly some warrants in return. As an equity holder, the government would have an oversight role regarding the firms' operations and activities.

The final category is for the institutions that are no longer viable either because of liquidity problems or their equity capital is currently negative or it is likely to become negative, based on reasonable expectations of future market and economic conditions. These firms, which would likely soon become equity insolvent without government protections and guarantees, would be declared insolvent by the regulatory authority. Shareholders would be forced to bear the full cost of the positions they have taken and risk losing their investment. Senior management and the board of directors would be replaced because they are responsible for the failed strategy.

A Resolution Process

The question then becomes how to resolve these failed institutions while minimizing the cost and disruption to the economy.

The method most often used when a bank fails is to arrange for a sale of its assets and an assumption of its liabilities by another institution. For these extremely large firms, there are a couple of significant roadblocks preventing this solution. First, the acquiring firm must have the capacity for the acquisition, which means it would have to be in the same size range as the failed institution. And secondly, if such a deal was forged, it would create an even larger firm with greater systemic risks to the economy.

Instead, an extremely large firm that has failed would have to be temporarily operated as a conservatorship or a bridge organization and then reprivatized as quickly as is economically feasible. We cannot simply add more capital without a change in the firm's ownership and management and expect different outcomes in the future.

Experience shows that this approach has worked. The best example was with the failure of Continental Illinois National Bank and its holding company in 1984. Because we are in Oklahoma today, I will note that Continental's problems began with some bad loans it purchased from Oklahoma City's Penn Square Bank. As an officer in our Bank's regulatory function at that time, I was directly involved in the closing of Penn Square. In fact, from 1982 to 1992, 347 banks failed or received FDIC assistance in the Tenth Federal Reserve District states. I was involved in almost every one of these resolutions and all were tragedies. I tell you this to make clear that I do not take this proposal lightly nor do I expect any size bank failure to be easy or

painless. But the process that worked for Continental Illinois is a viable approach to addressing important aspects of today's crisis.

At the time of its failure, Continental Illinois had \$40 billion in assets and was the nation's largest commercial and industrial lender. It was the seventh-largest bank in the United States. It had 57 offices in 14 states and 29 foreign countries, a large network of domestic and international correspondent relationships, and a separate function for making residential and commercial real estate loans. It also provided specialized services to a variety of companies.

When Continental failed, its top management and directors were replaced with individuals who had experience operating large, complex organizations. John Swearingen, former chairman of Standard Oil of Indiana, became CEO of the holding company, and William Ogden, a former vice chairman of Chase Manhattan Bank, became CEO.

The FDIC committed to taking a book value of \$4.5 billion of bad assets off of Continental's balance sheet and placed them in a separate work-out unit to recover as much of the value of the assets as possible. Among those bad assets, \$1 billion was written off as a loss at the time of the transaction.

To offset the \$1 billion loss to Continental's capital, the FDIC provided \$1 billion in capital in exchange for preferred stock, of which \$720 million was convertible to common stock upon sale. When converted, the \$720 million would amount to a 79.9 percent ownership stake in Continental.

The FDIC also received five-year warrants to purchase the remaining common stock for far below one cent per share (\$0.00001). If at the end of five years, the cost of the resolution was more than \$800 million, the FDIC would exercise 100 percent of the warrants; if losses were lower, the amount of warrants exercised would be in proportion to the amount of the losses.

To economize on FDIC staff and to provide additional expertise, the loan liquidation unit was staffed by a combination of FDIC personnel, hired specialists and Continental employees under incentive contracts.

Continental Illinois was fully reprivatized by 1991 and eventually purchased by Bank of America in 1994. The FDIC exercised all of the warrants so the shareholders in Continental's holding company effectively lost their entire investment. The FDIC sold all of the preferred shares and shares from exercising the warrants for \$1.2 billion, which was a net gain of \$200 million. The FDIC also earned \$200 million in dividends. The ultimate resolution cost to the FDIC was \$1.1 billion, which was 3.28 percent of Continental's assets at the time of resolution.

There has been much talk lately about a new resolution process for systemically important firms that Congress could enact, and I would encourage this be implemented as quickly as possible, but we do not have to wait for new authority. We can act immediately, using essentially the same steps we used for Continental.

Stock could be issued and control assumed by a government entity. A bridge institution could be created within the institution so essential services and operations would continue as normal. Where necessary, the government would provide capital in exchange for preferred shares convertible to common stock upon sale. Existing shareholders would provide the government warrants to purchase all outstanding shares with the amount exercised determined by the government's resolution cost. Senior management and directors would be replaced.

The most difficult part of resolving these large firms without a new resolution process is how to make creditors bear the cost of their positions. Ideally, when a firm fails, all existing obligations would be addressed and dealt with according to the covenants and contractual priorities set up for each type of debt. Insured creditors would have immediate access to their

funds, while other creditors would have immediate access to maturing funds with the potential for haircuts, depending on expected recoveries, any collateral protection and likely market impact. However, this is difficult because it would require negotiating with groups of creditors, unless there's a process that allows regulatory authorities to declare a nonbank financial firm insolvent.

Regardless of how the firm is resolved, short-term liabilities in particular would need to be addressed immediately because of their importance in meeting the creditors' daily payment obligations and operational needs. Quick decisions should also be made on all counterparty arrangements because of the widespread impact that uncertainty would have on the counterparties.

Authorities would also need to assess the market impact – specifically, whether the losses associated with this outcome would lead to a loss of confidence in financial markets and serious funding problems that would threaten the viability of other financial firms. If so, it may be necessary to honor all counterparty arrangements and/or short-term liabilities, as we did with Continental Illinois.

However, this guarantee must be considered as an exception to the normal process. Congress would have to enact an approval process similar to the systemic exception for banks as specified in the 1991 FDIC Improvement Act, requiring approval by two-thirds of the Federal Reserve Board, two-thirds of the FDIC Board and the secretary of the Treasury, in consultation with the president.

As much as I dislike extending government guarantees and thereby reducing market discipline, if we were to implement this exception, I believe we would also need to extend the

same guarantees to all other institutions or we would give failed institutions a competitive advantage.

Another key part of the resolution is that the bad assets need to be taken off the balance sheet of the failed institution at realistic market values and placed in an asset management company, resulting in two entities often referred to as a “good bank” and “bad bank.”

Alternatively, the FDIC or Treasury as the receiver could take the bad assets and work them out. After writing off the bad assets, the government would provide the “good bank” with enough capital so that it can become a profitable ongoing concern and attractive to private investors for reprivatization. Any recoveries from the bad bank would first go toward paying off the costs of the government, and any proceeds left over would be distributed according to the priority of remaining claimants.

The separation of the bad assets is critical. When a bank has a large share of nonperforming assets, they remain a burden when they are left on the balance sheet, even if they are written down appropriately. For example, they must be funded although they are not producing income. Such a circumstance creates uncertainty about the bank’s financial condition and diverts management’s attention from the business objectives necessary for recovery. The focus of the “good bank” must be on the future, gaining new customers and expanding operations, while the goal of the “bad bank” must be on getting rid of customers and winding down the operations.

As part of the reprivatization process, it is also important to determine the advisability of breaking up or selling off operations and independent subsidiaries where possible, especially given the market discipline problems we have encountered with institutions regarded as “too big to fail.” Moreover, assessing the condition and viability of large, complex financial firms is

difficult, and the failure of such a firm may be an indication that it is also too large and complex to manage well. We should avoid setting conditions that only repeat past mistakes in creating too big and too complex an institution.

This system is clearly more equitable than what we have seen so far.

At the start of the TARP I program, \$125 billion was provided to the nine largest financial firms without an in-depth, thorough exam of their condition. However, all other banks received TARP funds only if their primary regulator concluded they were strong enough to weather the crisis and continue as an ongoing concern.

The \$10 per share that Bear Stearns' stockholders received from the JPMorgan Chase acquisition would not have been possible without the government's guarantee of \$29 billion of problem assets. Additionally, the government has committed \$173 billion to support AIG's continued operations, with their shareholders standing to reap financial gain if AIG ultimately recovers.

Meanwhile, 46 banks in the United States have failed since the beginning of 2008. All of them were resolved through one of the bank resolution problems I have discussed here today.

How Do We Know the Resolution Process Will Work?

It is understandable that there are concerns about letting these large firms fail, but it should be noted that the program I have just described has a record of success elsewhere.

The economic situation in Sweden in the early 1990s was similar to that in the United States today. Its financial system was dominated by six large banks that accounted for 90 percent of the industry's assets. Sweden took decisive steps to identify losses in its major financial institutions. The viable Swedish banks were soon recapitalized, largely through

private sources, and public authorities quickly took over two large insolvent banks and spun off their bad assets to be managed within a separate entity. Sweden was able to systematically restore confidence in its financial system, and although it took several years to work down and sell off all of the bad assets, there was minimal net cost to the taxpayers.

Some argue that the Swedish situation is not a valid comparison because it only dealt with only six banks. In addition, some argue that the Swedish system was much less complex, and that the Swedish government had to work out primarily commercial real estate loans instead of the complex financial assets, structured securities and derivatives that we would have to work out today.

These are valid concerns, but I would point out, first, that although the United States has several thousand banks, only 19 have more than \$100 billion of assets, and that after supervisory authorities evaluate their condition, it is likely that few would require further government intervention. Second, as for complexity, I would point out that real estate assets involve considerable complexity, no less so than many financial derivatives.

Another important example is the Reconstruction Finance Corporation (RFC), which was used to deal with banking problems in the United States in the 1930s. The RFC followed a process very similar to what I have described. It began by examining problem banks and writing down the bad assets to realistic economic values, making any needed and appropriate changes in bank management, injecting public equity as needed into these banks, and returning the banks to private ownership. The RFC proved to be highly successful in recapitalizing banks, and like Sweden, there was essentially no net cost to taxpayers. More detailed information on both the Continental Illinois and Swedish models for large bank resolution will be posted today with a text of my remarks on our Bank's website at KansasCityFed.org. Absent a detailed explanation

of why this approach can't be done, it is my hope that it will be useful to provide more details around my view that it can be done.

Let me make two final points.

First, the debate over the resolution of the largest financial firms is often sensationalized because it is framed in terms of nationalizing failed institutions. It is also pointed out that government officials may not be effective managers of private business concerns.

In response, I would note that no firm would be nationalized in this program. Nationalization is the process of the government taking over a going concern with the intent of operating it. Though a bridge institution is the most likely outcome when a large financial firm fails, the goal is for the firm to be reprivatized as quickly as possible. In addition, subject to regulatory agency oversight, the bridge firm would be managed by private sector managers selected for their experience in operating well-run, large, complex organizations.

The second point is related to the complexity issue, which is that it would be hard to find enough people with the required knowledge, experience and skills to fill the open positions. Going back to the Continental Illinois example, we were able to do it then. More generally: The United States is a vast country with a tremendous amount of management resources in a broad-based economic and industrial system. If the United States does not have the talent to run these firms, then we are much worse off than I thought. I refuse to accept that conclusion.

MATERIALS REFERENCED IN THE SPEECH:

SUCCESS DEPENDS ON FAILURE

- A Resolution Process for Financial Firms
- Assistance for Continental Illinois
- Swedish Response to 1990s Banking Crisis
- References

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A Resolution Process for Financial Firms

- The United States is in the middle of a serious financial crisis, and the economy is under significant stress. While there has been a lot of debate about how to revive the economy and restore financial stability, there is broad agreement that the economy will not recover until the financial system is stabilized and credit starts flowing more normally.
- The recovery of the financial system depends critically on the public regaining trust and confidence in financial institutions, particularly the largest financial institutions. The public's confidence in the largest institutions has been seriously shaken by the risks they have taken, the poor management of those risks and the resulting losses. Thus, the restoration of normal financial market activity depends importantly on how the problems of the largest bank and nonbank financial institutions are addressed.
- Despite the best of intentions, the policies and actions directed at restoring the health of the financial system have not been consistent or transparent. It is understandable that the initial measures were ad hoc and inconsistent because the depth and breadth of the problems were not expected and there were no plans in place for addressing the problems.
- The solution must be a clear and fair plan so that financial firms, investors and consumers know what to expect when any financial institution runs into problems. Specifically, the plan must provide a process for how policymakers will address the deterioration of the financial condition of all financial firms, regardless of their size, and resolve them if they become insolvent.
- A resolution process is particularly important for the largest, most complex and interconnected institutions because they have been considered by many as "too big to fail," at least since the early 1980s. This paper describes a resolution process that can be used for any financial firm involved in the intermediation process or payments system, but the focus is on the large, systemically important institutions. The premise of the paper is that no firm is too big to fail and that resolving a large failed firm is the best solution for the economy.

Principles for a Resolution Framework

- A free market system requires that business owners capture the profits from their successes and bear the costs of their failures. Firms that meet the market test will grow, while those that do not will shrink and, ultimately, must be allowed to go out of business if they fail. The consequences of failure and the resolution framework must be clearly stated and transparent so that business owners have clear expectations about the consequences of their actions.
- The resolution framework must prescribe a predefined set of rules, guided by an agreed upon set of principles. This is particularly important for financial institutions, big or small, because their success depends critically on the public's trust that they are solvent and a viable, ongoing concern.

- There are two key principles that the resolution process should follow.
- First, the resolution process should minimize the cost to the overall economy.
 - When resolving an insolvent firm, it is important that it does not cause significant financial and economic disruptions or exacerbate current problems.
 - The process should minimize the cost of resolving an insolvency to avoid a long-term fiscal burden on taxpayers.
 - The relevant costs are not just the direct costs but, more importantly, the current and future impact on the economy and financial system.
 - The direct costs of resolving a failed bank, such as the government bearing some of the failed bank’s losses, is simple to add up.
 - However, minimizing the future costs on the economy and financial system, particularly the unintended consequences, is much more difficult.
 - To minimize the future cost to the economy, the resolution process must not create adverse incentives that are inconsistent with economic efficiency. Specifically, the resolution process must not allow a firm’s management, shareholders and creditors to avoid the consequences of their mistakes because it reduces market discipline, creates adverse incentives for firms to take too much risk, and inefficiently directs resources and financial capital to less-productive uses.
 - The process must be transparent and clearly stated so that everyone understands what to expect and the consequences of their actions. Management must know beforehand what will happen if they gamble and take excessive risks that turn out to have a significant, negative effect on the firm’s financial condition.
 - Finally, to minimize costs, the resolution process should be based on solid research and information about what works and what does not work. Policymakers can learn a lot about what will and will not be successful by looking back at previous U.S. financial crises, as well as at crises in other countries.
- The second principle is the resolution process must be equitable in that it is the same for all financial firms regardless of size or location, although it is possible that the outcome will differ.
 - The resolution process must provide consistent treatment of a failing institution’s owners, managers, employees and customers, regardless of the institution’s size, complexity or location.
 - When talking about equity, it is important to recognize the difference between process and outcome.
 - For example, if a bank is examined and found to be insolvent, the bank should go through the resolution process and the owners should lose their investment regardless of the bank’s size. The outcome may be that a relatively small bank is resolved by another institution purchasing its assets and assuming its deposits, while a relatively large bank is temporarily operated as a bridge bank.
 - In both cases, the banks go through the same process of being declared insolvent and the same procedures for determining how it will be resolved.
 - Otherwise, banks may take on excessive risks just to grow to a size large enough to receive favorable treatment, and customers may choose to go with a large bank instead of a small bank.

Options for Resolving a Failed Financial Institution

- There are several options for resolving a failed firm, but it is important to first define insolvency.
 - By definition, a firm is insolvent if its common equity capital is negative – that is, the firm’s outstanding liabilities owed to creditors is greater than the total value of its assets.
 - However, a financial firm, even if it has a positive amount of equity capital, is not viable and will fail if its liquidity is insufficient to meet its current payment obligations, either because it cannot sell its assets for enough to pay off maturing liabilities, or it loses market confidence and cannot borrow enough.
 - It is important to note that these are definitions of insolvency and are not subjective conditions, which points out that the term “too big to fail” really is a misstatement. It does not matter what size a firm is – if it is insolvent by these definitions, it has failed.
- The question becomes, what do we do when a firm fails?
- One option is for the government to allow an insolvent firm to maintain ongoing operations by providing funds to bring capital ratios up to required minimums or to meet payment obligations.
 - In this case, nothing is actually resolved, and the insolvent firm is essentially bailed out so that it can continue normal operations.
 - This option may be used for a large financial firm that is considered “too big to fail” because of concerns that it is systemically important, in the sense that other resolution methods would have large, negative spillover effects on economy.
 - Under this option, the term “too big to fail” should be restated as “too big to resolve” because of the near-term negative spillover effects and disruptions to the economy and financial system.
 - In a bailout, senior management and directors keep their jobs; current shareholders do not lose their investment, although the government may impose some restrictions on the firm’s activities and practices; and creditors do not suffer any losses.
 - A bailout is the worst option in terms of the first principle of minimizing costs.
 - While a bailout may temporarily stabilize current economic conditions or not immediately cause further problems, it sets the stage for significant future problems. In a bailout, senior management, directors and current shareholders stand to reap any gains that may result, which weakens market discipline and creates the moral hazard that the firm will take too much risk.
 - Bailouts are also inequitable because they are used only for the “too big to fail” firms and not for smaller firms that are not expected to cause spillover effects if other resolution methods are used.
- Alternatively, bank regulators have for years used a variety of options to resolve insolvent banks. These options include:
 - liquidation,
 - arranging for the sale of a failed bank’s assets and assumption of its liabilities by another institution,

- or operating the bank for a short period of time through open-bank assistance or as a bridge bank or conservatorship until the bank can be sold to another bank or group of private investors.
- When most people think of a firm as failing, they generally think the firm is shut down and liquidated.
 - In a bank liquidation, the FDIC is appointed as a receiver and it pays off insured depositors up to the deposit insurance limit.
 - Uninsured depositors are generally paid partial amounts based on expected recoveries.
 - The FDIC maximizes the value of the assets by selling them or holding on to them and working them out. The proceeds from the assets are used to first pay remaining amounts owed to uninsured depositors and other unsecured creditors, and if anything is left over, to shareholders.
 - Because the firm is insolvent, the uninsured creditors will suffer some losses, and they may have to wait for a long time to receive their final payouts.
 - While liquidation strongly enforces market discipline and does not promote moral hazard, it tends to be the most disruptive option for resolving a big or small financial firm, and therefore is the least desirable choice.
 - This option is disruptive for individuals and business customers because they tend to hold short-term instruments, such as deposits and commercial paper, for making payments or as a temporary way of storing their funds. Many business customers also have counterparty arrangements, such as derivatives contracts, that would go into default when the bank is liquidated.
- The resolution method used most often is a purchase and assumption (P&A) transaction, where the FDIC as receiver finds another bank to purchase the insolvent bank's assets and assume its liabilities.
 - In terms of the direct costs to the government, this is typically the least-cost resolution method because the FDIC may receive a premium from the acquiring bank. And even if the FDIC has to pay the acquiring bank to assume the liabilities, it is often less costly than paying off insured depositors and having to manage and liquidate the failed bank's assets.
 - More importantly, though, it generally has the least negative impact on the economy.
 - Short-term creditors and counterparties have immediate access to all insured deposits and at least a large portion of uninsured obligations, while borrowers continue to have access to credit.
 - In addition, because management and directors are replaced and shareholders lose their investment, a P&A transaction does not reduce market discipline or create adverse incentives for bank management and shareholders.
- While a P&A transaction is often the best option for most failed banks, it generally is not the best option if one of the largest financial institutions fails because it creates even larger companies that pose even greater systemic risks to the economy.
 - A major difficulty in the current financial crisis has been that some institutions are so large and complex that resolving them when they fail is complicated and disruptive no matter what option is used.

- Only another institution in the same size range would have the capacity and resources to purchase the assets and assume the liabilities of another large institution.
- Indeed, over the past year, there have been several examples of large institutions taking over other large, problem institutions. It only makes sense that if institutions can get “too big to fail,” then all else held constant, the resolution process should not result in even larger institutions.
- The final option, which is the most feasible for a large, complex financial institution that fails, is to run it temporarily as a conservatorship or bridge organization.
 - Clearly, a liquidation would be too disruptive to the economy.
 - This option also provides time for potential acquirers of the institution or its parts to conduct the necessary due diligence.
 - The institution would then be reprivatized as soon as it is economically feasible.
 - As will be discussed below, management, shareholders and creditors would be forced to bear the full cost of their actions and positions they have taken to maintain market discipline and economic efficiency.
- One of the difficulties with all of these options is that while there are time-tested, fast resolution processes in place for depository institutions, today’s largest financial institutions are conglomerate financial holding companies with many financial subsidiaries that are not banks.
 - The bank subsidiaries could be placed into FDIC receivership, but the only other option under current law for the holding company and other subsidiaries is a bankruptcy process.
 - Bankruptcy proceedings can take a long time to complete – sometimes years – which works well for a nonfinancial firm because it can continue normal operations while in bankruptcy.
 - It does not work for financial firms, however, because they have a variety of complex, short-term liabilities and counterparty arrangements that customers depend on for maintaining daily operations. A long, drawn-out bankruptcy proceeding would prevent customers and counterparties from having access to their funds, which would cause significant economic disruptions.
 - In addition, the cornerstone of a financial institution’s franchise value is trust in its viability as an ongoing concern, and that trust is sure to quickly erode in a long, drawn-out bankruptcy proceeding.
 - The difficulty in resolving failed holding companies quickly and in a way that minimizes the disruption to the economy is why the Treasury secretary recently proposed a resolution process for systemically important financial holding companies.
- Enacting a resolution process for financial companies is clearly important, but the supervisory authorities do not need to wait for it to happen and should act immediately to resolve a large financial company should one fail.

A Proposed Resolution Process

- The resolution process discussed below is applicable to any financial firm that is part of the intermediation process or payments system, but in light of the current financial crisis, the focus is on systemically important financial institutions that are found to be insolvent.
- To prevent systemic disruptions to the economy, a failed institution should be allowed to continue its operations through a bridge institution or conservatorship so that all essential services and operations would go on as normal.
 - Because the firm is insolvent, it would need additional capital to continue operating.
 - To recapitalize the firm, the government could provide the capital in exchange for preferred shares, convertible to common stock upon sale.
- In general, the supervisory authorities would not have the authority to declare the institution insolvent. Thus, to ensure that management and shareholders bear the costs of their actions and investment decisions, the government's investment would be conditional on:
 - Replacement of the senior management and board of directors that led the firm to failure.
 - Existing shareholders providing the government warrants to purchase all outstanding shares, with the amount exercised determined by the net costs of resolving the firm.
 - While shareholders may be reluctant to agree to these conditions, in most cases, they would have little choice given the immediate need for liquidity and capital assistance.
- The specific steps to be taken would depend on several factors, such as the type of financial organization and the supervisor's existing legal authority.
 - For example, if a holding company's primary asset is an insured bank and the bank and holding company become insolvent, the bank could be closed and the FDIC could set up a bridge bank.
 - In this case, the holding company would also fail, and the supervisory authorities could take actions to mitigate the impact on the rest of the economy.
- The most difficult part of resolving these large firms without a new resolution process is how to make creditors bear the cost of their positions.
 - Ideally, when a firm fails, all existing obligations would be addressed and dealt with according to the covenants and contractual priorities set up for each type of debt.
 - Insured creditors would have immediate access to their funds, while other creditors would have immediate access to maturing funds with the potential for haircuts, depending on expected recoveries, any collateral protection and likely market impact.
 - However, this is difficult because it would require negotiating with groups of creditors, unless there's a process that allows regulatory authorities to declare a nonbank financial firm insolvent.
- Regardless of how the firm is resolved, it is critical to make quick decisions on how creditors will be treated.
 - Short-term liabilities in particular would need to be addressed immediately because of their importance in meeting the creditors' daily payment obligations and operations needs.

- Quick decisions also need to be made on all counterparty arrangements because of the widespread impact that uncertainty about their status or default would have on their counterparties.
 - So that unsecured creditors bear the cost of their decisions and market discipline is maintained, the resolution authorities should consider leaving these creditors standing in line behind more senior creditors as the claims on the bank are resolved.
 - However, the authorities would also need to assess the market impact – specifically, whether the losses associated with this outcome would lead to a loss of confidence in financial markets and serious funding problems that would threaten the viability of other financial firms.
- In a severe financial crisis, such as is occurring today, it may be necessary to honor *short-term* liabilities and/or *all* counterparty arrangements to prevent a systemic disruption to the economy.
 - However, this guarantee should be considered as a “systemic” exception to the normal process.
 - To limit the use of this exception to truly systemic situations, Congress should enact an approval process similar to the systemic exception for banks as specified in the 1991 FDIC Improvement Act.
 - This exception requires approval by two-thirds of the Federal Reserve Board, two-thirds of the FDIC Board and the secretary of the Treasury, in consultation with the president.
 - In addition, though the extension of government guarantees and the resulting reduction in market discipline should generally be avoided, extension of the same guarantees would need to be made to every other institution. Otherwise, failed institutions would have a competitive advantage over sound institutions, which clearly violates the principle of equitable treatment.
- Another key part of the resolution is the bad assets need to be taken off the balance sheet of the failed institution at realistic market values.
 - One option is to place the bad assets in a separate asset management company, resulting in two new entities often referred to as a “good bank” and “bad bank.”
 - Alternatively, the FDIC or Treasury as the receiver could take the bad assets and work them out.
 - After writing off the bad assets, the government would provide the good bank with enough capital so that it can become a profitable ongoing concern and attractive to private investors for eventual reprivatization.
 - Any recoveries from the bad bank would first go toward paying off the costs of the government, and any proceeds left over would be distributed according to the priority of remaining claimants.
- The separation of the bad assets is critical for creating a forward-looking process for recovery and the eventual reprivatization of the good bank.
 - When a bank has a large share of nonperforming assets, they remain a burden when they are left on the balance sheet, even if they are written down appropriately.
 - For example, they still have to be funded even though they are not producing income, they create uncertainty about the bank’s financial condition, and they divert a lot of

management's attention from more productive activities for the future growth and profitability of the bank.

- In addition, the business objectives and the skills necessary for managing bad assets and recovering their maximum value is very different from the objectives and necessary skills for running an ongoing financial firm.
 - In other words, the goal of the good bank is to attract new customers and expand operations, while the goal of the bad bank is to get rid of customers and wind down the operations.
- As part of the reprivatization process, the supervisory authorities should consider breaking up or selling off operations and independent subsidiaries where possible.
 - The growth of firms into "too big to fail" institutions has created significant market discipline problems.
 - In addition, if such a firm were to fail, it may also be an indication that it is too large and complex to manage well.

How Do We Know the Resolution Process Will Work?

- A variety of concerns has been raised about letting the largest financial firms fail. These concerns are legitimate and it is clear that any solution will be difficult and costly. However, the resolution process being advocated here has a record of success elsewhere.
- First, the proposed resolution process is exactly what the Swedes did to solve an equally severe banking crisis that they had in the early 1990s (see attachment "Swedish Response to 1990s Banking Crisis" for a more detailed description of the Swedish crisis and resolution process).
 - The economic situation in Sweden was similar to today's, and their financial system was dominated by six large banks that accounted for 90 percent of the industry's assets.
 - Sweden took decisive steps to identify losses in its major financial institutions.
 - The viable Swedish banks were soon recapitalized, largely through private sources, and public authorities quickly took over two large insolvent banks and spun off their bad assets to be managed within a separate entity.
 - Sweden was able to quickly restore confidence in its financial system, and although it took several years to work down and sell off all of the bad assets, there was essentially no net cost to the taxpayers.
 - Creditors, however, were fully protected because the supervisory authorities were concerned about the systemic consequences of imposing losses on uninsured depositors and other unsecured creditors.
- Some people do not think that the Swedish situation is a valid comparison because it dealt with only six banks. In addition, some argue that the Swedish system was much less complex, and that the government primarily had to work out commercial real estate loans, not the complex financial assets, such as structured securities and derivatives, that would have to be worked out today if a large financial institution was allowed to fail. While these concerns are valid, it should be noted that:

- Although the United States has several thousand banks, only 19 banks have more than \$100 billion of assets, and that after supervisory authorities evaluate their condition, it is likely that only a few would have to be resolved.
- It is actually very difficult to work out problems on real estate assets, and it is not necessarily more difficult to work out even complex securities.
- As an aside, an additional lesson that can be learned from Sweden is that a resolution process is much more likely to succeed if it has broad political support and is structured to be independent of the political process.
 - The plan should be put largely under the control of independent supervisory agencies.
 - Political involvement should be confined largely to specifying the program's goals and basic rules.
 - The Swedes also found that a commitment to providing the supervisory authority the funds necessary for resolutions reduces the need for political involvement.
- A second example is this is essentially the process the Reconstruction Finance Corporation (RFC) used to deal with banking problems in the United States in the 1930s.
 - The RFC began by examining problem banks and writing down the bad assets to realistic economic values.
 - It then made any needed and appropriate changes in bank management and provided public equity capital as needed.
 - Finally, it returned the banks to private ownership and essentially recovered all of its costs.
- A final example is the failure of Continental Illinois National Bank and its holding company in 1984. This is a good comparison because it is an example of a holding company resolution using preferred stock and warrants as described in the proposed process. In addition, it is an example of a resolution of a large, complex, interconnected holding company.
 - Continental Illinois was the largest U.S. commercial and industrial lender and the seventh-largest U.S. bank. It had 57 offices in 14 states and 29 foreign countries, a network of 2,300 domestic and international correspondent relationships, and a separate function for making residential and commercial real estate loans. It also provided specialized services to a variety of companies.
 - The attached document, "Assistance for Continental Illinois," provides details about the process used to resolve the bank and holding company.
 - The result was that the bank and holding company management were replaced, the holding company shareholders lost their entire investment, and the bank was restored to sound condition and returned to private ownership.
 - As in Sweden, Continental Illinois' creditors were fully protected because of concerns about the systemic consequences of imposing losses on uninsured depositors and other unsecured creditors.
- Another concern that has been raised about letting the largest financial firms fail is that it nationalizes these institutions. As part of this concern, it is also often pointed out that government officials may not be effective managers of private business concerns.
 - In the proposed process, no firm would be nationalized.

- Nationalization is the process of the government taking over a going concern with the intent of continued ownership.
 - Though a bridge institution is the most likely outcome for a large financial firm that fails, the goal is for the firm to be reprivatized as quickly as possible, subject to the government not wasting taxpayer funds.
 - In addition, subject to regulatory agency oversight, the bridge firm would be managed by private sector managers selected for their experience in operating well-run, large, complex organizations.
- Some opponents to the proposed process also claim it would be very difficult to take over these firms and bring in new management because they are too complex to manage, as well as there is not enough people with the required knowledge, experience, and skills to fill the open positions.
 - The Continental Illinois example shows it is possible bring in a management team with experience running large, complex organizations.
 - In addition, while the institution might be complex, a new management team is clearly better than leaving the institution under the control of the management team that caused it to fail in the first place.
 - More generally, it is hard to believe that there is not enough talent, either from the United States or other countries, to run these organizations.

Assistance for Continental Illinois

I. Problems at Continental Illinois

- In the late 1970s and early 1980s, Continental Illinois pursued a strategy of rapid growth in commercial lending, particularly energy lending, that was largely funded by purchased money.
- It became the seventh-largest U.S. bank and largest commercial lender in the United States.
- Penn Square's failure in 1982, LDC debt problems and the downturns in energy markets led to declining asset quality and earnings at Continental from 1982 into 1984 and forced Continental to rely heavily on foreign money markets for funding.
- News stories in May 1984 on Continental's problems started a run by foreign depositors on Continental, and by May 19, they had withdrawn more than \$6 billion.
- The Federal Reserve Bank of Chicago began lending through the discount window to cover the lost deposits, and Continental put together a \$4.5 billion loan package funded by 16 large U.S. banks, but these steps did not stop the deposit run.

II. Interim Financial Assistance

- On May 17, 1984, the FDIC, OCC and Federal Reserve announced an interim assistance package for Continental, which was based on the FDIC's open bank assistance authority.
- The FDIC explicitly guaranteed all deposits at Continental in order to keep a liquidity crisis from spreading to other U.S. banks, prevent significant losses at the many banks that had correspondent accounts at Continental and avoid other negative effects in U.S. financial markets.
- A \$2 billion capital infusion for Continental was arranged in the form of interest-bearing subordinated notes, with the FDIC providing \$1.5 billion and the remaining \$500 million provided by seven of the largest U.S. banks.
- The Federal Reserve agreed to meet any liquidity needs of Continental, and a group of 24 major U.S. banks also agreed to provide more than \$5.3 billion in funding on an unsecured basis until a permanent solution was developed.
- The FDIC was unable to find any merger partners for Continental during this interim period, presumably due to Continental's asset problems, substantial litigation and funding issues, along with the limited number of merger partners under Illinois' interstate banking restrictions.

III. Permanent Financial Assistance

- In July 1984, a permanent assistance plan was put in place for Continental.

- Continental's top management and board of directors were removed. John Swearingen, former chairman of Standard Oil of Indiana, became CEO of the holding company, and William Ogden, a former vice chairman of Chase Manhattan, became CEO of the bank.
- The FDIC assumed \$3.5 billion of Continental's discount window borrowings from the Federal Reserve.
- In exchange for assuming this debt, the FDIC received \$3.5 billion (adjusted book value) of assets from Continental. This consisted of poor quality loans that Continental had already written down to \$3 billion (these loans were further written down to \$2 billion in this transaction, and Continental was forced to take a charge of \$1 billion against capital) and a note from Continental for \$1.5 billion, which Continental could repay within three years by giving the FDIC additional loans of Continental's choice with a book value of \$1.5 billion.
- To offset the \$1 billion charge to Continental's capital that was required by the loan sale, the FDIC infused \$1 billion in capital into Continental. The FDIC's capital infusion consisted of \$720 million of permanent, convertible, nonvoting, junior perpetual preferred stock in Continental's holding company (this amounted to a 79.9 percent ownership stake in Continental if converted) and another \$280 million of permanent, adjustable-rate, cumulative preferred stock in the holding company. This assistance was provided through the holding company rather than the bank because covenants in the holding company's debt instruments required debtholder approval to sell the bank or to inject capital directly into it.
- The FDIC also received an option designed to compensate it for any losses, carrying costs or collection costs on the loans it acquired.
- The \$2 billion in subordinated notes issued under the interim plan was repaid.
- To economize on FDIC staff and to provide additional expertise, the loan liquidation involved a combination of FDIC personnel, Continental employees under incentive contracts and hired specialists.

IV. Return to Private Ownership and the Cost of Resolving Continental Illinois

- In a series of sales that took place between December 1986 and June 1991, the FDIC sold all of its preferred stock and the stock acquired through its option.
- The shareholders in Continental's holding company lost their entire investment once the FDIC exercised the option it received as compensation for loan liquidation losses.
- From the sale of stock, which completed the return of Continental to private ownership, the FDIC had a net gain of \$200 million over its initial \$1 billion capital investment, and it also received more than \$200 million in dividends on this stock.
- Overall, the loss on the FDIC's books from Continental's failure was \$1.1 billion, which is equal to 3.28 percent of Continental's assets at the time of resolution.
- Bank of America eventually bought Continental in August 1994.

Swedish Response to 1990s Banking Crisis

- Economic and financial market conditions leading up to the Swedish banking crisis were very similar to the conditions leading up to the current crisis.
 - Deregulation of financial markets (elimination of quantitative controls on bank lending, ceilings on interest rates and restrictions on capital flows) is similar to recent deregulation (Gramm-Leach-Bliley) and financial innovations (securitization, derivatives).
 - Large inflow of foreign capital and expansion of domestic lending and debt.
 - Low/negative real interest rates.
 - Strong growth in consumption and real estate investment and low savings rate.
 - Sharp increases in asset prices (stocks and real estate).
- Although the economic downturn leading to the crisis was precipitated by rising real interest rates, the impact on the economy was similar to the current crisis.
 - Stock and real estate prices fell sharply (tangible asset values fell about 30 percent).
 - Bankruptcies increased dramatically (bankruptcies grew about 20 percent, 40 percent and 70 percent in 1989, 1990 and 1991, respectively).
 - Consumption fell and the savings rate rose from being slightly negative at the end of the 1980s to 8 percent in 1993.
 - Residential real estate investment froze.
- Goal of financial support and recovery plan – temporary government investment in banks where necessary, but banks were to be placed in private ownership as soon as economically feasible.
- Political support – the program had broad political support, which was important for quick decisive actions and providing the national leadership necessary for public support.
- Political independence – a Bank Support Authority, separate from the financial supervisory authority and central bank, was established under the Ministry of Finance to manage the program. The Bank Support Authority (BSA) had open-ended funding and was free from political interference in making decisions, although the BSA worked closely with the supervisory authority and central bank.
- Debt guarantees
 - All bank depositors, counterparties, and other creditors were fully protected from future losses, including foreign creditors (accounted for about 40 percent of bank funding).
 - Guarantees were eliminated when the crisis ended in the mid-1990s, and a bank-financed deposit insurance system was created (Sweden did not have deposit insurance prior to the crisis).
- Transparency
 - The government was very open about the process.
 - A valuation board composed of real estate experts was used to ensure consistent and realistic asset values, and asset values that had declined were promptly written down.
- Bank recapitalization
 - A bank's future viability was estimated using a quantitative model of profitability subject to various economic scenarios. Banks were placed in one of three categories based on their viability in the worst-case scenario, which determined the type of government support they would receive.
 - Category 1 – Capital deteriorates but remains above minimum requirements.

- The bank was expected to raise additional capital, with temporary government guarantees available if necessary to help maintain public confidence.
- Category 2 – Capital falls below minimum requirements but is expected to rise above the minimum in a reasonable period of time.
 - Shareholders were expected to contribute additional capital, with the government contributing capital as necessary to meet operating requirements. Government received preferred shares.
 - Category 3 – Capital becomes negative and bank is unlikely to become profitable.
 - Bank declared insolvent and government resolves the bank in the least-costly manner, including the possibility of liquidation.
 - Good bank, bad bank model – used for banks that received government support and for insolvent banks. Nonperforming loans were transferred to work-out companies at realistic market values. The good bank is provided additional capital as necessary for sound operations and managed by financial market professionals with clear business objectives.
 - Shareholders were not protected (except for one bank in which the government was the majority shareholder, as noted below).
 - Government’s preferred shares were offset by a corresponding reduction in private shares.
 - The government also received voting power that would grow over time, so the government would eventually become the majority shareholder if the support was large enough and maintained for a long period of time.
 - Banks that received assistance were given conditions to make operational improvements. Government representatives were placed on the bank boards to ensure compliance.
 - Results
 - Among the six major banks, Nordbanken (Category 2) received government capital (the government was already the majority shareholder and it also purchased the outstanding privately held shares); Gota (Category 3) failed, was taken over by the government and eventually merged with Nordbanken; and Sparbanken received a government loan.
 - The banking crisis was largely over by 1996 and the banking system remained largely intact – there were no runs and few signs of a credit crunch.
 - While there is no official estimate of the cost of the support program, the most recent estimate of the net fiscal cost is that the government broke even, which is based on government outlays during the most acute phases of the crises and revenues from the sale of bad assets, preferred shares and other proceeds over the past 15 years. The initial gross fiscal cost of the support program is estimated to have been about 4 percent of GDP.
 - Ultimately, Nordbanken was largely privatized and is now part of Nordea (the government owns about 20 percent), which operates in Sweden, Norway, Finland and Denmark.
 - Lessons learned
 - Political consensus on a support plan is crucial.
 - Once the plan is formed and implemented, it is just as important for the process to be independent of political interference and fully transparent to the public.
 - The government officials in charge of the program must take timely and decisive actions to resolve problem firms, which is one reason political independence is important.
 - Assets must be given realistic valuations.
 - Shareholders at failing banks must lose their investment, and senior management and the board of directors must be replaced for both efficiency and equity purposes. Markets will not be efficient unless those who may benefit from taking risk actions also bear the costs

when those actions lead to losses, and equitable treatment requires that the same rules apply to all firms regardless of size.

- The program's success also requires that the new management of the good and bad banks are financial industry professionals, are given sound business objectives and clearly understand to whom they are responsible, which is another reason why political independence is important.

REFERENCES

Davison, Lee. "Continental Illinois and 'Too Big to Fail,'" *History of the Eighties, Lessons for the Future, Vol. 1, An Examination of the Banking Crises of the 1980s and Early 1990s*, Federal Deposit Insurance Corporation, 1997, Chapter 7, pp. 235-257.

Englund, Peter. "The Swedish Banking Crisis: Roots and Consequences," *Oxford Review of Economic Policy*, Vol. 15, No. 3, pp. 80-97.

Ergungor, O. Emre. "On the Resolution of Financial Crises: The Swedish Experience," Federal Reserve Bank of Cleveland, *Policy Discussion Paper*, Number 21, June 2007.

Ingves, Stefan, and Lind, Goran. "Is the Swedish Model Still Valid?" Presentation at G30 Conference, Sveriges Riksbank, New York, December 5, 2008.

Ingves, Stefan, and Lind, Goran. "The Management of the Bank Crisis – In Retrospect," *Quarterly Review*, 1/1996, pp. 5-18.

Jonung, Lars. "The Swedish Model for Resolving the Banking Crisis of 1991-93: Seven Reasons Why it was Successful," DG ECFIN, European Commission, Brussels, *European Economy, Economic Papers* 360, February 2009.

Jonung, Lars, Kiander, Jaakko, and Vartia, Pentti. "The Great Financial Crisis in Finland and Sweden: The Dynamics of Boom, Bust and Recovery, 1985-2000," DG ECFIN, European Commission, Brussels, *European Economy, Economic Papers* 350, December 2008.

McDermott, Kate. "Continental Illinois National Bank and Trust Company," *Managing the Crisis*, Federal Deposit Insurance Corporation, 1998, Chapter 4, pp. 545-65.